



MINISTRY OF WATER AND ENVIRONMENT

INTEGRATED WATER MANAGEMENT AND DEVELOPMENT PROJECT

PROJECT ID NO: P163782

Procurement of:

**CIVIL WORKS FOR INSTALLATION OF HYDROMETRIC
EQUIPMENT UNDER CATEGORIES I, II, & III.**

- Category I: 5 No. Digital Water Level Recording Stations**
 - Category II: 5 No. Ground Water Level Recording Stations**
 - Category III: 2 No. Automated Full Climate Stations**
-

OCTOBER 2020

Request for Bids
Small Works
(One-Envelope Bidding Process)

Procurement of:

Project: Integrated Water Management and Development Project

Purchaser: Ministry of Water & Environment

Country: Republic of Uganda

RFB No: MWE/WRKS/19-20/00008

Issued date: October 2020

The bidding documents have been prepared in four volumes:-

Volume I: Standard Procurement Document

Volume II: Bills of Quantities

Volume III: Drawings

Volume IV: Environmental and Social Safeguards Policy 2018 and Scoping
report

Standard Procurement Document

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PART 1 – Bidding Procedures

Section I - Instructions to Bidders

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Section I - Instructions to Bidders

A. General

1. Scope of Bid

1.1 In connection with the Specific Procurement Notice - Request for Bids (RFB), specified in the Bid Data Sheet (BDS), the Employer, as specified **in the BDS**, issues this bidding document for the provision of Works as specified in Section VII, Works' Requirements. The name, identification and number of lots (contracts) of this RFB are specified **in the BDS**.

1.2 Throughout this bidding document:

- (a) the term "in writing" means communicated in written form (e.g. by mail, e-mail, and fax, including if specified **in the BDS**, distributed or received through the electronic-procurement system used by the Employer) with proof of receipt;
- (b) if the context so requires, "singular" means "plural" and vice versa;
- (c) "Day" means calendar day, unless otherwise specified as "Business Day". A Business Day is any day that is an official working day of the Borrower. It excludes the Borrower's official public holidays; and
- (d) "ESHS" means environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety.

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called "Borrower") specified **in the BDS** has received or has applied for financing (hereinafter called "funds") from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called "the Bank") in an amount specified **in the BDS**, toward the project named **in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this bidding document is issued.

2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods,

equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

- 3.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Section VI.
- 3.2 In further pursuance of this policy, bidders shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and their personnel, to permit the Bank to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, or a state-owned enterprise or institution, subject to ITB 4.6, or any combination of them in the form of a joint venture (JV), under an existing agreement, or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution. Unless specified **in the BDS**, there is no limit on the number of members in a JV.
- 4.2 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:
 - (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
 - (b) receives or has received any direct or indirect subsidy from another Bidder; or
 - (c) has the same legal representative as another Bidder; or
 - (d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence

- the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- (e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or
 - (f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Project Manager for the Contract implementation;
 - (g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm;
 - (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding document or specifications of the contract, and/or the Bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.
- 4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.
- 4.4 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any

part of the Contract including related Services.

- 4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in Section VI paragraph 2.2 d., shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified in the BDS.
- 4.6 Bidders that are state-owned enterprises or institutions in the Employer's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Employer.
- 4.7 A Bidder shall not be under suspension from Bidding by the Employer as the result of the operation of a Bid-Securing or Proposal-Securing Declaration.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. When the Works are implemented across jurisdictional boundaries (and more than one country is a Borrower, and is involved in the procurement), then exclusion of a firm or individual on the basis of ITB 4.8 (a) above by any country may be applied to that procurement across other countries involved, if the Bank and the Borrowers involved in the procurement agree.
- 4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.10 A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this

procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment;

(a) relates to fraud or corruption, and

(b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5. Eligible Materials, Equipment and Services

5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.

B. Contents of Bidding Document

6. Sections of Bidding Document

6.1 The bidding document consists of Parts 1, 2, and 3, which include all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II - Bid Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Works' Requirements

- Section VII - Works' Requirements

PART 3 Conditions of Contract and Contract Forms

- Section VIII - General Conditions of Contract (GCC)
- Section IX - Particular Conditions of Contract (PCC)
- Section X - Contract Forms

6.2 The Specific Procurement Notice - Request for Bids (RFB) issued by the Employer is not part of this bidding document.

6.3 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the bidding document,

responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding document and to furnish with its Bid all information and documentation as is required by the bidding document.

7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

7.1 A Bidder requiring any clarification of the bidding document shall contact the Employer in writing at the Employer's address specified **in the BDS** or raise its inquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of Bids within a period specified **in the BDS**. The Employer shall forward copies of its response to all Bidders who have acquired the bidding document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified **in the BDS**, the Employer shall also promptly publish its response at the web page identified in the BDS. Should the clarification result in changes to the essential elements of the bidding document, the Employer shall amend the bidding document following the procedure under ITB 8 and ITB 22.2.

7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

7.4 If so specified **in the BDS**, the Bidder's designated representative is invited to attend a pre-Bid meeting and/or a Site of Works visit. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 The Bidder is requested, to submit any questions in writing, to reach the Employer not later than one week before the meeting.

7.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the bidding document in accordance with ITB 6.3 Any modification to the bidding document that may become necessary as a result of the pre-Bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-Bid meeting. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

8.1 At any time prior to the deadline for submission of bids, the Employer may amend the bidding document by issuing addenda.

8.2 Any addendum issued shall be part of the bidding document and shall be communicated in writing to all who have obtained the bidding document from the Employer in accordance with ITB 6. The Employer shall also promptly publish the addendum on the Employer's web page in accordance with ITB 7.1.

8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2.

C. Preparation of Bids

9. Cost of Bidding

9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

10. Language of Bid

10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Employer, shall be written in the language specified **in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified **in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents Comprising the

11.1 The Bid shall comprise the following:

Bid

- (a) **Letter of Bid** prepared in accordance with ITB 12;
- (b) **Bill of Quantities or Activity Schedule:** completed in accordance with ITB 12 and ITB 14, as specified **in the BDS**;
- (c) **Bid Security or Bid-Securing Declaration**, in accordance with ITB 19.1;
- (d) **Alternative Bid**, if permissible, in accordance with ITB 13;
- (e) **Authorization:** written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3;
- (f) **Bidder's Eligibility:** documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to Bid;
- (g) **Qualifications:** documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
- (h) **Conformity:** a technical proposal in accordance with ITB 16;
- (i) any other document required **in the BDS**.

11.2 In addition to the requirements under ITB 11.1, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.

11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letter of Bid and Schedules

12.1 The Letter of Bid and Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1 Unless otherwise specified **in the BDS**, alternative Bids shall not be considered.

13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included **in the BDS** and the

method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

- 13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the bidding document must first price the Employer's design as described in the bidding document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Bidder with the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the Employer.
- 13.4 When specified **in the BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified **in the BDS** and described in Section VII, Works' Requirements. The method for their evaluation will be stipulated in Section III, Evaluation and Qualification Criteria.

14. Bid Prices and Discounts

- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Activity Schedule or Bill of Quantities shall conform to the requirements specified below.
- 14.2 The Bidder shall submit a Bid for the whole of the Works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section IV. Bidding Forms. In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.
- 14.3 The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid in accordance with ITB 12.1.
- 14.5 Unless otherwise specified **in the BDS** and the Conditions of Contract, the prices quoted by the Bidder shall be fixed. If the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of

the Conditions of Contract, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data in Section IV- Bidding Forms and the Employer may require the Bidder to justify its proposed indices and weightings.

- 14.6 If so specified in ITB 1.1, Bids are invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all lots (contracts) are opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be included in the rates and prices¹ and the total Bid price submitted by the Bidder.

15. Currencies of Bid and Payment

- 15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be the same and shall be as specified **in the BDS**.
- 15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data are reasonable², in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

16. Documents Comprising the Technical Proposal

- 16.1 The Bidder shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work's requirements and the completion time.

17. Documents Establishing the Eligibility and Qualifications of the Bidder

- 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.
- 17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract, the Bidder shall provide the information requested in the

¹ In lump sum contracts, delete "rates and prices and the."

² For lump sum contracts, delete "unit rates and prices and shown in the Schedule of Adjustment Data are reasonable" and replace with "Lump Sum."

corresponding information sheets included in Section IV, Bidding Forms.

17.3 If a margin of preference applies as specified in accordance with ITB 33.1, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 33.1.

18. Period of Validity of Bids

18.1 Bids shall remain valid for the Bid Validity period specified **in the BDS**. The Bid Validity period starts from the date fixed for the Bid submission deadline (as prescribed by the Employer in accordance with ITB 22.1). A Bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

18.2 In exceptional circumstances, prior to the expiration of the Bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in ITB 18.3.

18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Bid validity period, the Contract price shall be determined as follows:

- (a) in the case of **fixed price** contracts, the Contract price shall be the Bid price adjusted by the factor specified **in the BDS**;
- (b) in the case of **adjustable** price contracts, no adjustment shall be made; or
- (c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

19.1 The Bidder shall furnish as part of its Bid, either a Bid-Securing Declaration or a Bid Security as specified **in the BDS**, in original form and, in the case of a Bid Security, in the amount and currency specified **in the BDS**.

19.2 A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.

19.3 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:

- (a) an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding or surety company);
- (b) an irrevocable letter of credit;
- (c) a cashier's or certified check; or
- (d) another security specified **in the BDS**,

from a reputable source from an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Employer's Country, the issuing non-bank financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable, unless the Employer has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.

19.4 If a Bid Security or Bid Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.

19.5 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB 48.

19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security. and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security.

19.7 The Bid Security may be forfeited or the Bid-Securing

Declaration executed:

- (a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or
- (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 47; or
 - (ii) furnish a Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with ITB 48.

19.8 The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been constituted into a legally enforceable JV, at the time of Bidding, the Bid Security or the Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent mentioned in ITB 4.1 and ITB 11.2.

19.9 If a Bid Security is not required **in the BDS**, pursuant to ITB 19.1, and;

- (a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid; or
- (b) if the successful Bidder fails to: sign the Contract in accordance with ITB 47, or furnish a Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with ITB 48;

the Borrower may, if provided for **in the BDS**, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time stated **in the BDS**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB 11 and clearly mark it "ORIGINAL". Alternative Bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the Bid in the number specified **in the BDS**, and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 Bidders shall mark as "CONFIDENTIAL" information in their Bids which is confidential to their business. This may include

proprietary information, trade secrets, or commercial or financially sensitive information.

- 20.3 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified **in the BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.
- 20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 20.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

- 21.1 The Bidder shall deliver the Bid in a single, sealed envelope (one-envelope Bidding process). Within the single envelope the Bidder shall place the following separate, sealed envelopes:
 - (a) in an envelope marked “ORIGINAL”, all documents comprising the Bid, as described in ITB 11; and
 - (b) in an envelope marked “COPIES”, all required copies of the Bid; and
 - (c) if alternative Bids are permitted in accordance with ITB 13, and if relevant:
 - (i) in an envelope marked “ ORIGINAL - ALTERNATIVE BID”, the alternative Bid; and
 - (ii) in the enveloped marked “COPIES – ALTERNATIVE BID” all required copies of the alternative Bid.
- 21.2 The inner and outer envelopes shall:
 - (a) bear the name and address of the Bidder;
 - (b) be addressed to the Employer in accordance with ITB 22.1;
 - (c) bear the specific identification of this Bidding process

specified in accordance with BDS 1.1; and

- (d) bear a warning not to open before the time and date for Bid opening.

21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1 Bids must be received by the Employer at the address and no later than the date and time specified **in the BDS**. When so specified **in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified **in the BDS**.

22.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the bidding document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The Employer shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 22. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:

- (a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION"; and

- (b) received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of

the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

- 25.1 Except in the cases specified in ITB 23 and ITB 24.2, the Employer shall publicly open and read out in accordance with this ITB, all Bids received by the deadline, at the date, time and place specified **in the BDS**, in the presence of Bidders' designated representatives and anyone who chooses to attend. All Bidders, or their representatives and any interested party may attend a public opening. Any specific electronic Bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be as specified **in the BDS**.
- 25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened, but returned to the Bidder. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid opening.
- 25.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Bid opening.
- 25.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening.
- 25.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Price, per lot (contract) if applicable, including any discounts and alternative Bids; the presence or absence of a Bid Security, or Bid Securing Declaration, if required; and any other details as the Employer may consider appropriate.
- 25.6 Only Bids, alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation. The Letter of Bid and the priced Schedules are to be initialed by representatives of the Employer attending Bid opening in the manner specified **in the BDS**.

- 25.7 The Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).
- 25.8 The Employer shall prepare a record of the Bid opening that shall include, as a minimum:
- (a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;
 - (b) the Bid Price, per lot (contract) if applicable, including any discounts;
 - (c) the presence or absence of a Bid Security or Bid-Securing Declaration, if one was required; and
 - (d) any alternative Bids.
- 25.9 The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

- 26. Confidentiality**
- 26.1 Information relating to the evaluation of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until information on Intention to Award the Contract is transmitted to all Bidders in accordance with ITB 43.
- 26.2 Any effort by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if a Bidder wishes to contact the Employer on any matter related to the Bidding process, it shall do so in writing.
- 27. Clarification of Bids**
- 27.1 To assist in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease in the prices or substance of the

Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 31.

- 27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.
- 28. Deviations, Reservations, and Omissions**
- 28.1 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the bidding document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the bidding document.
- 29. Determination of Responsiveness**
- 29.1 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.
- 29.2 A substantially responsive Bid is one that meets the requirements of the bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the bidding document, the Employer's rights or the Bidder's obligations under the proposed Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.
- 29.3 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 16, in particular, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.
- 29.4 If a Bid is not substantially responsive to the requirements of the bidding document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material

deviation, reservation, or omission.

**30. Nonmaterial
Nonconformities**

30.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid.

30.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

30.3 Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or nonconforming item or component in the manner specified **in the BDS**.

**31. Correction of
Arithmetical
Errors**

31.1 Provided that the Bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:

- (a) only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1, shall result in the rejection of the Bid.

**32. Conversion to
Single Currency**

32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified **in the**

BDS.

- 33. Margin of Preference** 33.1 Unless otherwise specified **in the BDS**, a margin of preference for domestic Bidders³ shall not apply.
- 34. Subcontractors** 34.1 Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer, Financial Parts
- 34.2 The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications.
- 34.3 Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified **in the BDS**. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.
- 35. Evaluation of Bids** 35.1 The Employer shall use the criteria and methodologies listed in this ITB and Section III, Evaluation and Qualification criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Employer shall determine the Most Advantageous Bid. This is the Bid of the Bidder that meets the Qualification Criteria and whose Bid has been determined to be:
- (a) substantially responsive to the bidding document; and
 - (b) the lowest evaluated cost.
- 35.2 To evaluate a Bid, the Employer shall consider the following:
- (a) the Bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of

³ An individual firm is considered a domestic Bidder for purposes of the margin of preference if it is registered in the country of the Employer, has more than 50 percent ownership by nationals of the country of the Employer, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as domestic Bidders and eligible for domestic preference only if the individual member firms are registered in the country of the Employer or have more than 50 percent ownership by nationals of the country of the Employer, and the JV shall be registered in the country of the Borrower. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms. JVs between foreign and national firms will not be eligible for domestic preference.

Quantities⁴ for admeasurement contracts, but including Daywork⁵ items, where priced competitively;

- (b) price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
- (c) price adjustment due to discounts offered in accordance with ITB 14.4;
- (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;
- (e) price adjustment for nonconformities in accordance with ITB 30.3; and
- (f) the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria.

35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.

35.4 If this bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III, Evaluation and Qualification Criteria.

36. Comparison of Bids

36.1 The Employer shall compare the evaluated costs of all substantially responsive Bids established in accordance with ITB 35.2 to determine the Bid that has the lowest evaluated cost.

37. Abnormally Low Bids

37.1 An Abnormally Low Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the Bid price raises material concerns as to the capability of the Bidder to perform the Contract for the offered Bid price.

37.2 In the event of identification of a potentially Abnormally Low Bid, the Employer shall seek written clarifications from the Bidder,

⁴ In lump sum contracts, delete “Bill of Quantities” and replace with “Activity Schedule.”

⁵ Daywork is work carried out following instructions of the Project Manager and paid for on the basis of time spent by workers, and the use of materials and the Contractor’s equipment, at the rates quoted in the Bid. For Daywork to be priced competitively for Bid evaluation purposes, the Employer must list tentative quantities for individual items to be costed against Daywork (e.g., a specific number of tractor driver staff-days, or a specific tonnage of Portland cement), to be multiplied by the Bidders’ quoted rates and included in the total Bid price.

including detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the bidding document.

37.3 After evaluation of the price analyses, in the event that the Employer determines that the Bidder has failed to demonstrate its capability to perform the Contract for the offered Bid Price, the Employer shall reject the Bid.

38. Unbalanced or Front Loaded Bids

38.1 If the Bid for an admeasurement contract, which results in the lowest evaluated cost is, in the Employer's opinion, seriously unbalanced or, front loaded, the Employer may require the Bidder to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the Bid price as with the scope of works, proposed methodology, schedule and any other requirements of the bidding document.

38.2 After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:

(a) accept the Bid; or

(b) require that the amount of the Performance Security be increased at the expense of the Bidder to a level not exceeding 20% of the Contract Price; or

(c) reject the Bid.

39. Qualification of the Bidder

39.1 The Employer shall determine to its satisfaction whether the eligible Bidder that is selected as having submitted the lowest evaluated cost and substantially responsive Bid meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

39.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder.

39.3 An affirmative determination of qualification shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the Bid, in which event the Employer shall proceed to the substantially responsive Bid which offers the next lowest evaluated cost to make a similar determination of that Bidder's qualifications to perform

satisfactorily.

40. Most Advantageous Bid

40.1 Having compared the evaluated costs of Bids, the Employer shall determine the Most Advantageous Bid. The Most Advantageous Bid is the Bid of the Bidder that meets the Qualification Criteria and whose Bid has been determined to be:

- (a) substantially responsive to the bidding document; and
- (b) the lowest evaluated cost.

41. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

41.1 The Employer reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to Contract Award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, Bid securities, shall be promptly returned to the Bidders.

42. Standstill Period

42.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 46. The Standstill Period commences the day after the date the Employer has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

43. Notification of Intention to Award

43.1 The Employer shall send to each Bidder the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

- (a) the name and address of the Bidder submitting the successful Bid;
- (b) the Contract price of the successful Bid;
- (c) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated;
- (d) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful, unless the price information in c) above already reveals the reason;
- (e) the expiry date of the Standstill Period;
- (f) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

F. Award of Contract

- 44. Award Criteria** 44.1 Subject to ITB 41, the Employer shall award the Contract to the successful Bidder. This is the Bidder whose Bid has been determined to be the Most Advantageous Bid as specified in ITB 40.
- 45. Notification of Award** 45.1 Prior to the expiration of the Bid Validity Period and upon expiry of the Standstill Period, specified in ITB 42.1 or any extension thereof, and, upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter of Acceptance”) shall specify the sum that the Employer will pay the Contractor in consideration of the execution of the contract (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”).
- 45.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the Contract Award Notice which shall contain, at a minimum, the following information:
- (a) name and address of the Employer;
 - (b) name and reference number of the contract being awarded, and the selection method used;
 - (c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;
 - (d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;
 - (e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope; and
 - (f) successful Bidder’s Beneficial Ownership Disclosure Form, if specified in BDS ITB 47.1.
- 45.3 The Contract Award Notice shall be published on the Employer’s website with free access if available, or in at least one newspaper of national circulation in the Employer’s Country, or in the official gazette. The Employer shall also publish the contract award notice in UNDB online.
- 45.4 Until a formal contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.
- 46. Debriefing by the** 46.1 On receipt of the Employer’s Notification of Intention to Award

- Employer** referred to in ITB 43.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Employer for a debriefing. The Employer shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.
- 46.2 Where a request for debriefing is received within the deadline, the Employer shall provide a debriefing within five (5) Business Days, unless the Employer decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Employer shall promptly inform, by the quickest means available, all Bidders of the extended standstill period
- 46.3 Where a request for debriefing is received by the Employer later than the three (3)-Business Day deadline, the Employer should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3)-day deadline shall not lead to extension of the standstill period.
- 46.4 Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidder shall bear their own costs of attending such a debriefing meeting.
- 47. Signing of Contract**
- 47.1 The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and, if specified in the BDS, a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form, if so requested, shall be submitted within eight (8) Business Days of receiving this request.
- 47.2 The successful Bidder shall sign, date and return to the Employer, the Contract Agreement within twenty-eight (28) days of its receipt.
- 48. Performance Security**
- 48.1 Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security and, if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with the General Conditions of Contract, subject to ITB 38.2 (b), using for that purpose the Performance Security and ESHS Performance Security Forms included in

Section X, Contract Forms, or another form acceptable to the Employer. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country, unless the Employer has agreed in writing that a correspondent financial institution is not required.

48.2 Failure of the successful Bidder to submit the above-mentioned Performance Security and, if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security, or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder offering the next Most Advantageous Bid.

49. Adjudicator

49.1 The Employer proposes the person named **in the BDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified **in the BDS**, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in his Bid. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the Particular Conditions of Contract (PCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

**50. Procurement
Related
Complaint**

50.1 The procedures for making a Procurement-related Complaint are as specified in the BDS.

Section II - Bid Data Sheet (BDS)

The following specific data for the Works to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Reference	A. General
ITB 1.1	<p>The reference number of the Request for Bids (RFB) is: MWE / WRKS /19-20/00008</p> <p>The Employer is: Ministry of Water and Environment</p> <p>The name of the RFB is: Civil Works for Installation of Hydrometric Equipment under Categories I, II, & III for Uganda as follows:</p> <p>Category I: 5 No. Digital Water Level Recording Stations Category II: 5 No. Ground Water Level Recording Stations Category III: 2 No. Automated Full Climate Stations</p> <p>The number and identification of lots (contracts) comprising this RFB is: N/A</p>
ITB 2.1	<p>The Borrower is: <i>Government of the Republic of Uganda</i></p> <p>Loan or Financing Agreement amount: USD 280M</p> <p>The name of the Project is: <i>Integrated Water Management and Development Project</i></p>
ITB 4.1	Maximum number of members in the Joint Venture (JV) shall be: No limit
ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr .
B. Contents of Bidding Document	
ITB 7.1	<p>For <u>Clarification of Bid purposes</u> only, the Purchaser's address is:</p> <p>For <u>clarification purposes</u> only, the Employer's address is:</p> <p>The Permanent Secretary, Ministry of Water & Environment</p> <p>Attention: Head, Procurement & Disposal Unit</p> <p>Street Address: Plot 3-7 Kabalega Crescent Road, Luzira</p> <p>City: Kampala</p> <p>ZIP Code:</p> <p>Country: Uganda</p> <p>Telephone: +256 414 220 229</p>

	<p>Facsimile number: +256 414 505 941</p> <p>Electronic mail address: kateregga9@hotmail.com with copies to tomu.kanyike@gmail.com</p>
ITB 7.1	Requests for clarification should be received by the Employer no later than: 10 days to bid submission date
ITB 7.1	Web page: N/A
ITB 7.4	<p>A site visit conducted by the Employer shall be organized. The visits shall be conducted as follows:</p> <p>CATEGORY I: DIGITAL WATER LEVEL RECORDING STATIONS</p> <p><u>A: Site Visit I: North & North Eastern Uganda</u></p> <p>Meeting Point: Kitgum Municipal Town Date: 26th October 2020, 10:00am Sites to be visited:</p> <ol style="list-style-type: none"> 1. Station on River Pager (UNWZ) 2. Station on River Longiro (KWMZ) <p>Ministry Contact Person: Kyewe Aggrey (0772-695738/ 0701695738)</p> <p><u>B: Site Visit II: Western Uganda</u></p> <p>Meeting Point: Kasese Municipal Town Date: 29th October 2020, 10:00am Sites to be visited:</p> <ol style="list-style-type: none"> 1. Station on River Nyamwamba (AWMZ) <p>Ministry Contact Person: Kyewe Aggrey (0772-695738/ 0701695738)</p> <p>CATEGORY II: GROUND WATER LEVEL RECORDING STATIONS</p> <p><u>Site Visit I: Northern Uganda</u></p> <p>Meeting Point: Lira Municipal Town Date: 28th October 2020, 10:00am Sites to be visited:</p> <ol style="list-style-type: none"> 1. Lira (UNWZ) <p>Ministry Contact Person: Arwat Patrick (0782159156)</p> <p>CATEGORY III: AUTOMATED FULL CLIMATE STATIONS</p> <p><u>Site Visit I: North Eastern Uganda</u></p> <p>Meeting Point: Moroto Municipal Town Date: 27th October 2020, 10:00am Sites to be visited:</p> <ol style="list-style-type: none"> 1. Moroto (KWMZ) <p>Ministry Contact Person: Arwat Patrick (0782159156)</p>

	<p>A Pre-Bid meeting <i>shall</i> take place at the following date, time and place: Date: <i>November 04, 2020</i> Time: <i>10:00am</i> Place: <i>Ministry of Water and Environment Headquarters (Auditorium, 2nd floor</i></p>
<p>C. Preparation of Bids</p>	
<p>ITB 10.1</p>	<p>The language of the bid is: <i>English</i> All correspondence exchange shall be in <i>English</i> language. Language for translation of supporting documents and printed literature is English</p>
<p>ITB 11.1 (b)</p>	<p>The following schedules shall be submitted with the bid: <i>as the requirements on ITB 12 and 14</i></p>
<p>ITB 11.1 (i)</p>	<p>The Bidder shall submit the following additional documents in its Bid:</p> <ul style="list-style-type: none"> (i) A certificate as evidence demonstrating good performance from at least one recent Employer within the last year in Uganda and/or elsewhere to confirm satisfactory performance. (ii) For contracts cited as specific experience, the Bidder shall include in its bid the contact information including telephone No. Fax No. email address and physical location of previous employers as well as the address of the location of the works. At least one similar contract cited as previous experience should be outside the Bidder's country. All the contact details provided must be reachable. Failure to reach any previous employer will result in disqualification of the bid <p>Code of Conduct (ESHS)</p> <p>The Bidder shall submit its Code of Conduct that will apply to its employees and subcontractors, to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under the contract.</p> <p>In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.</p> <p>The Contractor shall be required to implement the agreed Code of Conduct.</p> <p>Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks</p>

	<p>The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the following key Environmental, Social, Health and Safety (ESHS) risks.</p> <ol style="list-style-type: none"> i. Traffic Management Plan to ensure safety of local communities from construction traffic. ii. Water Resource Protection Plan to prevent contamination of drinking water. iii. Hoarding for all construction sites to prevent unauthorized access to the sites. iv. Marking of deep excavations using signage and warning tape to prevent injuries to workers, community members and animals. v. Plans for provision of temporary safe access bridge/walkway to offshore working areas. vi. Strategy for obtaining Consents/Permits prior to the start of relevant works such as opening a quarry or borrow pit. vii. Gender based violence and sexual exploitation and abuse (GBV/SEA) prevention and response action plan. <p>The Contractor shall be required to submit for approval, and subsequently implement, the Contractor’s Environment and Social Management Plan (C-ESMP), in accordance with the Particular Conditions of Contract Sub-Clause 16.2, that includes the agreed Management Strategies and Implementation Plans described here.</p>
ITB 13.1	Alternative bids <i>shall not be</i> permitted.
ITB 13.2	Alternative times for completion <i>shall not be</i> permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: <i>Not Applicable</i> .
ITB 14.5	The prices quoted by the Bidder <i>shall not be</i> subject to adjustment during the performance of the Contract.
ITB 15.1	The prices shall be quoted by the bidder in: <i>Uganda Shillings</i> .
ITB 18.1	The bid validity period shall be: <i>120 calendar</i> days.
ITB 18.3 (a)	The bid price shall be adjusted by the following factor(s): N/A
ITB 19.1	The Bidder shall furnish a bid security in the amount of UGX 15,000,000 or an equivalent amount in a freely-convertible currency.
ITB 19.3 (d)	Other types of acceptable securities: <i>None</i>
ITB 20.1	In addition to the original of the Bid, the number of copies is: <i>Three (3)</i>
ITB 20.3	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <ol style="list-style-type: none"> a) <i>Notarized Powers of Attorney giving authority of the Bidder’s Representative to sign the Bid and in the event the Bidder is awarded the</i>

	<p><i>Contract during contract execution; and</i></p> <p><i>b) In the case of Bids submitted by an existing or intended JV an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. This will be in the form of a Power of Attorney</i></p>
<p>D. Submission and Opening of Bids</p>	
ITB 22.1	<p>For <u>Bid submission purposes</u> only, the Purchaser's address is: The Permanent Secretary Ministry of Water and Environment Plot 3-7 Kabalega Crescent Road, Luzira Tel: +256-414-220229 Fax: +256-414-505941 Kampala, UGANDA Email: ps@mwe.go.ug;</p> <p>The deadline for Bid submission is: Date: <i>17th November 2020</i>: Time: <i>10:30 a.m.</i></p> <p>Bidders <i>shall not</i> have the option of submitting their Bids electronically.</p>
ITB 25.1	<p>The Bid opening shall take place at: Procurement and Disposal Unit offices, Ground Floor, Ministry of Water and Environment Plot 3-7 Kabalega Crescent Road, Luzira Tel: +256-414-220229 Fax: +256-414-505941 Kampala, UGANDA Date: <i>17th November 2020</i> Time: <i>10:35am</i></p>
ITB 25.6	<p>The Letter of Bid and Price Schedules shall be initialed by <i>all</i> representatives of the Purchaser conducting Bid opening.</p>
<p>E. Evaluation and Comparison of Bids</p>	
ITB 30.3	<p>The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Bids. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.</p>
ITB 32.1	<p>The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: Uganda Shillings</p>

	<p>The source of exchange rate shall be: Bank of Uganda</p> <p>The date for the exchange rate shall be: Deadline for bid submission</p>
ITB 33.1	A margin of domestic preference <i>shall not</i> apply.
ITB 34.1	At this time the Employer <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 34.2	<i>N/A</i>
ITB 34.3	<p>a) Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: 20% of the total contract amount.</p> <p>b) Sub-contractors' qualification and experience will not be considered for evaluation of the Bidder. The Bidder on its own (without taking into account the qualification and experience of the sub-contractor) should meet the qualification criteria.</p>
F. Award of Contract	
ITB 47.1	The successful Bidder <i>shall not</i> submit the Beneficial Ownership Disclosure Form.
ITB 49	The Adjudicator proposed by the Employer is: Prof. Jackson Mwakali. The hourly fee for this proposed Adjudicator shall be: US\$50. The biographical data of the proposed Adjudicator is indicated in the CV attached to this document
ITB 50.1	<p>The procedures for making a Procurement-related Complaint are detailed in the "Procurement Regulations for IPF Borrowers (Annex III)." If a Bidder wishes to make a Procurement-related Complaint, the Bidder shall submit its complaint following these procedures, In Writing (by the quickest means available, such as by email or fax), to:</p> <p style="padding-left: 40px;">For the attention: Mr. Alfred Okidi Okot</p> <p style="padding-left: 40px;">Title/position: Permanent Secretary</p> <p style="padding-left: 40px;">Employer: Ministry of Water and Environment</p> <p style="padding-left: 40px;">Email address: ps@mwe.go.ug</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <ol style="list-style-type: none"> 1. the terms of the Bidding Documents; and 2. the Employer's decision to award the contract.

Section III - Evaluation and Qualification Criteria

This section contains all the criteria that the Employer shall use to evaluate Bids and qualify Bidders through post-qualification. No other factors, methods or criteria shall be used other than specified in this bidding document. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- for construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established; or
- value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 32.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer

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1. Margin of Preference

If BDS so specifies, the Employer will grant a margin of preference of 7.5% (seven and one-half percent) to domestic contractors, in accordance with, and subject to, the following provisions:

- (a) Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Borrower and accepted by the Bank, a particular contractor or group of contractors qualifies for a domestic preference. The bidding document shall clearly indicate the preference and the method that will be followed in the evaluation and comparison of Bids to give effect to such preference.
- (b) After Bids have been received and reviewed by the Employer, responsive Bids shall be classified into the following groups:
 - (i) Group A: Bids offered by domestic contractors eligible for the preference.
 - (ii) Group B: Bids offered by other contractors.

All evaluated Bids in each group shall, as a first evaluation step, be compared to determine the Bid with lowest evaluated cost, and the Bid with the lowest evaluated cost in each group shall be further compared with each other. If a result of this comparison, a Bid from Group A is the lowest, it shall be selected for the award as the Most Advantageous Bid, if the Bidder is qualified. If a Bid from Group B is the lowest, as a second evaluation step, all Bids from Group B shall then be further compared with the lowest evaluated cost from Group A. For the purpose of this further comparison only, an amount equal to 7.5% (seven and one-half percent) of the respective Bid price corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of dayworks, if any, shall be added to the evaluated cost offered in each Bid from Group B. If the Bid from Group A is the lowest, it shall be selected for award. If not, the lowest evaluated cost from Group B based on the first evaluation step shall be selected.

The Employer shall use the criteria and methodologies listed in this Section to evaluate Bids. By applying these criteria and methodologies, the Employer shall determine the Most Advantageous Bid. This is the Bid that has been determined to be:

- (a) substantially responsive to the bidding document, and
- (b) the lowest evaluated cost.

2. Evaluation

In addition to the criteria listed in ITB 35.2 (a) – (e) the following criteria shall apply:

2.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VII, Works' Requirements.

2.2 Multiple Contracts

Pursuant to ITB 35.4 of the Instructions to Bidders, if Works are grouped in multiple contracts, evaluation will be as follows: **N/A**

2.3 Alternative Completion Times

An alternative Completion Time, if permitted under ITB 13.2, will be evaluated as follows: **N/A**

2.4 Sustainable procurement

N/A

2.5 Alternative Technical Solutions for specified parts of Works

The acceptability of alternative technical solutions of parts of the Works, if permitted under ITB 13.4, will be determined as follows: **N/A**

2.6 Specialized Subcontractors

If permitted under ITB 34, only the specific experience of Subcontractors for specialized works permitted by the Employer will be considered. The general experience and financial resources of the Specialized Subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder. **N/A**

3. Qualification

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
1. Eligibility							
1.1	Nationality	Nationality in accordance with ITB 4.4	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	Bank Eligibility	Not having been declared ineligible by the Bank, as described in ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.4	State-owned enterprise or institution of the Borrower country	Meets conditions of ITB 4.6	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower’s country law	Not having been excluded as a result of prohibition in the Borrower’s country laws or official regulations against commercial relations with the Bidder’s country, or by an act of compliance with UN Security Council resolution, both in accordance with ITB 4.8 and Section V.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
2. Historical Contract Non-Performance							
2.1	History of Non-	Non-performance of a	Must meet	Must meet	Must meet	N/A	Form CON-2

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
	Performing Contracts	contract ¹ did not occur as a result of contractor default since 1 st January 2014.	requirement ^{1 & 2}	requirements	requirement ²		
2.2	Suspension Based on Execution of Bid /Proposal Securing Declaration by the Employer or withdrawal of the Bid within Bid validity period	Not under suspension based on execution of a Bid/Proposal Securing Declaration pursuant to ITB 4.7 or withdrawal of the Bid pursuant ITB 19.9	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	Pending Litigation	Bidder's financial position and prospective long term profitability sound according to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the Bidder	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

¹ Nonperformance, as decided by the Employer, shall include all contracts where (a) nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Nonperformance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Nonperformance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

² This requirement also applies to contracts executed by the Bidder as JV member.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
2.4	Litigation History	No consistent history of court/arbitral award decisions against the Bidder ³ since 1 st January 2014	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2
2.5	Declaration: Environmental, Social, Health, and Safety (ESHS) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental, or social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), or health or safety requirements or safeguard in the past five years ⁴ .	Must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Form CON-3 ESHS Performance Declaration

³ The Bidder shall provide accurate information on the Letter of Bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a joint venture may result in disqualifying the Bidder.

⁴ The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
3. Financial Situation and Performance							
3.1	Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as UGX 200 million every 3 months, for the subject contract(s) net of the Bidders other commitments	Must meet requirement	Must meet Requirement	N/A	N/A	Form FIN – 3.1, with attachments
		(ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.	Must meet requirement	Must meet requirement	N/A	N/A	
		(iii) The audited	Must meet	N/A	Must meet	N/A	

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
		balance sheets or, if not required by the laws of the Bidder's country, other financial statements acceptable to the Employer, for the last 3 years shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate its prospective long-term profitability.	requirement		requirement		
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of at least twice the bid price: calculated as total certified payments received for contracts in progress and/or completed within the last 3 years, divided by 3 years	Must meet requirement	Must meet requirement	Must meet _____%, _____ of the requirement	Must meet _____%, _____ of the requirement	Form FIN – 3.2
4. Experience							
4.1 (a)	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, subcontractor, or management contractor for at least	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP – 4.1

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
		the last <i>ten</i> years, starting 1 st January 2010					
4.2 (a)	Specific Construction & Contract Management Experience	<p>A minimum number of 03 similar contracts specified below that have been satisfactorily and substantially⁵ completed as a prime contractor, joint venture member⁶, management contractor or sub-contractor⁶ between 1st January 2010 and bid submission deadline:</p> <p>(i) 3 contracts, each of minimum value of UGX 300 million;</p> <p>The similarity of the contracts shall be based on the</p>	Must meet requirement	Must meet requirement ⁷	N/A	Must meet the following requirements for the key activities listed below [list key activities and the corresponding minimum requirements to be met by one member otherwise state: "N/A"]	Form EXP 4.2(a)

⁵ Substantial completion shall be based on 80% or more works completed under the contract.

⁶ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement.

⁷ In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
		following: <i>[Based on Section VII, Scope of Works,</i>					
4.2 (b)		For the above and any other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or sub-contractor between 1st January 2010 and Application submission deadline, a minimum construction experience in the following key activities successfully completed ⁸ : i) Civil works for surface water, weather monitoring	Must meet requirements <i>[Specify activities that may be met through a specialized subcontractor, if permitted in accordance with ITB 34.3]</i>	Must meet requirements <i>[Specify activities that may be met through a Specialized Subcontractor, if permitted in accordance with ITB 34.3]</i>	N/A	Must meet the following requirements for key activities listed below <i>[if applicable, out of the key activities in the first column of this 4.2 b), list key activities (volume, number or rate of production as applicable) and the corresponding minimum requirements that have to be</i>	Form EXP – 4.2 (b)

⁸ Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All members Combined	Each Member	At least one Member	
		stations ii) Drilling of boreholes of at least 30 boreholes in a year				<i>met by one member, otherwise this cell should state: "N/A".]</i>	

4. Key Personnel

The Bidder must demonstrate that it will have a suitably qualified (and in adequate numbers) minimum Key Personnel, as described in the table below, that are required to perform the Contract.

The Bidder shall provide details of the Key Personnel and such other Key Personnel that the Bidder considers appropriate, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms in Section IV, Bidding Forms.

The Contractor shall require the Employer's consent to substitute or replace the Key Personnel (reference the Particular Conditions of Contract 9.1).

Key Personnel

Item No.	Position/specialization	Relevant academic qualifications	Total Work Similar Experience (years)	In Similar Works Experience (years)
1	Project/Contract Manager	Bsc. Civil Engineering	10	05
2	Hydro-geologist	BSc. Geology	10	05
3	Driller	Dip. Mechanical Engineering	10	05
4	Pump testing Technician	Dip. Electrical / Mechanical Engineering	10	05
5	Site Agent	BSc. Construction management or equivalent	10	05
6	Site Engineer	HND Civil Engineering	07	05
7	Land Surveyor	HND Surveying	07	05
8	Finishing Foreman	OND Engineering	07	05
9	Environmental, Health and Safety Officer	B.Sc Environmental Engineering	5	5
10	Quantity Surveyor	BA/BSc Quantity Surveying	7	5

5. Equipment

The Bidder must demonstrate that it will have access to the key Contractor's equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum required	Number
1	Drilling Rig	1	
2	Support Transport	1	
3	Test Pumping Unit	1	
4	Lorry/Truck/Dumpers (4 tonne)	2	
5	Concrete mixer	2	
6	Concrete Vibrator	2	
7	Dumpy level	2	

The Bidder shall provide further details of proposed items of equipment using the relevant Form in Section IV.

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Letter of Bid

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*

Alternative No.: *[insert identification No. if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with ITB 8;
- (b) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) **Bid-Securing Declaration:** We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration or Proposal-Securing Declaration in the Employer's Country in accordance with ITB 4.7;
- (d) **Conformity:** We offer to execute in conformity with the bidding document the following Works: *[insert a brief description of the Works]*
- (e) **Bid Price:** The total price of our Bid, excluding any discounts offered in item (f) below is: *[Insert one of the options below as appropriate]*

[Option 1, in case of one lot:] Total price is: [insert the total price of the Bid in words and figures, indicating the various amounts and the respective currencies];

Or

[Option 2, in case of multiple lots:] (a) Total price of each lot [insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]; and (b) Total price of all lots (sum of all lots) [insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];

- (f) **Discounts:** The discounts offered and the methodology for their application are:

- (i) The discounts offered are: *[Specify in detail each discount offered.]*

- (ii) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];
- (g) **Bid Validity Period:** Our Bid shall be valid for a period specified in BDS ITB 18.1 of days from the date fixed for the Bid submission deadline in accordance with the bidding document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (h) **Performance Security:** If our Bid is accepted, we commit to obtain a performance security [*and an Environmental, Social, Health and Safety (ESHS) Performance Security, Delete if not applicable*] in accordance with the bidding document;
- (i) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder or as a subcontractor, and we are not participating in any other Bid(s) as a Joint Venture member, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;
- (j) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's Country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (k) **State-owned enterprise or institution:** [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements of ITB 4.6*];
- (l) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: [*insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity*]

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

- (m) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (n) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive; and
- (o) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption; and
- (p) **Adjudicator:** We accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator.

[or]

We do not accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator, and propose instead that *[insert name]* be appointed as Adjudicator, whose daily fees and biographical data are attached.

Name of the Bidder: **[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder:***[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

Schedules

Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

- (a) to provide sufficient information on the quantities of Works to be performed to enable bids to be prepared efficiently and accurately; and*
- (b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.*

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and contents of the Bill of Quantities should be as simple and brief as possible.

Daywork Schedule

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Employer of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

- (a) A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor shall be paid for work executed on a daywork basis.*
- (b) Nominal quantities for each item of daywork, to be priced by each Bidder at daywork rates as Bid. The rate to be entered by the Bidder against each basic daywork item should include the Contractor's profit, overheads, supervision, and other charges.*

Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary priced Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the Special Conditions of Contract should state the manner in which they shall be used, and under whose authority (usually the Project Manager's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Employer to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

These Notes for Preparing a Bill of Quantities are intended only as information for the Employer or the person drafting the bidding document. They should not be included in the final bidding document.

1. Sample Bill of Quantities¹

(Local Currency and Foreign Currency)

<i>Item no.</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Amount</i>
	[To be entered by the Employer; Delete if not applicable:] Provisional sums for additional ESHS outcomes.				
	[To be entered by the Employer; Delete if not applicable:] Provisional sum for sexual exploitation and abuse (SEA) / gender based violence (GBV) awareness and sensitization training.				
Total					_____

¹ In case of Lump-sum Contract, use Sample Activity Schedule.

Sample Activity Schedule

<i>Item no.</i>	<i>Description</i>	<i>Unit</i>	<i>Amount</i>
	<i>[To be entered by the Employer; Delete if not applicable:]</i> Provisional sums for additional ESHS outcomes.		
	<i>[To be entered by the Employer; Delete if not applicable:]</i> Provisional sum for sexual exploitation and abuse (SEA) / gender based violence (GBV) awareness and sensitization training.		

2. Schedule of Payment Currencies

Forinsert name of Section of the Works

Separate tables may be required if the various sections of the Works (or of the Bill of Quantities) will have substantially different foreign and local currency requirements. The Employer should insert the names of each section of the Works.

	A	B	C	D
Name of Payment Currency	Amount of Currency	Rate of Exchange to Local Currency	Local Currency Equivalent $C = A \times B$	Percentage of Total Bid Price (TBP) $\frac{100 \times C}{TBP}$
Local currency _____		1.00		
Foreign Currency #1 _____				
Foreign Currency #2 _____				
Foreign Currency #3 _____				
Total Bid Price				100.00
Provisional Sums Expressed in Local Currency		1.00		
TOTAL BID PRICE (Including provisional sum)				

3. Schedule(s) of Adjustment Data

Table A - Local Currency

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Local Currency Amount	Bidder's Proposed Weighting
	Nonadjustable	—	—	—	A: _____* B: _____* C: _____* D: _____* E: _____*
			Total		1.00

[* To be entered by the Employer. Whereas “A” should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table B - Foreign Currency

Name of Currency: _____

If the Bidder wishes to quote in more than one foreign currency, this table should be repeated for each foreign currency.

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Currency in Type/Amount	Equivalent in FC1	Bidder's Proposed Weighting
	Nonadjustable	—	—	—		A: _____* B: _____* C: _____* D: _____* E: _____*
				Total		1.00

[* To be entered by the Employer. Whereas “A” should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Forms of Bid Security

Form of Bid Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:

[Insert name and address of the Employer]

Request for Bids No: *_[Insert reference number for the Request for Bids]*

Date: *[Insert date of issue]*

BID GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *_[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Bid (hereinafter called "the Bid") for the execution of *[insert description of contract]* under Request for Bids No. *[insert number]* ("the RFB").

Furthermore, we understand that, according to the Beneficiary's conditions, Bids must be supported by a Bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in letters]* (*insert amount in numbers*) upon receipt by us of the Beneficiary's complying supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) has withdrawn its Bid during the period of Bid validity specified by the Applicant in the Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary during the period of Bid validity, (i) fails to execute the contract agreement or (ii) fails to furnish the performance security and, if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security and, if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, issued to the Beneficiary in relation to such contract agreement; and (b) if the Applicant is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Bidding process; or (ii) twenty-eight days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

Form of Bid Security – Bid Bond

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO. _____

BY THIS BOND *[name of Bidder]* as Principal (hereinafter called “the Principal”), and *[name, legal title, and address of surety]*, authorized to transact business in *[name of country of Employer]*, as Surety (hereinafter called “the Surety”), are held and firmly bound unto *[name of Employer]* as Obligee (hereinafter called “the Employer”) in the sum of *[amount of Bond]*² *[amount in words]*, for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written Bid to the Employer dated the ____ day of _____, 20__, for the execution of *[name of Contract]* (hereinafter called the “Bid”).

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) has withdrawn its Bid during the period of bid validity set forth in the Principal’s Letter of Bid (“the Bid Validity Period”), or any extension thereto provided by the Principal; or
- (b) having been notified of the acceptance of its Bid by the Employer during the Bid Validity Period or any extension thereto provided by the Principal: (i) failed to execute the contract agreement; or (ii) has failed to furnish the Performance Security and, if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the Instructions to Bidders (“ITB”) of the Employer’s bidding document.

then the Surety undertakes to immediately pay to the Employer up to the above amount upon receipt of the Employer’s first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration Bid Validity Period set forth in the Principal’s Letter of Bid or any extension thereto provided by the Principal.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

² The amount of the Bond shall be denominated in the currency of the Employer’s country or the equivalent amount in a freely convertible currency.

Principal: _____ Surety: _____
Corporate Seal (where appropriate)

(Signature)
(Printed name and title)

(Signature)
(Printed name and title)

Form of Bid-Securing Declaration

Date: *[insert date (as day, month and year)]*
RFB No.: *[insert number of Bidding process]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding or submitting proposals in any contract with the Employer for the period of time of *[insert number of months or years]* starting on *[insert date]*, if we are in breach of our obligation(s) under the bid conditions, because we:

- (a) have withdrawn our Bid during the period of Bid validity specified in the Letter of Bid;
or
- (b) having been notified of the acceptance of our Bid by the Employer during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security and, if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the ITB.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Name of the Bidder* _____ *[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder** *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid *[insert complete title of the person signing the Bid]*

Signature of the person named above _____ *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

****:** Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid *[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]*

Technical Proposal

Technical Proposal Forms

- **Key Personnel Schedule**
- **Equipment**
- **Site Organization**
- **Method Statement**
- **Mobilization Schedule**
- **Construction Schedule**
- **ESHS Management Strategies and Implementation Plans**
- **Code of Conduct (ESHS)**
- **Others**

FORM PER -1

Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Key Personnel

1.	Title of position:	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
2.	Title of position: <i>[Environmental Specialist]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
3.	Title of position: <i>[Health and Safety Specialist]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
4.	Title of position: <i>[Social Specialist]</i>	
	Name of candidate:	

	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
5.	Title of position: <i>[insert title]</i>	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>

**Form PER-2:
Resume and Declaration
Key Personnel**

Name of Bidder

Position [#1]: [title of position from Form PER-1]											
Personnel information	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;">Name:</td> <td style="padding: 5px;">Date of birth:</td> </tr> <tr> <td style="padding: 5px;">Address:</td> <td style="padding: 5px;">E-mail:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Professional qualifications:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Academic qualifications:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Language proficiency:<i>[language and levels of speaking, reading and writing skills]</i></td> </tr> </table>	Name:	Date of birth:	Address:	E-mail:	Professional qualifications:		Academic qualifications:		Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>	
Name:	Date of birth:										
Address:	E-mail:										
Professional qualifications:											
Academic qualifications:											
Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>											
details	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 5px;">Address of employer:</td> </tr> <tr> <td style="width: 40%; padding: 5px;">Telephone:</td> <td style="padding: 5px;">Contact (manager / personnel officer):</td> </tr> <tr> <td style="padding: 5px;">Fax:</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Job title:</td> <td style="padding: 5px;">Years with present employer:</td> </tr> </table>	Address of employer:		Telephone:	Contact (manager / personnel officer):	Fax:		Job title:	Years with present employer:		
Address of employer:											
Telephone:	Contact (manager / personnel officer):										
Fax:											
Job title:	Years with present employer:										

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert the number of days/week/months/ that this Key Personnel will be engaged]</i>

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Bid evaluation;
- (b) my disqualification from participating in the Bid;
- (c) my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day month year): _____

Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria). A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder. The Bidder shall provide all the information requested below, to the extent possible. Fields with asterisk (*) shall be used for evaluation.

Type of Equipment*		
Equipment Information	Name of manufacturer,	Model and power rating
	Capacity*	Year of manufacture*
Current Status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

The following information shall be provided only for equipment not owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Site Organization

Provide a detailed description/illustration of the proposed site organization in terms of personnel, offices, materials storage, workshops etc.

Method Statement

Provide a detailed description of the proposed method statement to execute the works

Mobilization Schedule

Provide a detailed description/illustration of the proposed mobilization schedule for materials, equipment, labour etc. including sources.

Construction Schedule

Provide a detailed description/illustration of the proposed construction schedule

ESHS Management Strategies and Implementation Plans

(ESHS-MSIP)

The Bidder shall submit comprehensive and concise Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP) as required by ITB 11.1 (i) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ESHS provisions of the contract including those as may be more fully described in the Works Requirements in Section VII.

Code of Conduct: Environmental, Social, Health and Safety (ESHS)

The Bidder shall submit the Code of Conduct that will apply to the Contractor's employees and subcontractors as required by ITB 11.1 (i) of the Bid Data Sheet. The Code of Conduct shall ensure compliance with the ESHS provisions of the contract, including those as may be more fully described in the Works Requirements in Section VII.

In addition, the Bidder shall submit an outline of how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.

Others

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder

Form ELI -1.1: Bidder Information Form

Date: _____
 RFB No. and title: _____
 Page _____ of _____ pages

Bidder's name
In case of Joint Venture (JV), name of each member:
Bidder's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Bidder's actual or intended year of incorporation:
Bidder's legal address [in country of registration]:
Bidder's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1. <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing: <ul style="list-style-type: none"> • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Employer
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. <i>[If required under BDS ITB 47.1, the successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.]</i>

Form ELI -1.2: Information Form for JV Bidders

(to be completed for each member of Joint Venture)

Date: _____

RFB No. and title: _____

Page _____ of _____ pages

Bidder's Joint Venture name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and is not under the supervision of the Employer, in accordance with ITB 4.6.
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. <i>[If required under BDS ITB 47.1, the successful Bidder shall provide additional information on beneficial ownership for each JV member using the Beneficial Ownership Disclosure Form.]</i>

Form CON – 2: Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's Name: _____
 Date: _____

Joint Venture Member's Name _____
 RFB No. and title: _____
 Page _____ of _____ pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 st January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.			

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)

<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
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Form CON – 3: Environmental, Social, Health, and Safety Performance Declaration

[The following table shall be filled in for the Bidder, each member of a Joint Venture and each Specialized Subcontractor]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member's or Specialized Subcontractor's Name: *[insert full name]*

RFB No. and title: *[insert RFB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Environmental, Social, Health, and Safety Performance Declaration in accordance with Section III, Qualification Criteria, and Requirements			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5. Details are described below:			
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i>	<i>[insert amount]</i>

		Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	
...	...	<i>[list all applicable contracts]</i>	...
Performance Security called by an employer(s) for reasons related to ESHS performance			
Year	Contract Identification		Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for calling of performance security: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>		<i>[insert amount]</i>

Form CCC: Current Contract Commitments / Works in Progress

Bidders and each member of a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Name of contract	Employer, contact address/tel/fax	Value of outstanding work (current US\$ equivalent)	Estimated completion date	Average monthly invoicing over last six months (US\$/month)
1.				
2.				
3.				
4.				
5.				
etc.				

Form FIN – 3.1: Financial Situation and Performance

Bidder's Name: _____
 Date: _____
 Joint Venture Member's Name _____
 RFB No. and title: _____
 Page _____ of _____ pages

1. Financial data

Type of Financial information in (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate, USD equivalent)				
	Year 1	Year 2	Year 3	Year4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US\$ equivalent)
1		
2		
3		

3. Financial documents

The Bidder and its parties shall provide copies of financial statements for _____ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.2. The financial statements shall:

- (a) reflect the financial situation of the Bidder or in case of JV member , and not an affiliated entity (such as parent company or group member).
 - (b) be independently audited or certified in accordance with local legislation.
 - (c) be complete, including all notes to the financial statements.
 - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements³ for the _____years required above; and complying with the requirements

³ If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Form FIN - 3.2: Average Annual Construction Turnover

Bidder's Name: _____
 Date: _____
 Joint Venture Member's Name _____
 RFB No. and title: _____
 Page _____ of _____ pages

		Annual turnover data (construction only)	
Year	Amount Currency	Exchange rate	USD equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

Form FIN - 3.3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria.

Source of financing	Amount (US\$ equivalent)
1.	
2.	
3.	
4.	

Form EXP - 4.1: General Construction Experience

Bidder's Name: _____
 Date: _____
 Joint Venture Member's Name _____
 RFB No. and title: _____
 Page _____ of _____ pages

Starting Year	Ending Year	Contract Identification	Role of Bidder
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	

Form EXP - 4.2(a): Specific Construction and Contract Management Experience

Bidder's Name: _____

Date: _____

Joint Venture Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub- contractor <input type="checkbox"/>
Total Contract Amount			US\$ *	
If member in a JV or subcontractor, specify participation in total Contract amount			*	
Employer's Name:				
Address:				
Telephone/fax number				
E-mail:				

Form EXP - 4.2(a) (cont.)
Specific Construction and Contract Management Experience
(cont.)

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Form EXP - 4.2(b): Construction Experience in Key Activities

Bidder's Name: _____

Date: _____

Joint Venture Member's Name _____

Subcontractor's Name⁴ (as per ITB 34.2 and 34.3): _____

RFB No. and title: _____

Page _____ of _____ pages

Subcontractor's Name (as per ITB 34.2 and 34.3): _____

All subcontractors for key activities must complete the information in this form as per ITB 34.2 and 34.3 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One: _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub- contractor <input type="checkbox"/>
Total Contract Amount			US\$	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				

⁴ If applicable.

Employer's Name:	
Address:	
Telephone/fax number	
E-mail:	

	Information
Employer's Name:	
Address:	
Telephone/fax number	
E-mail:	

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

2. Activity No. Two

3.

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

In reference to ITB 4.8, and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8 (a) and 5.1 *[insert a list of the countries following approval by the Bank to apply the restriction or state “none”]*

Under ITB 4.8 (b) and 5.1 *[insert a list of the countries following approval by the Bank to apply the restriction or state “none”]*

Section VI - Fraud and Corruption

(Section VI shall not be modified)

1. Purpose

1.1 The Bank’s Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

- i. “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii. “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
- iii. “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv. “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v. “obstructive practice” is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank’s Anti- Corruption Guidelines and in accordance with the Bank’s prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;¹ (ii) to be a nominated² sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect³ all

¹ For the avoidance of doubt, a sanctioned party’s ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

³ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm’s or individual’s financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

PART 2 – Works' Requirements

Section VII - Works’ Requirements

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SPECIFICATIONS

STATEMENT OF REQUIREMENTS

Introduction and Context

Government of Uganda through Ministry of Water and Environment under the Water Management and Development Project has received funds from the World Bank and it has planned to utilize part of the funds to procure civil works for construction of hydro-meteorological monitoring infrastructure. The works are necessary prior to installation of the instruments that are to be procured separately.

The Ministry of Water and Environment wishes to procure the services of a competent Contractor to undertake the works under the following categories:

- Category I: 5 No. Digital Water Level Recording Stations
 Category II: 5 No. Ground Water Level Recording Stations
 Category III: 2 No. Automated Full Climate Stations

The coordinates of the selected sites in each category are indicated below. These coordinates and elevations of the stations in the lists have been verified by GPS, and are reasonably accurate. Some coordinates and elevations are less accurate and should be taken as indicative of the location. Local site conditions may require some relocation of the stations, which will be made in consultation with DWRM/GoU. The detailed map indicating the location in Uganda is provided on page 5-7:

Category I – Digital Water Level Recording Stations

S/N	Station name	Coordinates		Description	
		Latitude	Longitude	Administration	Location
1	R. Aswa I	2.583	32.933	Upper Nile WMZ	Upstream of Aswa 2 (Along Lira-Puranga road)
2	R. Pager	3.250	33.883	Upper Nile WMZ	Kitgum town (Along Kitgum – Palabek road)
3	R. Longiro	2.98733	34.1	Kyoga WMZ	About 1 km from Kotido town (Along Kotido-Abim road)
4	R. Nyamwamba	0.25	30.1167	Albert WMZ	In Kasese near proposed air strip
5	R. Nchwera	0811781	9949588	Albert WMZ	Along Katungulu-Ishasha road

The digital water level recording stations will be equipped with bench marks, weirs, stilling well, inlet, protective house, gabion mattresses, fence and pillar gauges. In general, the protective houses will be constructed in such a manner as to be ready to receive hydrometric instruments for installation. A series of staff/pillar gauges will also be constructed for the manual observation of water level as well as three benchmarks tied to the local datum.

Category II – Ground Water Level Recording Stations

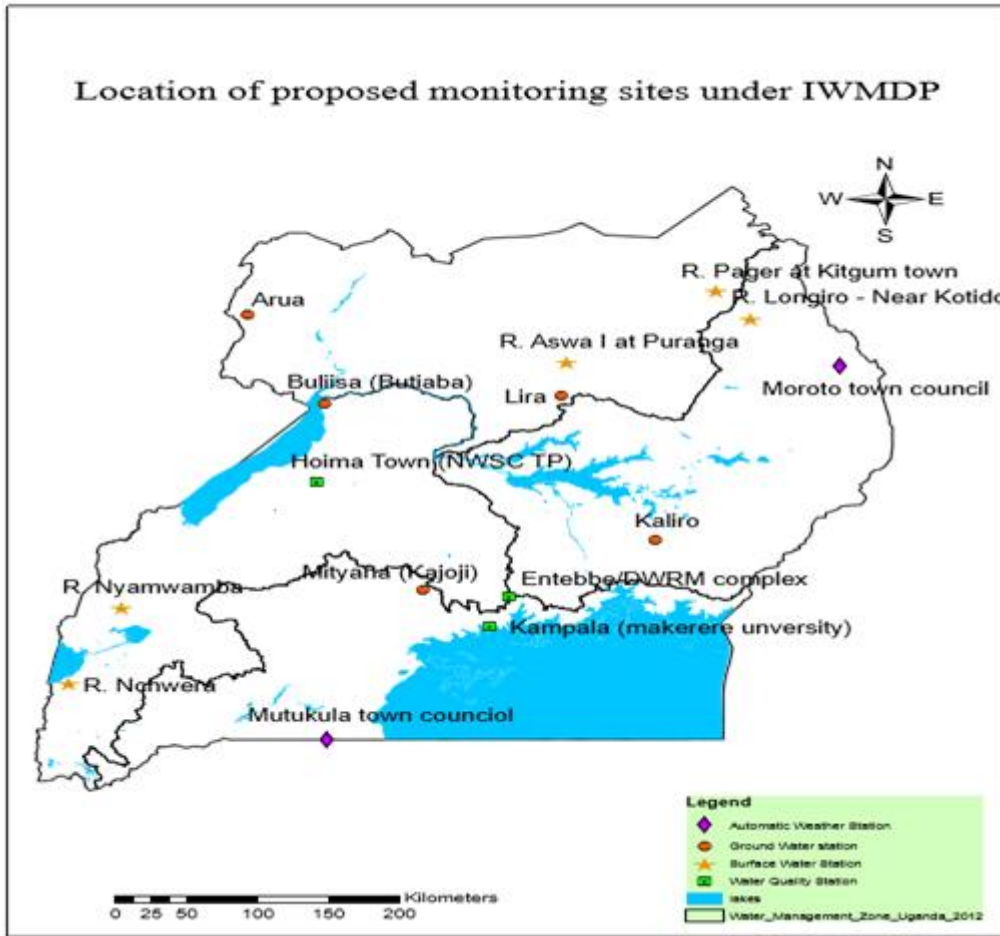
No.	Location	Eastings	Northings	Expected Drill Depth	Expected Aquifers
1	Arua	267402	535145	70m	Overburden and Fractured Bedrock
2	Buliisa (Butiaba)	313718	401082	80m	Overburden and Fractured Bedrock
3	Mityana (Kajoji)	386841	234545	80m	Overburden and Fractured Bedrock
4	Kaliro	556507	299191	60m	Overburden and Fractured Bedrock
5	Lira	488765	450089	75m	Overburden and Fractured Bedrock

Boreholes for the selected ground water level recording stations must be drilled and capped i.e. ready to receive the equipment for installation. A five-meter tower will be required to support the instrument enclosure, solar panel, and communications antenna.

Category III –Automated Full Climate Stations

S/No.	Station Name	Location
1	Mutukula	Mutukula P/S Council
2	Moroto	Municipal council

The basic configuration infrastructure for a typical Full Climate Station will be a 10 x 10 meter fenced observing park with a ten-meter tower for placement of wind sensors. The fence will have a gate for access. Galvanized chain link is preferred for the fence.



TECHNICAL SPECIFICATIONS

General specifications of materials and workmanship

A. Generally

The Contractor shall generally employ the best of the materials and workmanship in compliance with the prescribed specifications and to the satisfaction of the Architect / Engineer.

All materials shall be new unless otherwise directed or permitted by the Architect and in all cases where the quality of goods or materials is not described or otherwise specified, it is to be the best quality obtainable and approved by the Architect / Engineer.

B. Discrepancies in Descriptions

Descriptions of materials and workmanship contained in the Bills of Quantities measured items shall take precedence over descriptions contained in the Specifications in the event of any discrepancies between the two, unless the client shall otherwise direct.

C. Tests and Samples

Unless otherwise described in the Bills of Quantities, the Contractor will be responsible for all the costs involved in testing materials to the satisfaction of the / Engineer. The cost of replacing materials fixed or placed in position which do not comply with the required test results or approved samples shall be borne solely by the Contractor.

DEMOLITIONS

A. Interpretation of Terms

"Demolish" or "Take down" shall be deemed to mean cutting away, breaking up, demolishing, pulling down, taking down, removing, etc. as the context requires and shall include in all cases temporarily strutting and supporting and making good remaining work as necessary, and clearing away and removing from site all debris, etc.

"Remove" shall mean taking down, hacking up, breaking down, removing, etc. and clearing away from site and all other expenses thereby entailed.

"Make good" shall be deemed to mean all making good, fitting, facing up, plastering, paving repairing, etc. to match and jointing up to remaining existing work.

"To match" shall mean to be equal to relevant existing work in design, workmanship and all other respects.

"Re-fix" shall apply to existing materials arising from the Works and shall mean take from stores and fix in new position including making good, repairing and adjusting as necessary.

"NEMA" shall mean National Environment Management Authority.

B. Visiting Site

The Contractor is required to visit the Site and carefully ascertain for himself the nature of Works as no claim for lack of knowledge in this respect will be entertained. The Contractor is to ensure that any flammable or explosive materials such as oil drums and gas cylinders are removed before the demolition work commences. The dimensions and quantities where stated in this Section are approximate and the Contractor is referred to the Site to ascertain the exact size and extent of the Works.

C. Notices

The Contractor must give all necessary notices including statutory notices and must exercise all the due care in the demolitions.

Prior to the commencement of any demolition work the Employer or the Contractor on his behalf shall notify the public utilities companies like the gas, electricity, water and drainage authorities, telecommunications services and associated companies responsible for other installations such as radio and cable television relay lines. It is, the contractor's responsibility to ensure that all services and other installations have been rendered safe or removed by the authority or company concerned.

The demolition work shall be undertaken in a safe manner, supervised by a competent person to ensure safety of persons and adjacent properties. He must not collapse large sections of walls, floors etc. and must provide all necessary temporary shoring and supports during the demolitions. He shall allow the Employer and the Local Authorities facilities for removing any fixtures, fittings or services which belong to them and such facilities shall be deemed to be included in his rates. Where reinforced concrete work is to be demolished, concrete cutters shall be used as shall be directed by the Engineer.

D. Rates for Demolitions

The rates for all items involving demolitions shall include for removing all materials and debris to store or from site and carting away to a tip or dump to be found by the Contractor who shall pay all charges.

E. Shoring and Supports

The items of pulling down and alterations are to include for both labour and materials and for any shoring, needling and strutting and temporary Works in connections therewith. The Contractor must allow in his prices for making good all Works disturbed in all trades and for carting away all rubbish.

The Contractor must provide all necessary temporary shoring and supports during the demolitions, and clear away when no longer required and make good all work disturbed.

F. Nuisances

The Contractor is to carry out the work with the minimum of inconvenience to the public and to the occupants of adjacent buildings and is to indemnify the Employer against any claims arising from such nuisance. In particular he shall keep the debris constantly watered to minimise the dust arising during demolition Works.

G. Materials from Demolitions to become property of the Employer

Any materials of value to the Employer which become available through demolitions are to be returned to store for re-use by the Employer. All other old materials unless otherwise stated are to become the property of the Contractor and credit shall be given for the value of such materials.

H. Disposal of the rubble / debris

All rubble / debris arising out of demolition works shall be dumped / deposited in an approved site to be identified by the Contractor who shall pay all costs pertaining to the loading, transporting, off-loading, dumping / deposit site and local authority, including approvals from NEMA. The dumping site shall not be near wetlands or water sources and be done in accordance with the Uganda Environmental Statute of 1997.

EXCAVATIONS AND EARTHWORKS**A. Examine the Site**

The Contractor is advised to visit and examine the site carefully and ascertain for himself the nature and the kinds of materials to be excavated and he shall price accordingly. No claim will be allowed for want of knowledge in this respect.

B. Demolitions and Clearance

The Contractor shall demolish and break up all existing structures, chambers, pits, obstructions and pavements on site. All the materials arising from the demolition, except where otherwise specified, shall become the property of the Contractor and shall be removed from the site by him and disposed off.

All holes or cuttings at or below formation level left as a result of demolition and clearance shall be backfilled and compacted to the same requirements as holes resulting from the removal of unsuitable material.

C. Site Clearance

Site clearance shall include the cutting down of all trees, stumps, bushes, vegetation and rubbish as instructed by the Engineer, burning the debris arising in approved locations, and carting remaining material to a tip provided by the Contractor. Trees, bushes and shrubs to be retained are to be fully protected during progress of the works.

D. Grubbing

Grubbing up roots etc. shall include the following and disposal shall be as described under the foregoing clauses:-

1. Stumps and roots of large trees shall be completely removed.
2. Stumps and roots of small trees, bushes or other vegetation shall be completely removed to a depth of at least 600mm below formation.
3. Smaller stumps and roots of vegetation up to 25mm thick shall be completely removed to a depth of 230mm below formation.

4. Fine roots shall be removed to as great depth as is practicable by hand.

Except where the area of grubbing is to be excavated, all resulting holes shall be filled up solid with approved material compacted to the same relative density as the surrounding material.

E. Top Soil

Unless otherwise specified, prior to general excavation, all top soil in the areas under construction, whether in cut or fill, shall be carefully stripped and surplus topsoil stockpiled in approved areas and removed from site.

Top soil shall be kept separate from subsoils and shall not contain any rubbish, stone or hard-core, or be contaminated by petrol, oil, lime, cement or other unjurious matter.

F. Materials Arising

Except where otherwise specified, all materials arising from site clearance which are surplus to, or unacceptable for use in the permanent Works, shall become the property of the Contractor and shall be disposed off by him either off the site if unsuitable or, if suitable, in the disposal area as directed by the Architect / Engineer.

Burning on site will not be permitted.

G. General

Where the levels after stripping the top soil are above the required formation levels, the Contractor shall excavate to the required levels.

Material from swamps, marshes or bogs, materials which contain peat, logs, stumps, perishable material or domestic refuse, material susceptible to spontaneous combustion; or clay of liquid limit exceeding 80 and / or plasticity index exceeding 55 unless modified chemically or mechanically to reduce the liquid limit and plasticity index below the above quoted values will not be accepted as filling material in the construction areas and is classified as unsuitable material.

Rocks, stones or boulders greater than 200mm in size shall not be accepted as filling material in the construction areas and are classified as unsuitable material.

Excavations shall be to the widths and depths indicated on the Drawings or to such lesser or greater depths as the Engineer may deem necessary and so instruct the Contractor in order to obtain satisfactory foundations.

Any difference in the quantity of work actually executed under such instructions and that provided in the Bills of Quantities shall be measured and valued by the Quantity Surveyor as a Variation under the relevant Conditions of Contract.

If, however, the Contractor excavates to any greater depths or widths than are shown on the Drawings or directed, then the Contractor shall, at his own expense, satisfactorily fill in such extra depth and width with concrete similar to that described for foundations.

H. Foundation Excavations

The foundation trenches and column bases shall be excavated to the widths and depths of the concrete foundations shown on the drawings or to such widths as the Engineer/supervisor may instruct after examination of the excavations. Quantities of all excavations shall be measured and valued by the Quantity Surveyor and any difference between such measured and the measurements herein given shall be dealt with as a variation of the Contract. If, however, the Contractor excavates to any greater depths than shown in the drawings or as instructed by the Engineer, then he shall at his own expense fill in such extra depth of excavations with concrete as specified for the foundations to the satisfaction of the Engineer. The Contractor shall not be paid for the cost of any excavation executed deeper or wider than shown on the drawings or instructed by the Engineer nor for the cost of back filling such excavation or disposing of surplus.

I. Bottoms to Excavations

The Contractor shall report to the Engineer as and when a secure bottom to the excavations has been obtained and the same is ready to receive concrete.

Any concrete or other work put in before excavations have been inspected and approved, shall, if so directed, be removed and new work substituted after excavations have been approved, all at the Contractor's expenses.

The bottoms of all foundation trenches and column bases shall be trimmed square and level. The Contractor shall form such steps on bottoms of foundation trenches as the Engineer may consider necessary in such positions and to such depths as he may direct.

If so directed, the Contractor shall water and well ram the bottoms of excavations to the satisfaction of the Engineer

J. Starting Level

Unless otherwise described, the starting level of all foundation trenches and pits for column footings, excavations has been measured from the level remaining after completion of reduced level excavation. However, the Contractor's prices should include for carrying out the excavation work in any alternative sequence that he may require.

K. Measurement

Excavation Work is measured net as before digging and the Contractor must allow for increases in bulk after digging. Filling is measured net as after consolidation.

L. Borrow Pits

No borrow pits will be allowed to be opened on the site.

M. Removal of Surplus Material

All surplus excavated material, where so directed, and all rubbish, is to be carried away from the site and the Contractor shall find his own dump and pay all charges.

N. Rock

Any rock or other hard materials encountered in excavating to the required depths which, in the opinion of the Engineer, can only be removed by wedges or compressor plant or explosives shall be paid for as an extra and the price shall include for trimming and levelling. No blasting will be allowed without prior permission. Hard compacted murrum which can be removed by pick, traxcavator, ripper or similar mechanical plant will not be classed as rock, notwithstanding that the Contractor may decide to remove it by wedges or compressor plant.

O. Foundations not to be covered

No excavations or foundations work shall be filled in or covered up until all measurements necessary for the adjustment of variations have been made by the Quantity Surveyor.

P. Rates for Excavations

Excavation for all concrete foundations have been measured to the net sizes required by concrete dimensions.

The rates for excavation MUST INCLUDE for trimming and preparing bottoms and all faces to receive concrete, etc. and for any extra excavation required for planking and strutting.

Prices shall include for excavating in any material encountered unless specifically otherwise described, handling etc. of extra bulk after excavating, or before consolidating any extra excavation required for formwork or planking and strutting circular work, grubbing up any old drains, roots, etc. that may be encountered, for trimming sides and levelling and ramming bottoms, forming steppings and trimming excavations or filling to embankments and batters as required.

Q. Hard-core Filling

Hard-core for filling under floors, etc. shall be good, hard stone ballast or quarry waste to the approval of the Engineer, broken to pass not greater than a 150mm ring or to be 75% of the layers being compacted whichever is the lesser, and graded so that it can be easily and thoroughly compacted by rolling. The filling is to be laid in layers, each of a consolidated thickness not exceeding 200mm and well-watered and rolled with a vibrating roller (minimum 2 tonne) or 10 tonne yard roller. Where rolling is impossible, compaction shall be by hand or mechanical tampers. The top surface of the hard-core shall be levelled or graded to falls as required and blinded with similar materials broken to 25 mm gauge and surfaced with 25 mm layer of stone dust, well-watered and rolled to receive concrete or paving. The surface so obtained shall be to the Engineer's approval.

R. Murrum Filling

Murrum for filling as base course shall be from an approved source and of the highest quality. It shall be laid in layers not less than 100mm thick and not greater than 200mm thick prior to compaction. Water will be applied to O.M.C. and each layer will be thoroughly compacted by at least 8 passes of a 10 tonne smooth wheeled roller or a 2 tonne vibrating roller until all movement ceases and 100% C.B.R. is obtained.

S. Protection from Water

The Contractor must take every precaution to protect the excavation and foundations at all stages of construction from damage from water caused by sudden rains, spring or other means, both by phasing the work to minimise damage and also by means of pumping, shoring, temporary drains and the like. The contractor has the opportunity to price this item in the Bills which follow.

The Contractor shall allow in his prices for keeping the whole of the Works free from standing water and for clearing away and making good any damage caused thereby.

T. Materials found in Excavations

All materials classified as rock may, if approved by the Engineer be used as hard-core filling and the measured quantities of imported filling will be adjusted accordingly; all rock so used must be broken to the required size as before described before being used.

No sand, aggregate, murrum or other material found in the excavations is to be used in the works without the written permission of the Engineer. The materials which have been accepted for use shall be free from all weeds, roots, vegetable soil or other unstable layer to be well wetted and consolidated as described herein.

U. Insecticide Treatment

Where described, the top surface of filling shall be treated with "Aldrex 48" Pesticide (manufactured by the Shell Chemical Company of Eastern Africa Ltd.) to be applied by an approved firm, in accordance with the manufacturer's instructions and subject to a ten year guarantee to the satisfaction of the Engineer.

V. Diothene Sheeting

Diothene sheeting to be used shall be produced by an approved manufacturer. Joints in sheeting shall be treble folded with a 150mm fold and taped at 300mm intervals with 50mm wide black plastic adhesive tapes as manufactured by Sellotape Ltd. The sheeting shall not be stretched but shall be laid with sufficient wrinkles to permit shrinkage up to 15%.

STRUCTURAL CONCRETE SPECIFICATION

A. Engineer

For the purpose of the Concrete Structures the Structural Engineer shall be deemed vested with the duties of and be the representative of the Engineer.

B. Code of Practice for Reinforced Concrete Work

All workmanship, materials, tests and performance in connection with the reinforced concrete work are to be in conformity with the British Standard 8110 and in accordance with the local bye-laws where not consistent with these specifications.

C. Supervision

A competent person approved by the Engineer shall be employed by the Contractor whose duty will be to supervise all stages in the preparation and placing of the concrete. All cubes shall be made and site tests carried out under his direct supervision, in consultation with the Engineer.

D. Contractor's Plant, Equipment and Construction Procedures

Not less than 30 days prior to the installation of the contractor's plant and equipment for processing, handling, transporting and storing and proportioning ingredients, and for mixing, transporting and placing concrete, the Contractor shall submit drawings for approval by the Engineer, showing proposed general plant arrangement, together with a general description of the equipment he proposes to use.

After completion of installation, the operation of the plant and equipment shall be subject to the approval of the Engineer.

Where these specifications, the Bills of Quantities or the drawings require specific procedures to be followed, such requirements are not to be construed as prohibiting use by the Contractor of alternative procedures if it can be demonstrated to the satisfaction of the Engineer, that equal results will be obtained by the use of such alternatives.

Approval of plant and equipment or their operation, or of any construction procedure, shall not operate to waive or modify any provisions or requirements contained in these specifications governing the quality of the materials or of the finished work.

Concrete Work

A. Levels and Foundation

The foundations of the work shall be carried down to depths as may be directed by the Engineer and they must be cut as nearly to the size of the concrete as possible and the vacant spaces between the concrete and solid ground excepting where otherwise shown must be carefully filled in as directed by the Engineer.

All temporary timber shall be removed but should any timber be left in or should any other work be done beyond that specified; it will be at the Contractor's own cost.

B Tolerances

On all setting out dimensions of 6m and over, a maximum non-accumulative tolerance of plus or minus 6mm will be allowed. On all setting out dimensions under 6m, a maximum non-accumulative tolerance of plus or minus 3mm will be allowed. On the cross sectional dimensions of structural members, unless otherwise required by the drawings, a maximum tolerance of plus or minus 3mm will be permitted.

The top surface of concrete floor slabs and beams shall be within 6mm of the normal level and line shown on the drawings. Columns shall be truly plumb and non-accumulative tolerance of 3mm in each storey and not more than 12mm out of plumb in their full height will be permitted. The Contractor shall be responsible for the cost of all corrective measures required by the Engineer to rectify work which is not constructed within the tolerances set out above.

C. Materials Generally

All materials to be used in the Works shall conform to quality and description as specified hereunder and shall be equal to approved samples. In particular, no materials shall be used until approved samples shall be supplied to the Engineer for approval before ordering in bulk and delivery to site. Any material delivered to site which has not been previously approved by the Engineer shall be the Contractor's liability. All materials shall be transported, handled and stored on site so as to preclude damage, deterioration or contamination.

All materials which have been damaged, contaminated or have deteriorated or do not comply in any way with the requirements of these specifications shall be rejected and shall be removed immediately from the site at the Contractor's own expense. No materials shall be stored or stacked on suspended floors without the Engineer's prior approval.

D Samples and Testing

Every facility shall be provided to enable the Engineer to obtain samples and carry out tests on the materials and construction. If these tests show that any of the material or construction do not comply with the requirements of these specifications, the Contractor will be responsible for the costs of the tests and the replacement of defective materials and/or construction.

E. Cement

Cement unless otherwise specified shall be Portland Cement of a brand approved by the Engineer and shall comply with the requirements of B.S. 12, and a manufacturer's certificate of test in accordance with B.S. 12 shall be supplied for each consignment delivered to the site. Provided that the approval of the engineer is obtained, the cement may vary from B.S. 12 in that up to 10% of the total weight may be reactive volcanic ash and the quantity of insoluble residue may be reactive volcanic ash and the quantity of insoluble residue may exceed that specified by B.S.12.

Should the Contractor require using cement of the rapid hardening variety, he shall obtain the approval of the Engineer and also obtain any instructions regarding modifications to these specifications caused thereby. Any additional cost that may be caused by the use of rapid hardening cement shall be at the contractor's expense. Cement may be delivered to the site either in bags or in bulk.

If delivered in bags, each bag shall be properly sealed and marked with the manufacturer's name and on the site is to be stored in a weatherproof shed of adequate dimensions with a raised floor. Each consignment shall be kept separate and marked, so that it may be used in the sequence in which it is received.

Any bag found to contain cement which has set or partly set, shall be completely discarded and not used in the works. Bags shall not be stored more than 1.5 metres in height.

If delivered in bulk the cement shall be stored in a weatherproof silo provided by the cement supplier or by the contractor but in either case the silo shall be to the approval of the Engineer.

F. Aggregates

Aggregates shall conform to the requirements of B.S. 882 and the sources and types of all aggregates are to be approved in all respects by the Engineer before work commences.

The grading of aggregates shall be within the limits set out in B.S. 882 and as later specified and the grading, once approved, shall be adhered to throughout the works and not varied without the approval of the Engineer. Fine aggregates shall be clean, coarse, siliceous sand of good, sharp, hard quality and shall be free from lumps of stone, earth, loam, salt, dust, organic matter and any other deleterious substances. It shall be graded within the limits of Zone 1 or 2 of table 2 of B.S. Sea sand will not be accepted.

Coarse aggregate for concrete Grades '35', '30', '25', shall be black trap, Mazeras, or similar basaltic stone to the approval of the Engineer and coral aggregate will not be accepted. It shall be hard, clean and of good shape, free from dust, decomposed stone, clay, earthy matter, foreign substances or friable thin elongated or laminated pieces. It shall be graded within the limits of Table 1 of B.S. 882 for its respective nominal size.

If in the opinion of the Engineer the aggregate meets with the above requirements but is dirty or adulterated in any manner it shall be screened and/or washed with clean water if he so directs at the contractor's expense.

Aggregates shall be delivered to the site in their prescribed sizes or grading and shall be stockpiled on paved areas or boarded platforms in separate units to avoid intermixing. On no account shall aggregates be stockpiled on the ground.

The Engineer shall be entitled to require a certificate from an approved testing laboratory in connection with each source of fine and coarse aggregate showing that materials comply with the specification.

G. Water

The water used for mixing concrete shall be from an approved source, clean, fresh and free from harmful matter, and comply with B.S. 3148.

H. Expansion Joint Filler

Expansion joint filler to be used by the contractor shall be approved by the Engineer where necessary

I. Joint Sealer

Where necessary Sealers to be used by the contractor shall be approved by the Engineer.

J. Description of a Concrete Mix

The concrete mixes as described are 'guaranteed Strength' mixes in the sense that no proportions are given but the required concrete strength is shown and the Contractor will be required to design a suitable mix with the given grading to fulfil the requirements as laid down hereunder for the relevant classes shown.

The mixes will be composed of the following classes: - 15, 20, 25, 30 and 40. These figures represent the minimum 28 day strength in N/mm² of the works cubes. The maximum size of aggregate shall be shown on the drawings or as ordered by the Engineer, and may be indicated in brackets after the mix class, example class 30(20).

K. Trial Mixes

Trial mixes of the proposed design shall be made on site in the presence of the Engineer or his representative under full scale conditions, the cost of the trial mix being borne by the Contractor.

The workability of the trial mixes shall be recorded and three mixes shall be prepared on three separate days. Nine test cubes shall be made from each mix and six tested at 7 days and the three at 28 days. The trial mix shall be acceptable if the test results comply with the above table.

Concrete Work**A. Weigh Batching Machine**

Weigh batching machines shall be of an approved type and shall be properly maintained and checked for accuracy at regular intervals. For concrete grade 20 and above, the fine and coarse aggregates shall be determined by weight. For lower concrete grades, volume batching as per the table below can be used.

Nominal Mix	Cement	Fine Aggregate	Coarse aggregate
1:3:6	50Kg bag	0.12	0.24

B. Waterproof Concrete

Where 'waterproof concrete' is specified, waterproofing additives of a type approved in writing by the Engineer are to be added to the mixing water strictly in accordance with the manufacturer's instructions. Not more than 25 litres of water per 50Kg bag of cement are to be used unless otherwise approved by the Engineer.

C. Water Bar

Water bar shall be P.V.C. water bar as manufactured by Expedite Limited, or other approved and shall be provided in the positions indicated on the drawings.

Joints shall be heat welded in accordance with the manufacturer's instructions and where the water bar is to be fixed vertically, metal clips as manufactured by the supplier of the water bar or of other approved design shall be provided to suspend the water bar from the reinforcement.

Where waterproof concrete is used the Contractor shall adhere strictly to the position and type of construction joints as detailed on the drawings. Any deviation from this procedure

or the provision of additional construction joints will require the prior approval of the Engineer and any additional water bar so required will be at the Contractor's expense.

Formwork shall be designed with sufficient timber formers and blocking pieces to support the water bar and to ensure that it is not displaced during concreting. In the case of horizontal joints in vertical walling and similar members the formwork shall be so constructed the lower half of the water bar to be poured in the same operation as the slab or other concrete from which it springs. Formwork to walls or similar members where water bar is positioned at the base of the lift shall have sufficient openings not less than 300mm square at approximately 150mm to 300mm above the level of the water bar to permit checking that the water bar is correctly positioned and not displaced during concreting.

No concreting will be permitted to portions where up stand starters from an integral part until the formwork to the starter has been fixed and approved.

D. Concrete Testing

The Contractor shall carry out concrete tests in strict accordance with the Code of Practice using approved equipment for carrying out control tests on the site.

E. Standard for Acceptance of Cube Test Results

The proportions of materials used in the works shall follow the proportions found to be acceptable in the trial mixes. The concrete shall be prepared under the control of a competent person and close control kept over quantities and water content of the materials. Regular testing of the moisture content of the aggregates shall be carried out.

F. Mixing and Placing of Concrete

The concrete shall be mixed only in approved power driven mixers of a type and capacity suitable for the work, and in any event not smaller than 0.50/0.33m³ capacity.

The mixer shall be equipped with an accurate water measuring device. All materials shall be thoroughly mixed dry before the water is added and the mixing of each batch shall continue for a period of not less than two minutes after the water has been added and until there is a uniform distribution of the materials and the mass is uniform in colour.

The entire contents of the mixed drum shall be discharged before recharging. The volume of mixed materials shall not exceed the rated capacity of the mixer. Whenever the mixer is started, 10% extra cement shall be added to the first batch and no extra payment will be made on this account.

The concrete shall be mixed as near to the place where it is required as is practicable, and only as much as is required for a specified section of the work and shall be mixed at one time, such section being commenced and finished in one operation without delay. All concrete must be efficiently handed and used in the works within twenty (20) minutes of mixing. It shall be discharged from the mixer direct either into receptacles or barrows and shall be distributed by approved means which do not cause separation or otherwise impair the quality of the concrete. Approved mechanical means of handling will be encouraged, but the use of chutes for placing concrete is subject to the prior approval of the Engineer.

Any accumulation of set concrete on the reinforcement shall be removed by wire brushing before further concrete is placed.

The Contractor shall provide runways for concreting to the satisfaction of the Engineer. Under no circumstances will the runways be allowed to rest on the reinforcement.

Care shall be taken that the concrete is not disturbed or subjected to the vibrations and shocks during the setting period.

Mixing machines, platforms and borrows shall be clean before commencing mixing and be cleaned on every cessation of work.

Where there are concrete is laid on hardcore or other absorbent materials the base shall be suitably and sufficiently wetted before the concrete is deposited.

G. Compaction

At all times during which concrete is being placed, the Contractor shall provide adequate trained and experienced labour to ensure that the concrete is compacted in the forms to the satisfaction of the Engineer.

Concrete shall not be placed at a rate greater than will permit satisfactory compaction nor to a depth greater than 450mm before it is compacted.

During and immediately after placing, the concrete shall be thoroughly compacted by means of continuous tamping, spading, slicing and vibration. Vibration is required for all concrete of grades '40', '30', '25' and '20'.

Care shall be taken to fill every part of the forms, to work the concrete under and around the reinforcement without displacing it and to avoid disturbing recently placed concrete which has begun to set.

Any water accumulating on the surface of newly placed concrete shall be removed and no further concrete shall be placed thereon until such water is removed.

Internal vibrators shall have a frequency of not less than 7,000 cycles per minute and shall have a rotating eccentric weight of at least 0.7kg with an eccentricity of not more than 12mm. Such vibrators shall visibly affect the concrete within a radius of 230mm from the vibrator.

Internal vibrators shall be inserted between layers of reinforcement less than one and one half times the diameter of the vibrator apart. Contact between vibrators and reinforcement and vibrators and formwork shall be avoided.

Internal vibrators shall be inserted vertically into the concrete wherever possible at not more than 500mm centres and shall constantly be moved from place to place. No internal vibrator shall be permitted to remain in any one position for more than ten seconds and it shall be withdrawn very slowly from the concrete.

In consolidating each layer of concrete the vibrating head shall be allowed to penetrate and re-vibrate the concrete in the upper portion of the underlying layer. In the area where newly placed concrete in each layer joins previously placed concrete more than usual vibration shall be performed, the vibrator penetrating deeply at close internals along these contacts. Layers of concrete shall not be placed until layers previously placed have been vibrated thoroughly as specified. Vibrators shall not be used to move concrete from place to place in the formwork.

At least one internal vibrator shall be operated for every three cubic metres of concrete placed per hour and at least one spare vibrator shall be maintained on site in case of break-

down during concreting operations.

External formwork vibrators shall be of the high frequency low amplitude type applied with the principal director of vibration in the horizontal plane. They shall be attached directly to the form at not more than 1224mm centres.

In addition to internal and external vibration the upper surface of suspended floor slabs shall be levelled with a tamping or vibration screed prior to finishing. Vibrating elements shall be of the low frequency high amplitude type at a speed of not less than 3.000 r.p.m.

H. Curing and Protection

Care must be taken that no concrete is allowed to become prematurely dry and the fresh concrete must be carefully protected within two hours of placing from rain, sun and wind by means of hessian sacking, polythene sheeting, or other approved means. This protective layer and the concrete itself must be kept continuously wet for at least seven days after the concrete has been placed. The Contractor must allow for the complete coverage of all fresh concrete for a period of 7 days. Hessian or polythene sheeting shall be in the maximum widths obtained and shall be secured against with. The Contractor will not be permitted to use old cement bags, hessian or material in small pieces.

Concrete in foundation and other underground work shall be protected from falling earth during and after placing.

Traffic or loading must not be allowed on the concrete until the concrete is sufficiently matured and in no case shall traffic or loading be of such magnitude as to cause deflection or other movement in the formwork or damage to the concrete members. Where directed by the Engineer props may be required to be left in position under slabs and other members for greater periods than those specified hereafter.

I. Faulty Concrete

Any concrete which fails to comply with these specifications, or which shows signs of setting before it is placed shall be taken out and removed from the site. Where concrete is found defective after it has set, the concrete shall be cut and replaced in accordance with the Engineer's instructions. On no account shall any faulty, honeycombed, or otherwise defective concrete be repaired or patched until the Engineer has made an inspection and issued instructions for the repair. The whole of the cost whatsoever, which may be occasioned by the need to remove faulty concrete, shall be borne by the Contractor.

Reinforcement

A. Rod Reinforcement

The steel reinforcement shall be mild steel or high tensile steel as detailed on drawings or schedules and shall comply with the latest requirements of the following British Standards:-

Hot rolled bars for the reinforcement of concrete	to B.S. 4449 (metric units)
Cold worked steel for the Reinforcement of concrete	to B.S. 4461 (metric units)
Hard drawn steel wire	to B.S. 4482 (metric units)

It shall be in metric sizes as detailed on the drawings.
The Contractor shall submit a test certificate of the rolling. Reinforcement shall be stored on racks above ground level. All reinforcement shall be free from loose scale or rust, grease, paint or other substances likely to reduce the bond between the steel and concrete.

B. Fabric Reinforcement

To be electrically cross-welded wire mesh reinforcement to B.S. 4483 and of size and weight specified.

C. Fixing Rod Reinforcement

Reinforcement shall be accurately bent to the shapes and dimensions shown on the drawings and bending schedules and in accordance with B.S. 4466. Reinforcement must be cut and bent cold and no welded joints will be permitted unless so detailed.

Reinforcement shall be accurately placed in position as shown on the drawings and before and during concreting, shall be secured against displacement by using No. 18 S.W.G. annealed binding wire or suitable clips at intersections, and shall be supported by concrete or metal supports, spacers or metal hangers to ensure the correct position and cover.

No concrete shall be commenced until the Engineer has inspected the reinforcement in position and until his approval has been obtained and the Contractor shall give two clear days' notice of his intention to concrete.

The Contractor is responsible for maintaining the reinforcement in its correct position according to the drawings, before and during concreting. During concreting a competent steel fixer must be in attendance on the concretors to adjust the positions of any reinforcement which may be displaced. The vibrators are not to come into contact with the reinforcement.

Where reinforcement projects from a concrete section of the structure and this reinforcement is expected to remain exposed for some time, it is to be coated with a cement grout to prevent rust staining on the finished concrete. This grout is to be brushed off the reinforcement prior to the continuation of concreting.

D. Position and Correctness of Reinforcement

Irrespective of whether any inspection and/or approval of the fixing reinforcement has been carried out as above, it shall be the Contractor's sole responsibility to ensure that the reinforcement complies with the details on the drawings or schedules and is fixed exactly in the positions shown therein and in the positions to give the prescribed cover. The Contractor will be held entirely responsible for any failing or defect in any portion of the reinforced concrete structure and including any consequent delay, claims, third party claims, etc., where it is shown that the reinforcement has been incorrectly positioned or is incorrect in size or quality with respect to the detailed drawings or schedules.

E. Spacing Blocks

Spacing blocks of approved size and shape made of concrete similar to that in the surrounding construction and fixed to the reinforcement or formwork by No. 18 S.W.G.

wires set into the spacer blocks, or other approved means, shall be provided where necessary to ensure that the requisite cover is obtained. The Contractor is to include for providing sufficient spacer blocks in his prices for steel reinforcement where a supplier has been nominated. Where composite blocks or other forms of rib construction are used, spacer blocks are to be provided as shown on the drawings. These will generally consist of concrete blocks as described above made to fit the width of the rib less 3mm tolerance and with single or double grooves (depending on the number of reinforcement bars used per rib) in the top surface with wire ties at each groove.

F. Concrete Cover Reinforcement

Unless otherwise directed the concrete cover rod reinforcement over bars in any face shall be:-

Foundations against earth face	50mm
Foundation against blinding	30mm
Columns	20mm
Beams and walls	20mm
Slabs	15mm or the bar diameter
whichever is	the greater.

G. Fixing Fabric Reinforcement

The fabric shall be free from scale, rust, grease or other substance likely to reduce the bond between the steel and the concrete and shall be laid with minimum laps and bound with No. 18 S.W.G. annealed iron wire. In all ground slabs, unless otherwise specified a single layer of square mesh steel fabric shall be placed at a depth of 50mm below the surface of the concrete. The fabric shall comply in all respects with B.S. 3382 and be of the size and weight specified or shown on the drawings.

The fabric shall extend to within 75mm of the expansion joints and shall have laps of at least 230mm at all joints in the fabric at junctions with reinforced concrete beams or other members. It shall be placed on top of the first layer of concrete as previously described and sufficient wire ties shall be provided to ensure that the fabric is held down securely.

H. Fixtures and Indentations in Concrete

No openings, chases, holes or other voids shall be formed in the concrete without the prior approval of the Engineer. Details of any fixtures to be permanently built into the concrete including the proposed position of all electrical conduits 25mm and over in diameter shall be submitted to the Engineer for his approval before being placed.

I. Chases, Holes, etc, in Concrete

The Contractor shall be responsible for the co-ordination with the Electrical and other Sub-Contractors for incorporating electrical conduits, pipes, fixing blocks, chases, holes and the like in concrete members as required and must ensure that adequate notice is given to such Sub-Contractors informing them when concrete incorporating the above are to be poured.

The Contractor shall submit full details of these items to the Engineer for approval before the work is put in hand. All fixing blocks, chases, holes, etc. to be left in the concrete shall be set out and cast with the concrete.

Formwork

A. Materials

The method and system of formwork which the Contractor proposes to use shall be approved by the Engineer before construction commences. Formwork shall be substantially and rigidly constructed of timber or steel or precast concrete or other approved material.

All timber for formwork shall be good sound clean sawn well-seasoned timber, free from warps and loose knots and of scantlings sufficiently strong for their purpose.

B. Construction of Formwork

All formwork shall be of sufficient thickness and with joints close enough to prevent undue leakage of liquid from the concrete and fixed to proper alignment, level and plumb and supported on sufficiently strong bearers, shores, braces, plates, etc. properly held together by bolts or other fastenings to prevent displacement, vibration or movement by the weight of material, men and plant on same and so wedged and clamped as to permit the easing and removal of the formwork without jarring the concrete.

Where formwork is supported on previously constructed portions of the reinforced concrete structural frame, the Contractor shall be in consultation with the Engineers to ensure that the supporting concrete structure is capable of carrying the load and/or sufficiently propped from lower floors frame or portions of the frame to permit the load to be temporarily carried during construction.

Soffits shall be erected with an upward camber of 5mm for each horizontal span or as directed by the Engineer.

Great care shall be taken to make and maintain all joints in the formwork as tight as possible, to prevent the leakage of grout during vibration. All faulty joints shall be caulked to the Engineer's approval before concreting.

The formwork shall be sufficiently rigid to ensure that no distortion or bulging occurs under the effects of vibration. If at any time the formwork is insufficiently rigid or in any way defective the Contractor shall strengthen or improve such formwork as the Engineer may direct.

The Contractor's attention is drawn to the various surface textures and applied finishes required and faces of formwork next to the concrete must be of such material and construction and be sufficiently true to provide a concrete surface which will in each case permit the specified surface treatment or applied finish.

All surfaces which will be in contact with concrete shall be oiled or greased to prevent adhesion of mortar. Oil or grease shall be of a non-staining mineral type applied as a thin film before the reinforcement is placed. Surplus moisture shall be from the forms prior to placing of the concrete.

Temporary openings shall be provided at the base of columns, wall and beam forms and at any other points where necessary to facilitate cleaning and inspection immediately before the pouring of concrete. Before the concrete is placed the shuttering shall be trued-up and any water accumulated therein shall be removed. All sawdust, chips, nails and other debris shall be washed out or otherwise removed within the framework. The reinforcement shall then be inspected for accuracy of fixing. Immediately before placing the concrete the formwork shall be well wetted and inspection openings shall be closed. The erection, easing striking and removing of all formwork must be done under personal supervision of a competent foreman, any damage occurring through faulty formwork or its incorrect removal shall be made good by the Contractor at his expense.

After removal of formwork, all projections, fins, etc., on the concrete surface shall be chipped off, and made good to the requirements of the Engineer. Any voids or honeycombing shall be treated as described in 'Faulty Concrete'.

C. Stripping Formwork

All formwork shall be removed without undue vibration or shock and without damage to the concrete. No formwork shall be removed without the prior consent of the Engineer and the minimum periods that shall elapse between the placing of the concrete and the striking of the formwork will be as follows:-

Beam sides, walls and inclined columns (unloaded) -	3 days
Slab horizontal soffits (prop left under) -	7 days
Beam soffits (prop left under) -	21 days

Removal of props (subject to 7 concrete cube strength being satisfactory) to:-

Slabs -	10 days
Beams -	14 days

If the Contractor wishes to take advantage of the shorter stripping times permitted for beam and slab soffits when props are left in place, he must so design his formwork that sufficient props as agreed with the Engineer can remain in their original position without being moved in any way until expiry of the minimum time for removal of props. Stripping and re-propping will not be permitted.

The above times may be reduced in certain circumstances, at the discretion of the Engineer provided and approved method is adopted at the Contractor's expense to ensure that the required concrete strength is attained before the forms are stripped.

Solid strips in composite slabs shall be considered as beams. The tops of retaining walls shall be adequately supported with stout raking props at intervals required by the Engineer. These props are not to be removed until 7 days after casting of the floor slab.

D. Fair Face

Where fair face is specified the concrete shall be brought perfectly true, smooth and even by rubbing with carborundum stone dipped in cement grout. Such work must be commenced within one hour of removing the formwork and be actively and rapidly pursued until completed, the object being to complete the finish as soon as possible after the removal of the shuttering. On no account may such work be postponed to a later stage in the Contract. Fair face surface shall be clean, smooth, even, true to form and free from all

board marks, joint marks, honeycombing, pitting, etc. The Contractor is permitted at his own expense to provide smooth lining to the forms which will achieve the required finish without rubbing down. All rubbed down work must be lightly washed with plain cold water at the completion of the Contract, and not before the cement grout used in the finish is at least four weeks old after initial mixing.

E. Bush Hammered Finish

The concrete surface prior to the tooling of this finish shall resemble in all respects that produced as 'Fair Face' above. Particular care is required to achieve complete compaction of the concrete.

The bush-hammering shall be carried out using approved tools and shall produce an even, tooled appearance. All arises, projections, etc. shall remain true and sharp and rounding off of edges shall be permitted. The Contractor is to take care that no reinforcement is exposed and that in any case no tooling penetrated the concrete surface by more than 10mm.

The Contractor shall, prior to any bush-hammering taking place, provide a sample measuring 1.00m square to the Engineer indicating the standard of bush-hammering to be achieved. This when approved by the Engineer will form the standard for the entire works. Any surface not complying with this standard shall be removed or made good to the Engineer's satisfaction at the Contractor's expense.

F. Tamped Finish

Areas so specified shall be finished at the time of casting with a tamped finish to the Engineer's approval produced by an edge board. Board marks are to be made to a true pattern and will generally be at right angles to the traffic flow. Haphazard or diagonal tamping will not be accepted.

G. Wrot Lines Formwork

The shuttering shall be constructed on wrot tongued and grooved boarding, plywood on blackboard lines with approved laminated plastic sheeting to produce a concrete surface with truly flat surface completely free from all air bubbles, joint marks, honeycomb and other pinnances and blemishes to the approval of the Engineer.

Should the Contractor desire to use alternative materials he should submit his proposals to the Engineer for approval. Should the Contractor fail to obtain approval and the Engineer subsequently rejects the work, the Contractor will at his own expense carry out all work necessary to attain the approval of the same.

H. Chisel Dressed Finish

Where specified a chisel dressed finish is to be carried out on any grade of concrete but not until it is at least 30 days old. The surfaces are to be fully chisel dressed to remove a maximum of 12mm (average 9mm) of the surface to expose the aggregate without excessive cracking or breaking thereon.

Where the drawings show details of arises of columns, beams, etc. these are to be pre-formed with timber fillets set in the formwork and care must be taken in working up to those to preserve a clean line. For vertical surfaces of walls and columns, particular care

must be taken to remove all sharp projections. For beam soffits this requirement is not necessary.

All chisel dressed surfaces are to have the margin chisel dressed by hand for a minimum width of 75mm commencing from the fillet edge. Thereafter mechanical chisel dressing may be used but the Contractor must ensure that a uniform texture and even plane surface is achieved. The use of pointed steel tools for both hand surfaces are to be thoroughly wire brushed and washed down and protected during the course of construction from damage, dirt, cement grout, etc.

Precast Concrete

A. General

Unless otherwise approved by the Engineer, all precast concrete construction shall be carried out on the site and shall conform to the requirements given elsewhere.

The maximum size of coarse aggregate in precast concrete shall not exceed 20mm except for thickness less than 75mm where it shall not exceed 12mm.

The compaction of precast concrete shall conform with requirements given elsewhere in these Specifications except for thin slabs where use of immersion type vibrators is not practicable. The concrete in these slabs may be consolidated on a vibrating table or by any other methods approved by the Engineer.

Steam curing of precast concrete will be permitted. The procedure for steam curing shall be subject to the approval of the Engineer.

The precast work shall be made under cover and shall remain under the same for seven days. During this period and for a further seven days the concrete shall be shielded by sacking or other approved material kept constantly wet. It shall be stacked in the open for at least a further seven days to season before being set in position. Where steam curing is used these times may be reduced to the approval of the Engineer.

Precast concrete units shall be constructed in individual forms. The methods of handling the precast concrete units after casting, during transport and erection shall be subject to the approval of the Engineer. Providing that such approval shall not relieve the Contractor of responsibility for damage to precast concrete units resulting from careless handling.

Repair of damage to the precast concrete units, except for minor abrasions of the edges which will not impair the installation and/appearance of the units will not be permitted and the damaged units shall be replaced by the Contractor at his own expense.

Moulds for 'Fair Face' precast work are to be made of metal or to have metal or polywood linings or are to be other approved moulds which will produce a smooth dense fair face to the finished concrete suitable to receive a painted finish direct and free from all shutter marks, holes, pinnacles, etc. In his prices for such precast work the Contractor shall include for all rubbing down to produce the finish required, to the satisfaction and approval of the Engineer.

The precast units shall be installed to the lines, grades and dimensions shown on the drawings or as directed by Engineer.

B. Erection of Precast Concrete

The design and method of construction allows for the structural elements to be precast and then completed and jointed on site with insitu concrete.

Insitu concrete in all precast elements shall be Class 30 concrete with a maximum aggregate size of 12mm. This concrete shall be fully vibrated in place and in all aspects the general specification clauses for concrete and the requirements of BS 8110 shall apply.

Concrete Surface Beds

A. General

Concrete for surface beds shall be Grade '20'

Before placing concrete and where specified or shown on the drawings a layer of 500 gauge polythene or diothene sheeting shall be laid on the base course. Minimum 300mm laps shall be provided at all joints.

The concrete shall be placed as soon as possible after being mixed. In transporting the concrete, adequate precautions shall be taken to avoid damage to the prepared base. The concrete shall be spread to such a thickness that when compacted it shall have the finished thickness as specified or shown on the drawings. A layer of concrete 50mm less than the finished thickness shall first be spread and stuck off at the correct level to receive the top fabric reinforcement.

The top layer shall then be added. Not more than 30 minutes shall elapse between spreading the bottom layer. The Contractor shall be responsible for maintaining the reinforcement in its correct position during the placing and compaction of the concrete.

The compaction and finishing of the concrete shall be effected by immersion vibrators and a hand or mechanical tamper weighing not less than 10kg per metre run and having a tamping edge shod with steel strip 75mm wide fixed to the tamper by countersunk screws. Immersion vibrator with 'spade' attachments will be permitted. Compaction shall be continued until a dense, sealed surface finish is achieved. Over-compaction causing an excessive amount of fines to be brought to the surface shall be avoided.

The surface of the concrete shall be finished to the surface texture specified to the levels, falls and cross falls, as directed or shown on the drawings and shall be subject to the following tolerance:

The level shall be within or –6mm of the levels specified.

The falls shall be within 10% of the falls specified.

The smoothness shall be such that departure from a 3.00m straight edge laid in any direction not exceed 3mm.

Minor irregularities shall be made good by the use of a steel float but in no circumstances shall mortar be used to make good the surface.

As soon as the surface has been finished, it shall be protected against too rapid drying by means of damp hessian, polythene sheeting or other approved means placed carefully on the surface and kept damp and in position for 7 days and the concrete shall be kept set for further 21 days. The most critical period is the first 24 hours after placing and curing during that time shall be very thorough. The Contractor is to obtain the Engineer's approval to the material and method he proposes to use for curing and no concreting will be permitted until such sufficient material is on site.

Forms shall not be removed from freshly placed concrete until it is at least 24 hours old. Care shall be taken that in their removal no damage is done to the concrete, but should any damage occur the Contractor shall be responsible for making it good.

B. Expansion Joints in Concrete Surface Beds

Expansion joints shall be positioned and constructed as shown on the drawings. The joints in the surface beds shall be absolutely square and true to line and position.

All joints in surface beds shall be formed to the patterns and shapes to coincide exactly with the joints in the surface finish or as otherwise indicated on the drawings. Formwork shall be manufactured from steel of heavy angle section and be to the Engineer's approval. The Contractor shall submit drawings of the forms he intends to use and obtain the Engineer's approval before fabrication. Panels shall be poured in alternate bays as agreed with the Engineer. No construction joints other than those indicated on the drawings shall be submitted.

C. Notes Concerning Measurement and Pricing

The Contractor must allow for all costs incurred during the progress of the contract of complying with the provisions concerning the preparation and use of grades mixes.

Prices for concrete shall include for mixing and depositing as described or indicated and for hoisting and depositing at the various levels required throughout the building, and shall also include for forming or hacking a satisfactory key for all faces receiving asphalt and plaster work.

Prices for slabs shall also include for levelling off the surface as described under 'Compaction', and all temporary formwork to form construction joints at bay edges.

Prices for reinforced concrete shall, in addition, include for filling into, between or on formwork and thoroughly compacting between and around rods or fabric reinforcement and for forming all additional construction joints between varying mixes. Where described as vibrated prices must include for fully vibrating as described.

Formwork (use and waste only) is measured net to the actual face of the concrete to be supported and the prices for formwork shall include for extra material at joints, extra labour and waste for narrow width, small quantities, overlaps passing at angles, straight cutting and waste, splayed edges, notchings, etc. and for fixing at the various levels including battens, struts, and supports and for bolting, wedging, easing, striking and removal. Prices for linear items such as boxing shall include for angles and ends. Strutting has been measured at varying levels to soffits only and prices for other items must include for strutting at any level.

Prices for steel rod reinforcement shall include for cutting to length and all labour in bending and cranking, forming hooked ends, handling, hoisting and fixing in position and for providing all necessary tying wire and supports.

Prices for fabric reinforcement shall include for all straight cutting and waste, handling, hoisting and fixing in position, providing all necessary tying wire, and all extra material in laps.

Prices of all precast concrete shall include for all finishings as described, handling reinforcement, hoisting and fixing at the required levels, bending, jointing and pointing in

cement and sand (1:5) mortar, also for casting or cutting to the exact lengths required and any waste resulting from such cutting. The sizes of weathered or moulded items stated are extreme sizes.

Concrete in main beams has been measured to the full width thereof and for full depth to top of slab level and composite slabs are measured separately, the net area between same. No adjustment will be made in these measurements for any projection of ribs, reinforcement, etc. into main beams or floors etc. to obtain bearings, which are deemed to be covered in the Contractor's rates.

Prices for expansion joints shall include for cutting to size all temporary supports and prices for expansion joint sealers shall include all temporary battens or fillets required to form the necessary grooves.

WALLING

A. Bricks

The bricks shall be locally manufactured clay wire-cut to be obtained from Uganda Clays Limited or other approved manufacturer. They shall be hard, sound and well burnt, of even shape and size with sharp well defined arrises, free from flaws, stones and unburnt lumps. Brittle or badly burnt bricks must not be used and broken bricks or bats may only be used where required for bond.

All bricks shall have a minimum average crushing strength of 21.0 N/mm² (3000 lbs/in²) and none are to have a crushing strength below 17.5 N/mm² (2500lbs/in²).

Brickwork shall rise 330 mm in four courses including joints.

B Brick Facings

Brick facing shall be selected well burnt bricks otherwise as last described, selected for darkness of colour to the approval of the Architect / Engineer.

Joints in facing brick walls be neatly raked out whilst still green to a depth of 9 mm to form a recessed square joint to the approval of the Architect / Engineer.

C Samples and Handling

Separate samples of each type of brick, taken at random from a load shall be deposited with and be approved by the Architect / Engineer before being used and all subsequent deliveries shall generally be up to the standard of the sample approved Bricks shall be handled so as to minimise damage. Facing bricks shall not be tipped nor shall they be stacked in such a position as to be discoloured by cement or dirt or affected by vegetable growth and they shall be protected from the weather by tarpaulins or other approved means.

D Concrete Blocks

Shall be or solid complying with B.S 2028 Type A and must be obtained from an approved manufacturer, equal to samples deposited with and approved by the Architect / Engineer.

Load bearing blocks shall have a minimum crushing strength of 3.5 N/mm² of gross area at 28 days.

Unless otherwise shown on the drawings, all concrete blocks are to be 450 mm x 200 mm x 150 mm, fair faced both sides. They shall be manufactured in cement and grey stone dust in the proportions approved by the Engineer and in any case to comply with the minimum crushing strength stated above and to provide a finished grey surface without blemishes, dents, exposed pebbles, broken arises and corners and inconsistent colours.

E Wall Reinforcement

Where so specified, shall consist of two 25 mm wide strips of hoop iron in horizontal joints at approximately 450 mm centres (vertically) for the full length of the walls, lapped 300 mm at running joints and full width of wall at angles and inter-sections.

F Cement

All cement used for making mortar shall be Portland cement complying with B.S12.

G Sand

All sand used for making mortar shall be clean well graded siliceous sand of good sharp quality equal to samples which shall be approved by the Architect / Engineer. It shall be free from lumps of stone, earth, loam, dust, salt, organic matter and any other deleterious substance, sieved through a fine sieve and washed if so directed by the Architect / Engineer.

H Lime

Lime for mortar shall be non-hydraulic or semi-hydraulic quick lime or hydrate lime in accordance with B.S 890, Clause E.

Quick lime shall be run to putty immediately after delivery to site in a pit dug on the site or in an approved container. The water to be first run into the pit or container and the lime to be added until it is completely submerged and stirred until all lumps are disintegrated and the resulting mild-lime shall then be run through a 3 mm square mesh sieve and run into a pit or other container and kept clean and moist for not less than 4 weeks before use.

Hydrated lime shall be added to water in a clean receptacle thoroughly mixed to the consistency of thick cream and allowed to stand and be kept clean and moist for not less than 16 hours before use.

I Cement Mortar

The cement mortar (1:3) shall be composed of 421/2 kgs of Portland cement to 0.085 cubic metres of sand. The cement mortar (1:6) shall be composed of 42.5 kgs of Portland cement to 0.17 cubic metres of sand measured in specially prepared gauge boxes and thoroughly mixed in an approved mechanical mixer or mixed dry on clean and approved mixing platforms, with water added afterwards until all parts are completely incorporated and brought to a proper consistency. The use or retempering of wholly or partially set mortar will not be allowed.

J Gauged Lime Mortar

Gauged lime mortar shall be composed of 2 parts by volume of lime putty to 9 parts by volume of sand measured in specially prepared gauge boxes and mixed dry on clean and approved mixing platforms, with water added afterwards until all parts are thoroughly incorporated and brought to a consistency.

The mortar shall be mixed 7 to 10 days before it is required for use and shall be stacked in a neat heap well smoothed off covered with wet sacks and allowed to mature.

Immediately before use 1 part by volume of Portland cement shall be added to 9 parts by volume of lime mortar, the whole being remixed with the addition of extra water until all parts are completely incorporated and brought to a proper consistency.

The gauged mortar must be used within 45 minutes of being mixed and the use or retempering of wholly or partially set mortar will not be allowed.

K Setting Out

The Contractor shall provide proper setting out rods and set out on the same all work showing openings, heights, cills and lintols and shall build the various walls and piers to the thicknesses, widths and heights shown upon the drawings. No part of the walling shall be carried up more than one metre higher at one time than any other part and in such cases the joining shall be made in long steps so as to prevent cracks arising and all walls shall levelled round at floors and wall heads.

L Bonding Walling

All blocks shall be properly bonded together and in such a manner that no vertical joint in any one course of blockwork shall be within 155 mm of a similar joint in the courses immediately above and below. Alternative course of walling at all angles and intersections shall be carried through the full thickness of the adjoining walls.

M Laying and Jointing

All blocks are to be well wetted before laying and tops of walls where left off shall be well wetted before commencing building. All joints are to be 10 mm thick and flushed up and grouted in solid as the work proceeds.

All exposed faces of walls for plastering are to be left rough and the joints raked out while mortar is green to form adequate key. All other faces shall be cleaned own on completion with a wire brush or as necessary and mortar droppings, smear marks, etc. removed and rates must include for this.

N Putlong Holes

All putlog holes shall be carefully, properly and completely filled up on completion of walling and before plastering is commenced.

O Prices to Include

The prices for walling shall include for all straight cutting, bonding, plumbing angles, forming reveals, pinning up to underside of concrete soffit and cutting up to sides of columns and cutting and pinning ends of lintols and cills.

P Damp Proof Membrane

The damp proof membrane shall be polythene manufactured by an approved manufacturer. It shall be laid immediately prior to concreting and the Contractor shall exercise great care to avoid damage. All joints shall be lapped a minimum of 300 mm.

Q Damp Proof Courses

Bituminous felt damp proof courses shall be asbestos based to B.S 743, Type C, weighing not less than 3.75 kgs per square metre, free from tears and holes, lapped 150 mm at running joints and for full width of wall at angles and intersections and bedded on and including a 12 mm levelling screed of cement mortar pointed.

R Protection

The whole of the walling shall be carefully protected and special care shall be taken in protecting face work from mortar splashes and the like and in making good putlog holes.

ROOFING

A. Lightweight Roof Screed and concrete slab concrete

Lightweight screeds shall consist of cement with "pudlo" or similar waterproofing compound thoroughly mixed in proportion of 2 Kg of "pudlo" to 48kg of cement and sand (1:4) and be finished to falls and cambers.

The surface of the concrete roof of which the screeds are to be laid shall be perfectly dry before laying commences.

The screeds shall be laid to falls and cross falls as indicated on the drawings and the surfaces floated perfectly smooth and free of all irregularities and projections to receive the felt roofing.

On completion of the screeds they shall be covered with a waterproof cover to prevent too rapid drying or the re absorption of rainwater before being covered with felt.

The concrete roof slab shall be constructed in accordance with the specifications in the drawings, or otherwise specified by the Engineer. All works shall be approved by the Engineer on site.

C Making Good

Carefully inspect all roofing works on completion and make good or replace all defective materials and workmanship, clean out and leave all perfectly sound and watertight.

CARPENTRY

A Materials

I - Timber

1. All Timber: To be clean, sound, merchantable, properly seasoned timber free from any defects or combination of defects, natural or otherwise, making it unsuitable for its function in the Works. The timber shall be sorted and selected at the time of fabrications for suitability for purpose.
2. Species of Timber: The following timber species shall be used or any other approved species as per BS 881 and 389.

Standard Common Name	Botanical Name
Cypress	Cypressus
Podocarpus	Podocarp Supp.
Ceda	Juniperus Procera
Africa Mahogany	Kaaya anthotheca

II - Storing and Handling

1. Generally: Do not store any timber or board materials in recently build wet construction; or anywhere unventilated.
2. Timber: Store as follows:
 - (i) Each grade separate and treated timber separate from untreated.
 - (ii) Off the ground of levelled bearers in a manner that prevents sagging and permits free air circulation.
 - (iii) If timber is damp or if a preservative is not fully dried out, stack as last but 'in stick'.
 - (iv) Protect from weather; keep any temporary covers from close contact with the timber.

STRUCTURAL STEELWORK**A. Quality of Materials and Workmanship**

The quality of all materials and workmanship used in the execution of this contract shall comply with the requirements of most recent issues of the following British Standards and Codes of Practice, including all amendments as of date of calling for tenders.

BS. 4390 Weldable Structural Steel

BS. 449 The use of Structural steel in Building Incorporating BS. Code of Practice CP113 including Addendum No.1)

BS. 4(Part 1) Hot Rolled Sections

BS. 4(Part 2) Hot Rolled Hollow Sections

BS. 2994 Cold Rolled Steel Sections

BS. 938 General Requirements for the Metal Arc Welding of Structural Steel Tubes to BS. 1775, (BS.938 be considered to apply the requirements to welding of hot rolled hollow sections to BS. 4 Part 2).

BS. 1856	General Requirements for the Metal Arc Welding of Mild Steel
BS. 639	Covered Electrodes for Metal Arc Welding of Mild Steel
CP. 2008	Protection of iron and steel structures from corrosion

The Engineer may at any time require any materials to be tested in accordance with the requirements of the Standards listed above. The cost of all successful tests shall be borne by the client, but the Contractor shall if required, promptly at his own expense test pieces as standard shall be borne by the Contractor. If in the opinion of the Engineer faulty material and/or workmanship have been used in the Works, the Contractor may be directed to dismantle and cut out the parts concerned and remove them for examination and testing. The cost of dismantling required by the Engineer. The cost of the tests on materials failing to comply with this, cutting out and making good to the approval of the Engineer shall be borne by the Contractor.

Fabrication

A. Cutting & Bending

All members, plates, brackets, etc., shall be neatly and accurately sheared, sawn, or profiled to the required shape as shown on the drawings. Where steel is oxy-cut to shape, care shall be taken to preserve the full finished sizes required.

If members or plates are bent or set, the bends or sets shall be correctly made to the radii or angles specified without leaving hammer marks. The material may be heated to permit this. The material that has been heated shall be annealed to approval.

B. Punching and Drilling

Holes for black bolts shall be drilled or punched 1.5mm larger in diameter than the bolt used. Holes for high tensile friction grip bolts shall be drilled or sub-punched and reamed to 1.5mm larger in diameter than the specified bolt sizes.

All drilled holes shall be panelled sided and shall be drilled with the axis of the holes perpendicular to the surface. Badly drilled holes shall either be reamed out to approval and larger bolts fitted or otherwise as directed. All rough arises shall be ground off. Holes for bolts in material thicker than 15mm must be drilled. When holes are drilled in one operation through two or more thicknesses of material, the parts shall be separated after drilling and all burrs removed before assembly. Holes for bolts shall not be formed by a gas cutting process.

C. Bolting

All bolts used shall be of such length that at least on full thread is exposed beyond the nut after the nut has been tightened. Where a nut or bolthead would bear on an inclined surface, a bevelled washer of the correct shape shall be interposed between two surfaces. Bevelled washers shall not be allowed to get out of position during fabrication and erection and for this purpose may be spot welded to the steel surface. Bevelled washers for use with high tensile bolts may not be weld

D Black Bolts, Nuts and Washers

All black bolts, nuts and washers, shall comply with the requirements of BS 916.

E High Tensile Bolts, Nuts and Washers, Friction Grip bolts

All high tensile steel bolts, nuts and washers used in friction grip joints shall comply with the requirements of BS.3189 and shall be used in accordance with BS.3294.

F Pressed Steel Purlins

Pressed or cold rolled steel purlins and girths shall be to the sizes indicated on the drawings and shall be formed from approved steel strip with minimum yield strength of 188N/sq.mm.

The sections shall be manufactured straight and free from twist, the tolerance away from straightness shall not be greater than 1.5mm for every 1500mm in length along any folded edge.

G Electric Welding

All welding shall be carried out in strict accordance with the requirements of BS. 1856 and 938 and electrodes shall comply with BS.639.

Fusion faces shall be free from irregularities such as tears, fins etc., which would interfere with the deposition of weld metal.

Fusion faces shall be smooth and uniform and shall be free from loose scale, slag, rust, grease, paint and/or other deleterious material.

All welds shall be of acceptable types, shall be of the finished sizes specified, and shall be carried out in such sequence that minimum distortion of the parts welded results.

Preparation of edges for welding shall be carried out by planning or machine flame cutting. Manual flame cutting may be permitted in certain circumstances.

Parts to be welded shall be maintained in their correct relative positions during welding, preferably by jigs.

Multiple run welds shall be carried out with each run closely following the previous run but allowing sufficient time for the proper removal of slag.

The Contractor shall ensure that each run is inspected and any unsatisfactory weld cut out and remade to approval.

Welds in material one inch or greater in thickness shall be made by the Argon arc or similar approved process, and special precautions shall be taken to prevent weld cracking.

Unless otherwise shown, the minimum size of fillet shall be 6mm.

On completion, welds shall present a smooth and regular finish. Weld metal shall be solid throughout with complete fusion between weld metal and parent metal and between successive runs throughout the joint.

Defects shall be cut out and made good to approval in sound weld metal. The external faces of butt welds are to be ground smooth on completion and to be to the approval of the Engineer.

Shop and Field Connection

A. Rolled Sections

All shop connections shall be electric welded or bolted with high tensile friction grip bolts.

No bolts used shall be less than 12mm diameter and no weld less than 40mm in length. At least two bolts shall be used in connections transmitting loads unless otherwise indicated by the Engineer.

No weld of length less than four times the nominal fillet size shall be deemed capable of carrying load.

Beam to column connections not detailed shall be on "standard" top and bottom cleat connections with the load carried on the bottom cleat. "Standard" web connections shall be used for connecting beams to beams.

Field connections shall be as detailed, i.e. bolted with high tensile or block bolts in drilled holes. Black bolts in punched holes will only be permitted for connections carrying a designed load or for connections to timber members.

B Structural Hollow Sections:-

Circular and Rectangular

Hollow sections shall be connected by electric welding unless shown otherwise.

The design of welds shall be in accordance with Clauses 54 and appendix C of BS. 449.

Butt welds shall be made with the fusion surface of the ends of each member properly prepared and the members properly aligned.

Assembly

C Trusses and Portal Frames

Trusses shall be carefully set out to the dimensions shown on the drawings.

Where it is required that trusses be cambered, such camber shall be provided by bending the bottom chord to the arc of a circle.

Notwithstanding any dimensioned spacing of purlin cleats, the Contractor shall ensure that purlin clear spacing is satisfactory for available stock lengths of roof sheeting. However, the Engineers' approval must first be obtained before any alteration is made in purlin spacing or sheeting sizes. Splices in portal and other frames shall be made where shown on the details or where directed.

D. Boxed Members

Abutting edges of boxed members shall be corrected and scaled with a continuous weld to exclude the entrance of moisture. Where specified such weld shall be ground flush to approval.

E. Shop Assembly

Such assembly of units in the shop as is specified or necessary before transporting to the site will be inspected by the Engineer before painting. The work will be laid out in the shop or yard so that all parts are accessible for inspection and testing of the work. The Contractor shall furnish all facilities for inspection and testing of the work and he must notify the Engineer on each occasion when material is ready for inspection.

F. Marking

All members of the structure to be site assembled shall be match marked in accordance with the shop details and marking plans for approval.

Erection

G. Site Dimensions

No erection shall commence before accurate Site Dimensions have been taken by the Contractor and no claim will be considered should final dimensions differ from those on the drawings. Any modification to the structural steel required in order to comply with site dimensions shall be made on the ground to the Engineer's approval before erection is commenced.

H. Equipment etc.

All erection shall be carried out by competent and experienced men and the Contractor shall take every care to safeguard the public, workmen, and adjoining property.

All gear used shall be of adequate strength and shall comply with all Regulations current at the time.

During erection the work shall at all times be adequately bolted, guyed and/or braced to make the structure secure.

The Contractor shall be held responsible for all damage caused to the structure, workmen, or building during erection.

I. Storing and Handling

Steel shall be stored and handled and erected in such a manner that no member is subject to excessive stresses which could have an adverse effect on the properties of the steel. In the opinion of the Engineer, if the steelwork has been subject to such treatment, the Contractor shall remove this steel from the site and replace it at his own expense.

J. Erection Details

No member or part of a member which has been bent or distorted shall be erected in that condition. All straightening shall be done on the ground.

Columns shall be wedged to line and level on steel or cast iron wedges and checked by the Engineer. After acceptance, column bases shall be grouted to approval before wedges are removed. Unless shown on the drawing, all columns shall be left truly vertical and correct to line and level. Beams, girths, etc., shall be erected level unless otherwise shown, and correctly positioned.

Trusses and open web joists shall be carefully handled at all times and when being erected shall be lifted at such points and in a manner as will preclude any possibility of damage from erection stresses.

Immediately after erection, each truss shall be made secure by purlins, bracing or guys to approval.

Bracing shall be placed in position as soon as dependent work will permit.

K. Field Connections

In making connections, drifting of unfair holes will not be permitted and holes not matching properly shall either be reamed or drilled out and a larger bolt inserted or otherwise as directed.

Holes formed or enlarged by oxy-cutting will be condemned and must be filled to approval by electric welding and redrilled.

L Tightening and Testing High Tensile Erection Grip Bolts

Before assembly, the contact surfaces, including those adjacent to the washer, shall be descaled or carry the normal tight mill scale. They shall be free from dirt, oil, loose scale, burrs, paint (except priming point) pits and other defects that would prevent solid seating of the parts.

Bolts shall be assembled with approved hardened flat or tapered washers as required between the bolt head and nut and the softer mild steel.

When bearing faces of the bolted parts have a slope or more than 1 in 20 with respect to a plane normal to the bolt axis, square smooth bevelled washers shall be used to compensate for the lack of parallelism.

All bolts shall be tightened by the "turn of nut" method. This method shall generally be as specified in BS. 3249 and as approved by the Engineer to achieve in all bolts a minimum tension equal to the proof load.

M Grouping

Unless otherwise detailed on the drawings, a space of not less than one and 40 millimetres and not more than 80 millimetres shall be provided between undersides of column base plates and footings, and between all beam and roof truss bearings and concrete pads, etc.

After each column, beam or roof truss has been wedged up to a line and level and fixed in position to approval, the space between footing or pad and the underside of the base plate or steel member shall be grouted with a mixture of Portland Cement and approved washed sand.

The Portland cement and sand shall be thoroughly mixed to approval in equal proportions by volume with only sufficient water to produce a mixture of "dump earth" consistent and shall be used within twenty minutes of mixing. The caulking mixture shall be packed to approval into the space between base plate and foundation and protected from damage until set.

Painting

A. Paints

All paints are to be supplied by a supplier approved in writing by the Engineer.

Paints are to be delivered to the site or the structural Contractor's works in the original containers as supplied by the manufacturer with seals unbroken and are to be used in strict accordance with the manufacturer's instructions. Manufacturer's representatives are free to visit the site and inspect materials and workmanship, and if necessary take samples of materials for laboratory analysis.

Paints are not to be thinned unless instructed by the Engineer.

No external painting is to be carried out during rain or when rain is likely to occur before the paint has had time to dry.

All surfaces are to be dry and free from moisture at the time of painting.

B. Preparation for Painting

All structural steel shall be thoroughly scrapped and wire brushed to remove mill scale and rust. Dirt and grease or oil shall be washed off with white spirit and the steel allowed drying.

C. Painting

A first coat of Red Lead graphite Primer shall be applied in the works immediately the steel preparation has been completed. A minimum of 24 hours shall elapse before the steel is moved from its position whilst painting.

After delivery to site, the steel shall be carefully examined and all areas where the priming coat has been damaged and / or where rust has developed shall be washed with white spirit

and wire brushed as necessary and further priming coat as for the first coat applied to completely cover the damaged areas.

A minimum of 48 hours after any patching work has been completed, the whole of the steel shall be cleaned off with white spirit and a second coat of Red Lead Graphite Primer of a different approved colour or shade from the first coat shall be applied and the painted steelwork left undisturbed for a further 48 hours.

During erection, surfaces of steel which are to be in contact shall be painted with one further coat of primer as previously described and the surfaces brought together whilst the paint is still wet.

After erection, a third and finishing coat of Micaceous Iron Oxide shall be applied to all steelwork, or super gloss enamel if noted on the drawings.

Bolts, nuts and washers, etc., shall, after erection is completed to approval, be carefully degreased with white spirit and painted as for steelwork.

No external painting is to be carried out during rain or when rain is likely to occur before the paint has had time to dry.

All surfaces are to be dry and free from moisture at the time of painting.

PLASTERWORK AND OTHER FINISHINGS

A Cement

The cement shall be Portland cement (ordinary or rapid hardening), Portland blast-furnace cement or low heat Portland cement. These shall conform to the specifications contained in BS 12, BS 146, BS 915 and BS 1370 respectively.

B Sand

The sand shall be as described for fine aggregate, but that for plastering shall be light in colour and well graded to a suitable fineness in accordance with the nature of the work in order to obtain the finish directed.

C Lime

The lime for plastering shall comply with BS 890, class 'A' for non-hydraulic lime and shall be as rich as obtainable and to approval. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken up and mixed and the wet mixture shall be passed through a sieve of sixty four meshes to the square inch. Lime putty shall consist of freshly slaked lime as above described, saturated with water until semi-fluid and passed through a fine sieve; it shall then be allowed to stand until superfluous water has evaporated and it has become of the consistency of the thick paste, in no case for a shorter period than one month before being used, during which it must be kept damp and clean and no portion of it allowed to become dry. Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to a putty at least 24 hours before use.

D Composition of Plasters, etc.

A mix referred to as 1:4 shall mean 40 kgs of cement and 0.113 cubic metre dry sand. All other mixes shall be construed in a like manner.

E Hacking, etc.

The prices for all paving and plastering, etc. shall include for hacking concrete surfaces and for raking out joints of walls 12 mm deep and for cross scoring undercoats to form a proper key.

Plastering on walls generally shall be taken to include flush faces of lintels, beams etc. in same.

Finishings

A Surfaces

All surfaces to be paved or plastered must be brushed clean and well wetted before each coat is applied. All cement paving and plaster shall be kept continually damp in the interval between application of coats and for seven days after the application of the final coat.

B Dubbing Out

Dubbing out, where required, shall be composed of one part cement to six parts of sand.

C Partially Set Mixes

Partially or wholly set materials will not be allowed to be used or mixed. The plaster, etc, mixes must be used within two hours of being combined with water.

D Samples

The Contractor shall prepare sample square metres of the screeds, paving and plastering, as directed, until the quality, textures and finish required is obtained and approved by the Architect, after which all work executed shall conform to the respective approved samples.

E Finish Generally

All screeds and pavings shall be finished smooth, even and truly level unless otherwise specified and pavings shall be steel trowelled.

Rendering and plastering shall be finished plumb, square, smooth hard and even, and junction between surfaces shall be perfectly true, straight and square.

All work shall be to approval, and any not complying with the above shall be hacked away and replaced at the Contractor's expense.

F Arrisses and Angles

All arrisses and angles shall be clean and sharp or slightly rounded or thumb coved, as directed, including neatly forming mitres.

G Making Good

All making good shall be cut out to a rectangular shape, the edges undercut to form dovetail key, and finished flush with face of surrounding paving or plaster. Cut out and make good all cracks, blisters and other defects and leave the whole of the work perfect on completion.

Finishings:

A Prices to Include

In addition to the foregoing, prices of superficial items are to include for work in narrow widths, all linear labours, angles and arrisses, all fair edges, for making good up to or stopping to a line at the required level at top of skirting or dadoes, where directed, and for making good up to windows, door frames and similar.

The prices for all linear items, unless otherwise measured, are to include for all short lengths, angles and arrisses mitres and ends of every description.

B Prices for Paving

Prices for paving are to include for adequate covering and protection during the progress of the works to ensure that the floors are handed over in perfect condition of completion.

C Light Weight Roof Screeds

Roof screeds shall consist of cement with 'Pudlo' or similar waterproofing compound thoroughly mixed in the proportion of 2 Kg of 'Pudlo' to every 40 Kg of cement and sand and the finished to falls and currents.

D Floor Screeds and Paving

Floor screeds and pavings shall be composed of cement and sand and shall both be laid in areas not exceeding eleven square metres during any period of 24 hours. As bays are formed, battens, strips must be used to retain the exposed edge of the screed.

E. Epoxy Flooring

Before the application of Epoxy Resin flooring all existing paving or tiles shall be taken up and the bed under made perfectly level and prepared to receive new flooring. If necessary the existing bed shall be hacked and a new levelling screed laid to form a level and even surface. Small timber fillets shall be securely fixed at junctions with walls to form coves.

F Terrazzo and Granolithic Finishes

The whole of the terrazzo and granolithic work is to be carried out by a specialist sub-Contractor who is to be specifically approved by the Architect / Engineer and the Contractor will be required to make arrangements for execution of this work and bear all expenses incurred. No change in the rates for this work inserted by the Contractor in these Bills of Quantities will be allowed.

The materials used and method of construction for terrazzo work are to be in accordance with the B.S Code of Practice C.P 204.

The surface finish to terrazzo or granolithic is to be brushed, ground and polished as specified. These textures are to comply with samples approved by the Architect / Engineer.

The terrazzo paving is to be of the overall thickness described with coloured cement and 12 mm marble aggregate unless otherwise described, rolled and trowelled to a dense even surface and rubbed down at completion to a grit finished surface free from holes and blemishes. colours shall be as selected by the Architect / Engineer. The paving is to be laid in square divided by plastic strips anchored securely in the screed and having their top edges truly level with the finished floor surface. The terrazzo work is to be laid and polished complete to the approval of the Architect / Engineer.

The granolithic paving is to be of the overall thickness described and shall consist of one part coloured cement to two parts aggregate to 6 mm gauge mixed with 15% fine dust. Aggregate is to be 70% black trap and remainder approved local coloured stone. Colours shall be as selected by the Architect / Engineer. Paving is to be rolled trowelled to dense even surface and rubbed down at a completion to a grit finished surface free from holes and blemishes. The paving is to be laid in square divided by plastic strips anchored securely in the screed and having their top edges truly level with the finished floor surface. The

granolithic work is to be laid and polished complete to the approval of the Architect / Engineer.

The Contractor is to twice scrub the terrazzo with soap and water before handing over.

Finishings

A Plastering and Rendering Generally

All surfaces to be made good with plaster or rendering to match existing shall be brushed cleaned and be well wetted before plaster is applied. All plaster and rendering shall be kept continuously damp for seven days after application. All arrises shall be finished true and slightly rounded except where otherwise stated, and shall be run at the same time as the adjoining plaster. No partially or wholly set plaster or rendering will be allowed to be used or re-mixed.

The Contractor shall prepare samples of plastering and rendering as directed until quality, textures and finish required is obtained and approved by the Architect / Engineer after which all plastering executed in the work shall conform to the respective approved samples.

The Contractor shall cut out and make good all cracks, blisters, and other defects in existing surfaces and leave the whole of the work perfect on completion. When making good defects the plaster or rendering shall be cut out to a rectangular shape with edge undercut to form dovetailed key, and all finished flush with face of surrounding plaster or rendering.

Rates for plastering and rendering are to include for raking out joints of walling or backing concrete to form a key. Instead of hacking the Contractor will be permitted to treat concrete surface, at his own expense, with bonding fluid such as 'Plaster-weld' manufactured by I. Manager & Sons Limited or other equal and approved, applied in strict accordance with the Manufacturer's printed instructions.

B Cement Rendering

Cement rendering shall consist of cement and sand (1:4) to not less than 15 mm finished thickness and be finished to a true and even surfaces.

C Two Coat Lime Plastering Internally

Lime plastering shall consist of a first coat in cement, lime and sand (1:2:9) and a finishing coat of lime putty skim with 10% cement added. The two coats shall have a total finished thickness of not less than 15 mm on walls and 10 mm total thickness of concrete soffites, beams edge, etc.

The first coat shall be trowelled to a perfectly true and even surface and finished with a wood float, the surface being sprinkled with water from a brush during the process and before it has set thoroughly scratched to form a key. The finishing coat shall not be less than 2 mm thick, thoroughly worked with a steel trowel, sprinkled with water as before and be brought to uniform, smooth and hard surface.

Finishings

A Tyrolean Plaster Finish

Where shown shall be applied to a 12 mm cement rendered backing coat lightly finished with a wood float and allowed to achieve its final setting period. The sand for Tyrolean finish will be washed and of a light coloured nature and sharp. The sand will be screened to

pass a No.20 B.S.S mesh sieve. The dry materials consisting of 1 part cement to 2 parts of sand thoroughly mixed together on a board and then mixed in a bucket or larger container in the proportion of 2:2 1/2 parts of cement and sand to one part of water by volume. The mixture will be flicked into backing coat by means of Tyrolean machine. The finish coat is to be built up to 3 layers to a total thickness of 6 mm and each coat can be applied continuously owing to the great adhesion of Tyrolean. All adjacent surfaces which are not to be treated must be covered. Sample panels are to be produced for the approval of the Architect / Engineer prior to the commencement of the work.

All adjoining surfaces which might be stained or damaged whilst spraying shall be masked.

B. External Exposed Aggregate Finish

External exposed aggregate finish shall consist of a 10 mm thick backing coat of cement and sand (1:4) and a 10 mm thick finishing coat of one part white cement to two parts granite pebbles and brushed to expose the aggregate.

C White Glazed Wall Tiling

The white glazed wall tiles shall be 150 mm x 150 mm x 6 mm cushion edge with associated fittings, of approved manufacture, all to BS 1281. Tiles shall be laid with straight horizontal and vertical joints, bedded in 'Rechafix' mastic cement, pointed in white cement and cleaned down on completion to approval.

D Expanded Metal Lathing

Expanded metal lathing of plastering shall be in accordance with BS 1369 (Plain expanded type) fixed to wood bracketing with galvanised nails. The lathing shall receive a pricking coat of cement and sand (1:4) plaster.

E Protection

All work in this Section shall be adequately protected against damage, to the satisfaction of the Architect / Engineer, until the works are handed over to the Employer.

METAL WORK

1. Generally

All materials shall be of the best of their respective kinds and conform at least to the relevant B.S where such exists. All work shall be carried out strictly as directed and approved by the Architect / Engineer before fixing.

2. Welding

Welding shall comply with the provisions of B.S 538 or other approved standards.

3. Mild Steel

Shall be of approved manufacture complying with the requirements of B.S 15. Welding to comply with the requirements of B.S 538, 938 and 1856. Screws, bolts, washers, etc., to comply with the requirements of B.S 916 and 1494 or other approved standards.

4. Galvanised Steel Sheet

Shall be of approved manufacture, free from all defects and shall hold up to the gauge specified. Galvanising shall be to B.S 729 Part 7 or other approved standards.

5. Nails, Screws and Bolts

Nails, screws and bolts shall be of the best quality mild steel, of lengths and weights approved by the Architect / Engineer. Nails shall be to B.S 1202 and bolts to B.S 916 or other approved standards.

Bolts shall project at least two threads through nuts and all bolts passing through timber shall have washers under heads and nuts.

6. Workmanship

All work shall be carried out in the most workmanlike manner and strictly and directed by the Architect / Engineer. Welding shall be neatly cleaned off and units shall be prefabricated in the workshop wherever possible, the minimum of site welding being employed.

All screwed work shall have full internal and external threads and holes shall have been cleaned off. Counter sinkings must be concentric.

7. Fixing Metal Windows, Doors, etc.

The Contractor's prices for fixing metal windows, doors, burglar-proof grilles, balustrades, etc. shall include for taking delivery in Kampala, transporting to site, storing, checking, assembling and fixing, including screwing to wood frame or cutting mortices for lugs in concrete or walling and running with cement mortar (1:4), bedding frames in similar mortar and pointing in mastic, bedding cills, transomes and mullions in mastic, making good plaster around frames both sides and fixing ceiling and adjusting all fittings.

ALUMINIUM WORKS (Doors, Windows, Shop fronts and Curtain walling)

A.General

Aluminium sections for windows, doors, shop fronts and curtain walling shall be as per the latest Booth Manufacturing Africa Ltd. Catalogue or other equal and approved. All surfaces shall be powder coated or anodized or of any other approved finish as shall be specified in the bills of quantities. Aluminium windows, doors, shop fronts and curtain walling shall be fixed in position with and including lugs plugged and screwed to brickwork, block work or concrete or screwed to wooden sub-frames as the case may be.

B.Glazing

All glass shall comply with B.S.925, free from flaws, bubbles specks and other imperfections and shall be of the types and thicknesses specified in the bills of quantities.

The glass shall be mainly single laminated glass of 6mm sun guard heat strengthened glass of acceptable thermal characteristics, deflection, wind speed, wind load, water and air tightness, and differential pressure and wind resistance levels. Samples and tests of glass shall be submitted to the Architect / Engineer before fabrication and assembly for approval of performance levels. Glass panes shall be cut to sizes to fit openings with not more than 1.5mm play all round. Beading strips shall be of aluminium; plastic or wash leather approved by the Architect / Engineer and shall be cut to fit exactly the line of frame and beads.

C. Drawings and Model of the System

Detailed production / shop drawings of the system shall be submitted by the Contractor to the Architect / Engineer for approval before procurement, manufacture, fabrication and assembly of the panels. A model of curtain walling system shall be made and submitted to the Architect / Engineer for approval before commencement of fabrication.

D."Alcan" Prepainted aluminium Cladding

Prepainted aluminium sheets / panels shall be as manufactured by M/S Aluminium & Light Industries Co (ALICO) Ltd. P.O. Box 6011, Sharjah – United Arab Emirates (UAE) or other approved manufacturer for facade cladding and shall be fixed strictly in accordance with the manufacturers' instructions and the Architect's drawings. The panels shall be 4mm thick and supplied with mild steel angle framing onto which they are fixed including all necessary screws, rivets, plugs and drills, all in accordance with the Architect's drawings and the Manufacturer's instructions. They are to be laid on approved 50mm thick semi-rigid, styrofoam insulation sheets / panels covered both sides with aluminium foil fixed to steel framing and / or on concrete surfaces in accordance with the Architect's drawings and the manufacturer's instructions.

E. Fabrication, assembling and erection

All aluminium works shall be fabricated, assembled and erected by skilled specialists recommended by the Manufacturers and approved by the Architect.

F. On Completion

Remove all scratched, cracked or stained aluminium sections and replace with new to the satisfaction of the Architect. Remove all broken, scratched or cracked panes and replace with new to the satisfaction of the Architect. Clean inside and outside with an approved cleaner. On no account shall windows be cleaned by scraping with glass.

PAINTING**A. Approved Specialist**

All work under this trade must be executed by an approved Specialist unless the Architect / Engineer agree otherwise.

B. Preparation and Priming of Plaster,etc, Surfaces

Plaster surfaces shall be perfectly smooth, free from defects and ready for decoration. All such surfaces shall be allowed to dry for a minimum period of six weeks, stopped with approved plaster compound stopping and rubbed down flush, as necessary, and then be thoroughly brushed down and left free from all efflorescence, dirt and dust immediately prior to decorating. Plaster surfaces which are to be finished with emulsion, oil or enamel paint, shall be primed with an alkali resisting primer complying with the particular paint manufacturer's specification and applied in accordance with their instructions.

C. Preparation and Priming of Metalwork

All surfaces shall be thoroughly brushed down with wire brushes and scraped where necessary to remove all scale, rust, etc., immediately prior to decorating. Where severe rust exists, and if approved by the Architect, a proprietary de-rusting solution may be used in accordance with the manufacturer's instructions.

Shop primed and unprimed surfaces shall be given one coat of metal chromate primer. Galvanised surfaces shall be treated before painting with an approved proprietary mordant or de-greasing solution before priming. Coated surfaces already treated with bituminous

solution shall be scrapped to remove soft parts and then receive two isolating coats of aluminium primer or other approved anti-tar primer.

SPECIFIC/PARTICULAR SPECIFICATIONS

i) SURFACE WATER LEVEL MONITORING STATIONS

The scope of civil works required for each surface water monitoring station is indicated in table x and shall include;

- Site inspection engineering and hydrological surveys
- Site preparation, clearing, levelling and dewatering
- Construction of Benchmarks and pillar gauges
- Construction of stilling well structure and inlet and weir
- Construction of a reinforced concrete protective house
- Construction of chain link fence

Table X: Civil works components at each Surface water level monitoring station

S/N	Station Name	General Components
1	R. Aswa I	3 Bench marks, Gauge Pillars, Stilling well, Inlet, Protective House, Fence
2	R. Pager	3 Bench marks, Gauge Pillars, Stilling well, Inlet, Protective House, Fence
3	R. Longiro	Venturi flume(Parshal), Gabion mattresses, 3 Bench marks, Stilling well, Inlet, Protective House, Fence
4	R. Nyamwamba	3 Bench marks, Gauge Pillars, Stilling well, Inlet, Protective House, Fence

5	R. Nchwera	3 Bench marks, Gauge Pillars, Stilling well, Inlet, Protective House, Fence
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Site Inspection, Engineering and Hydrological Surveys

The Contractor will visit each site with a representative from the Water Resources & Monitoring and Assessment Department (WRM&A) in order to hand-over the site and to give guidance on the placement of the required civil works. This will be followed by signing of a hand-over report by all parties prior to leaving the site. DWRM team comprising of three technical officers and one driver shall also undertake an engineering survey to determine the reduced levels upon which pillar gauges and bench marks shall be set. A report on both the surveyed reduced levels and historical extreme water levels (maximum and minimum) shall be passed on to the contractor to guide excavations and constructions. The costs associated to handing over sites, undertaking engineering surveys and carrying out supervision will be paid for by the contractor. The contractor shall provide for a lumpsum of twenty-three million (23,000,000/=) Uganda shillings per site and pass it over to the client. Table Y shows the stages at which supervision shall be conducted by the client.

Table Y: Stages of supervision per station and associated nights per DWRM staff

S/N	Supervision Stage
1	Site hand-over and engineering surveys
2	Bench marks and Pillar gauges
3	Excavation (Inlet & Stilling well) + Foundation
4	Plinth Wall
5	Floor Slab
6	Stilling well Walls
7	Roof Slab
8	Finishes (plastering, painting, doors, locks, etc)
9	Fence
10	Venturi flume
11	Borehole drilling
12	Technical Commissioning

Site preparation, clearing, leveling and dewatering

The Contractor will clear and level the site as required by the client.

The Contractor will excavate the required footings and trenches for required infrastructure at the site. This may include but is not limited to excavations for fence posts, concrete protective structure, conduit runs, staff gauge posts, bench marks, and for the placement of concrete. The bottom of each excavation will be level with aggregate and tamped.

Benchmarks and Pillar Gauges

Three benchmarks will be installed at each hydrometric station and one at each groundwater station as defined in the final design. The benchmark is to be a precast concrete column 100mm by 100mm by 500mm. The precast concrete column is to have a brass stud, 100mm in length, placed at the top of the column and extending 5mm above the top of the column. The top of the column is to be sloped to shed water.

A concrete collar is to be poured in place around the column. The collar is to be 300mm by 300mm by 100mm thick. The top of the concrete collar is to be at ground level. The concrete column is to be 50mm above the top of the collar.

Fencing

As per the final design specifications, All surface water monitoring stations will require a 6x6 meter fence that is one meter high. Fences are to be constructed of 11.5 gauge galvanized steel chain link mesh with metal fence posts and a gate for access to the station.

The posts are to be placed at 2m spacing. The posts are to be 40mm dia. 16 gauge hot dipped galvanized pipe with top cap to prevent entry of rain.

The footings for the fence posts are to be 300mm by 300mm and 350mm deep and sloped at the top to shed water. The fence post is to be embedded to a depth of 300mm in the concrete footing. The top of the footings is to be at ground level.

The top rail or stringer is to be 40mm dia. 16 gauge hot dipped galvanized pipe.

The gate opening is to be 1000mm wide. The gate is to be hinged with a self-locking latch. The gate is to be constructed of 11.5 gauge galvanized steel chain link mesh.

ii) AUTOMATIC WEATHER STATIONS (AWS)

The list of civil works and tasks required of the Contractor includes:

- Site Inspection
- Site clearing, leveling, and excavating where necessary
- 10m towers with inspection pits for cabling
- Fencing
- Rain Gauge foundations
- Benchmarks

Detailed specifications required for items listed above are provided in the following sub-sections

Site Inspection

The Contractor will visit each site with the DWRM representative to finalize the site location and the placement of the required civil works. Upon completing the site survey the site survey report will be signed by all parties prior to leaving the site.

Site Clearing, Leveling, and Excavating

The Contractor will excavate the required footings and trenches for required infrastructure at the site. This may include but is not limited to excavations for fence posts, towers, rain gauges, conduit runs, bench marks, and for the placement of grounding rods. The bottom of each excavation will be level with aggregate and tamped.

Towers and Inspection Pits

As per the final design all Automatic Weather Stations are to be equipped with a 10m tower and all hydrometric. The 10m towers are to be lightweight or medium duty steel lattice towers constructed of hot dip galvanized steel. The towers are to be self-supporting, and triangular in shape with steel tubal legs and bracing. The towers are to be supplied with a concrete base plate, tapered top, grounding kit, and all required connection hardware. The towers are to be supplied in 2.5m sections of triangular fully welded prefabricated lattice sections with tubular legs and solid round bracings featuring bolted site flange joints.

The 10m-tower foundation is to be constructed with a 1200mm by 1200mm by 500mm thick reinforced concrete footing with a column stump of 800mm by 800mm by 900mm of reinforced concrete. A 90 degree 60 mm I.D. Schedule 40 heavy wall Rigid PVC nonmetallic conduit cast with the foundation for the cable run. Anchor bolts are to be cast with the column stump to a depth of 500mm. The anchor bolts are to be of mild steel with a 12mm dia. and 600mm in length.

The towers are to be supplied with lightning arrestors, copper ground wire, and copper ground rods according to grounding requirements for lightning protection.

An inspection pit or manhole is to be installed within one meter from the base of the tower. The Inspection pit is to be of precast reinforce concrete form, square in shape with an outside dimension of 600mm by 600mm by 600mm deep. The wall thickness will be 100mm. The cover will be precast reinforce concrete 75mm in thickness and have an inside lip to hold the cover in place. The cover will have two u-shaped handles for easy of removal of the cover.

An entry point for the underground conduit will be at the base of the inspection pit and have a insert of 60 mm O.D. Schedule 40 heavy wall Rigid PVC Nonmetallic Conduit of 250 mm in length cast in place. The Schedule 40 heavy wall Rigid PVC Nonmetallic conduit will extend 25 mm inside the wall of the inspection pit. The inspection pits will placed at a depth where the top of the pit (without the cover) will be at ground level.

Fencing

As per the final design specifications, AWS sites will require a 6 x 6 meter fence that is one meter high, while ARG sites will require a 3 x 3 meter fence one meter high. Fences are to be constructed of 11.5 gauge galvanized steel chain link mesh with metal fence posts and a gate for access to the station.

The posts are to be placed at 2.0 m spacing for AWS and 1.5m spacing for ARG. The posts are to be 40mm dia. 16 gauge hot dipped galvanized pipe with top cap to prevent entry of rain.

The footings for the fence posts are to be 300mm by 300mm and 350mm deep and sloped at the top to shed water. The fence post is to be embedded to a depth of 300mm in the concrete footing. The top of the footings is to be at ground level.

The top rail or stringer is to be 40mm dia. 16 gauge hot dipped galvanized pipe.

The gate opening is to be 1000mm wide. The gate is to be hinged with a self-locking latch. The gate is to be constructed of 11.5 gauge galvanized steel chain link mesh.

Rain Gauge Foundations

The foundation for the auto accumulation rain gauge is to be 500mm by 500mm by 600mm deep mass concrete block with a 90 degree 60mm I.D. Schedule 40 heavy wall Rigid PVC nonmetallic conduit cast with the foundation for the cable run. A 75mm O.D. medium duty hot dipped galvanized pipe stand for mounting of the rain gauge is to be cast with the foundation. The pipe stand is to be 570mm in length with 300mm of its length embedded in the concrete foundation. The top of the foundation is to be 50mm above ground level and sloped at the top to shed water.

III. GROUND WATER LEVEL MONITORING STATIONS

The work includes borehole siting, borehole drilling, installation of casings and screens; provision of gravel packing; development of boreholes; test pumping; obtaining water and rock samples; water quality analysis; metallic capping; fencing; as specified hereafter and as directed by the Supervisor.

Drilling Site

The Contractor shall site (borehole siting) and drill the borehole(s) at the exact location(s) designated by the Employer or the Supervisor. Tracks required for access of drilling plant, gear, camp and accessories to the borehole site shall be made by the Contractor, and should as little as necessary interfere with existing fences and cultivated land.

Environmental Protection of the Site

Care must be taken in the handling and storage of all drilling fluids, oils, greases and fuel on site, to avoid any environmental degradation. The Contractor shall dispose of any toxic materials, drilling fluid and other additives, cuttings and discharged water in a manner approved by the Supervisor so as not to create damage to public and private property, and shall adhere to the set of "Environmental Guidelines for Drilling and Test pumping Operations" issued to him by the Employer.

The Contractor's adherence to these guidelines will be closely monitored by the Supervisor, and any infringement by the Contractor may render unacceptable the particular portion of the Works to which it applies. The Contractor shall ensure that all his personnel are aware of these Environmental Guidelines and the consequences of not adhering to them.

Workmanship

The Contractor is expected to carry out all works as instructed by the Supervisor in a thorough and workman-like manner, and up to today's professional standards. He shall carry out operations with the due efficiency and dispatch in accordance with the terms of the Contract and to the satisfaction of the Supervisor. For this purpose the Contractor shall use suitable machinery and gear, and supply efficient and experienced staff.

Equipment And Materials

All necessary machinery, equipment and materials to carry out the borehole sitting, drilling, test pumping, headwork construction, etc. as specified are to be mobilized for the Works. Test pumping equipment should be independent from the drilling rig(s). Prior to mobilization the Supervisor will verify the specifications and state of repair of all major items of plant and transport, and shall have the right to order the removal and/or replacement of any items which in his opinion is insufficient or in unsatisfactory condition. Acceptance by the Supervisor of the Contractors proposed plant and transport does not, however, relieve the Contractor of his obligations under this Contract, in case such plant and transport accepted by the Supervisor fails to successfully complete the required Works.

All machinery, equipment and materials to carry out the said Works shall be handled, transported and stored in accordance with the manufacturers' recommendations to minimize deterioration.

Supervision Of The Works

The execution of the Works is to be supervised by the Employer's appointed Supervisor, as named in the Contract Data. Refer to table Y for associated costs

Borehole Depth and Diameter

The Contractor shall drill to the total depth and at such diameter as will be instructed by the Employer or the Supervisor. No borehole will be acceptable if drilled to a depth and diameter other than that instructed by the Employer or his appointed Supervisor.

Drilling Method

The Contractor may use any rotary drilling technique that he feels applicable to achieve the depth and diameter required, provided that the techniques used are those specified in his proposal or are approved by the Supervisor. The use of bentonite mud, lost circulation agents or any form of plugging material that may ultimately affect the production capacity of the water bearing strata intersected will not be permitted. Any drilling fluid additives must be approved by the Supervisor, and must be of low solids, non-toxic degradable type.

Sampling

Representative, continuous samples (min. 100 grams) of the strata penetrated shall be collected at every 1m interval and when required by the Supervisor, by whatever method is standard for the drilling technique in use and approved by the Supervisor. The Contractor shall take every possible precaution to guard against sample contamination. Samples are not to be washed! Representative samples shall be put into approved containers supplied by the Contractor, labeled in a manner approved by the Supervisor with the borehole number and depth interval,

and stored in a position where they will not be contaminated by site conditions or drilling operations. On completion of work at each site, samples should be handed to the Supervisor's Representative on site at intervals agreed between the Supervisor and the Contractor.

Temporary Casing

Installation and diameter of any temporary casing required for the successful construction of the boreholes will be at the discretion of the Contractor provided that the completed borehole meets the specifications and design required under this Contract and is approved by the Supervisor. The cost for supply, installation and removal of temporary casing shall be entirely for the Contractor. The Contractor cannot claim any casing left in the borehole that is not retrievable, from the Employer.

Water Supply for Drilling

The Contractor shall make his own arrangements for obtaining, storing, transporting and pumping of water, required for drilling purposes and for use by the drilling crew at their camp site.

Borehole Design

The final design of the borehole shall be confirmed by the Supervisor in consultation with the Contractor during the drilling process, or immediately after drilling is completed. Two types of standard borehole designs are given below:

Drilled at 300mm through soft collapsible overburden until firm rock is encountered. Drilled further with 250mm bit for 3m or more through non-collapsing formation. Cased with 7" ND uPVC Class D casing, 6mm wall thickness. Drilling to continue with 150mm bit to final depth. Bottom annular space between uPVC casing and borehole to be grouted with cement slurry of 1.67-2.08 Kg cement/litre (24-30 litres of water per 50 Kg bag of cement). Grout is to be injected into the annulus using tremie pipes, or a method approved by the Supervisor, in a continuous operation so that a complete and continuous seal is achieved.

Casing And Screens

Aquifer zones shall be completely or partly lined with uPVC screen as decided and approved by the Supervisor. The uPVC casings and screens to be supplied by the Contractor shall have a minimum wall thickness of 6mm for 6/7" ND casing. The Supervisor however reserves the right to vary these specifications and reject materials if found substandard. The permanent casing shall be of unplasticised polyvinyl chloride complying with DIN 8061 and DIN 8062 or (ISO 161/1) standards. The casing shall be 150 mm ND and shall have a minimum thickness of 6 mm and tensile strength of at least 45MN/m². The PVC pipes shall be joined by threads and the joints shall be watertight. Centralisers shall be joined in 3 m intervals and at the upper and lower end of the screen.

Filter pipes (screens) shall be of slotted unplasticised polyvinyl chloride (rigid PVC uPVC), complying with DIN 4925, year 1981 standard. Sections of the screen shall be provided in maximum 3m length and joined water tight by either flush threaded connections or by an appropriate method recommended by the screen manufacturer or an equivalent standard, so that the resulting joint shall be strong and have the same structural integrity as the casing and screen themselves.

In particular cases the lower end of the screen should be completed with a sump of minimum 0.5m and maximum 2m length. The bottom end should be sealed with a uPVC bottom cap in case of Design B.

Verticality

All boreholes shall be vertical, shall be drilled and cased straight, and all casings/screens shall be set round, plumb and true to line. If required by the Supervisor, the Contractor will make a verticality test during and after drilling by approved methods and at his own expense to demonstrate that the departure from the vertical does not exceed 3mm per 100mm between ground level and the bottom of the borehole.

If this departure is exceeded, the Contractor shall make the necessary corrections to the approval of the Supervisor, without additional payment. If the error cannot be corrected, then drilling shall cease, and a new borehole shall be drilled at a position nearby, indicated by the Supervisor. The abandoned borehole shall be backfilled and/or capped by methods approved by the Supervisor. No payment will be made for the re-drilling, the sealing/backfilling of the abandoned borehole, or for moving to the new site. Any materials (i.e. casing, screens, gravel pack, cement, etc.) lost in the abandoned borehole will be to the Contractors cost.

Gravel Pack

Suitable gravel pack shall be supplied by the Contractor. Prior to delivery, samples of the gravel pack shall be subjected to a grain size analysis at the Contractors expense and the results must be approved by the Supervisor before the gravel pack is used. Gravel pack should consist of washed, well-rounded particles of a uniform grading of between 2.5 and 4.0 mm, shall comprise 90% siliceous material and must contain no clay, shale, silt, fines, excessive amounts of calcareous material or crushed rock.

In terms of grain size, 90% of the gravel pack material shall conform to the grading specified by the Supervisor prior to the commencement of the Works, and the Contractor shall be required to submit samples of the gravel pack material prior to installation for approval by the Supervisor.

Sufficient gravel pack shall be installed to cover completely the uppermost screen, plus an additional 2m length (to allow for settling). Emplacement should be by means of a conductor pipe, and a good supply of water should be introduced with the gravel to prevent "bridging". The tremie (conductor) pipe should be raised gradually as the level of the gravel builds up. The pack should be capped with a clay seal to prevent contamination. The annular space above this seal can be back-filled with inert drill cuttings. The top 3 metres of the annular space should be grouted, leaving 0.4 meters at the top for construction of the pump pedestal.

Sanitary Seal

To provide an effective seal against the entry of contaminants, the upper 3 meters of the annular space between the casing and the borehole wall will be grouted using cement slurry of 1.85-2.15 kg cement/litre. Grout is to be injected into the annulus in a single operation so that a complete and continuous seal is achieved, by a method to be approved by the Supervisor.

Yield Estimates during Drilling

Yield estimates during the course of drilling shall be made using a method agreed upon by the Contractor and Supervisor. Preferably the calibrated bucket or velocity-area method should be

used. Average yields shall be read as directed by the Supervisor, and recorded in the Daily Record (ref. Paragraph 23 below).

Developments and Cleaning Of Boreholes

Development and cleaning of the boreholes, in order to remove native silts, clays, loose rock particles and drilling fluid residues deposited on the borehole wall during the drilling process, shall be carried out by the Contractor upon completion of the drilling and installation of casing.

If organic drilling fluids are used, they shall be broken down chemically according to manufacturer's recommendations before or during development. Cleaning may be carried out by airlift pumping, surging, backwashing or jetting, to the approval of the Supervisor. Clay desegregation by means of Sodium Hexa-metaphosphate ("Calgon") treatment may, in some cases, also be called for by the Supervisor.

The method proposed by the Contractor for development of boreholes shall be submitted to the Supervisor in writing for his approval. Development of boreholes shall be effective from the depth at which water is encountered to the bottom of each borehole. Development shall continue for such time as directed by the Supervisor and until the Supervisor is satisfied that the water is as free from fine particles as possible. Upon completion of development, any accumulation of material shall be removed from the bottom of the borehole by airlifting.

Test Pumping

The Contractor shall perform test pumping to establish the performance and yield of the borehole, and shall provide a suitable, self-contained, mobile test pumping unit, approved by the Supervisor, for this purpose. The method for varying the discharge rate of the pumps will depend on the type of pump used, but the Contractor shall ensure the provision of a suitable means of achieving the range of constant flow rates specified by the Supervisor.

Test pumping will be undertaken in each productive borehole, as assessed by the Supervisor from the yields indicated during drilling.

In the case of boreholes with indicative yields of between 500 and 1500 l.p.h., the borehole will be tested at a constant discharge rate of 800 l.p.h. for 2-3 hours or until the water level stabilises, as decided by the Supervisor.

In the case of boreholes with an indicative yield of greater than 1500 l.p.h., the borehole will be tested in the manner of a step test, with the initial step being at 800 l.p.h. The well should be tested for 72 hours. The duration of each step shall be 90 minutes, and a minimum of three steps of increasing discharge will be undertaken. The final step should lower the dynamic water level to approximately three metres above the level of the pump. Discharge for each step will be specified by the Supervisor, and should be kept constant. On completion of the final step, the recovery of water level should be monitored by the Contractor until 95% recovery has been achieved, or until advised by the Supervisor. It is anticipated that the maximum testing and recovery time per borehole should not exceed 76 hours.

Water levels shall be measured during test pumping by the Contractor by means of an electric contact gauge (dipper), suitably calibrated such that measurements can be made to an accuracy of 5mm. The frequency of measurement shall be as specified on an agreed test pumping data form or as otherwise determined by the Supervisor.

Discharge shall be measured by volumetric methods, or by means of some other approved calibrated measuring device. During the test pumping, the discharged water must be handled and disposed of in an appropriate manner to a point of overland drainage sufficiently far from the borehole to prevent recharge. This distance shall be at least 100m from the borehole, but may be reduced with the approval of the Supervisor if the pumped aquifer is confined.

During all testing operations, once the flow rate has been determined and preliminary adjustments made, the measured discharge rate shall be maintained within 5% of the required rate for the duration of the test or test stage. Persistent fluctuations beyond this tolerance will require abortion of the test.

When continuous pumping at a uniform rate is specified, failure of the pump operation for a period greater than one percent of the elapsed pumping time shall also require abortion of the test.

Any test which is aborted due to the reasons above shall be repeated, after full recovery of the water level. No payment shall be made to the Contractor for aborted tests, nor for standing time during water level recovery after aborted tests.

Fencing of the groundwater monitoring stations

As per the final design specifications, all groundwater monitoring stations will require a 6x6 meter fence that is one meter high. Fences are to be constructed of 11.5 gauge galvanized steel chain link mesh with metal fence posts and a gate for access to the station.

The posts are to be placed at 2m spacing. The posts are to be 40mm dia. 16 gauge hot dipped galvanized pipe with top cap to prevent entry of rain.

The footings for the fence posts are to be 300mm by 300mm and 350mm deep and sloped at the top to shed water. The fence post is to be embedded to a depth of 300mm in the concrete footing. The top of the footings is to be at ground level.

The top rail or stringer is to be 40mm dia. 16 gauge hot dipped galvanized pipe.

The gate opening is to be 1000mm wide. The gate is to be hinged with a self-locking latch. The gate is to be constructed of 11.5 gauge galvanized steel chain link mesh.

Water Level Observations

The Contractor shall supply appropriate electric contact water level gauges for measuring water level in the boreholes. Measurements must be made to the nearest 10mm at pre-determined intervals, dependent on the nature of the test. Well head arrangements shall permit these gauges to be inserted and passed freely. Any other method of measuring water levels will be subject to approval by the Supervisor.

Electrical Conductivity Measurements

The Contractor shall provide an operational Electrical Conductivity meter to take electrical conductivity readings of the discharge water during test pumping.

Records

Daily activity records shall be kept by the Contractor for each borehole. The records shall contain the information as specified below. In addition separate records should be supplied for each borehole upon completion.

a) Daily Record

- Site name
- Reference number of borehole
- Co-ordinates of borehole (latitude / longitude)
- Date of reporting
- Names of foreman and drillers
- Method of drilling
- Diameter of hole, and depth of changes in diameter
- Depth of hole at start and end of shift or working day
- Depth and size of casing at start and end of shift or working day
- Description of strata drilled with depth of transitions encountered
- Depth at which water is struck
- Yield of air lifted water, when drilling or developing with air
- Time log showing rate of penetration in minutes per metre, type of bit, standby time due to breakdown
- Depth intervals at which formation samples are taken
- Records of components and quantities used or added to the drilling fluid or air.
- Water level at the start of each working day
- Electrical conductivity measurements during test pumping
- Problems encountered during drilling
- Details of installations in the borehole (if any)
- Depth and description of well casing
- Depth and description of well screens
- Details of work to be invoiced at hourly rates (e.g. test pumping)

A copy of the Daily Record shall be made available daily to the Supervisor, and should include any other pertinent data as may be requested by the Supervisor.

b) Borehole Completion Record

- Siting report (VES, profile etc)
- As per standard Borehole Completion Form
- Detailed drillers geological log
- Borehole design (as-built drawing)

A copy of the Borehole Completion Record shall be made available to, and approved by the Supervisor on completion of each borehole, before being forwarded to the Employer. Three copies of these Records shall be forwarded to DWRM, and one copy each to the Employer and the Supervisor.

c) End of Contract Report

The Contractor is required to prepare an end of Contract report, which should address at the minimum the following issues;

- The selected sites (Siting report (VES, profile etc)
(*Suitability, accessibility*)
- The drilling /test pumping methodologies

(Type of drilling, designs used, test-pumping methods)

- Contract schedules and duration
(Summarized diary of events and actual durations)
- Summary of results and analysis.
(Table showing locations, well numbers, depths, casing type and depths, driller's and test pumping yields and any other information necessary)
- Casing /screens received and used on the Contract (if any)
(Table showing casings received, used, damaged and balances)
- Problems encountered
(With accessibility, formations, equipment and community, etc)
- Suggestion for improvement
(On supervision, documentation, durations, etc)
- Borehole Completion Records,
(Original Drilling and test pumping logs bound separately from the report)
- Any other information that the Contractor may deem important or necessary

Two copies of this report one without The Borehole Completion Records) should be submitted to the Supervisor and one copy to the Directorate of water Resources Management (DWRM).

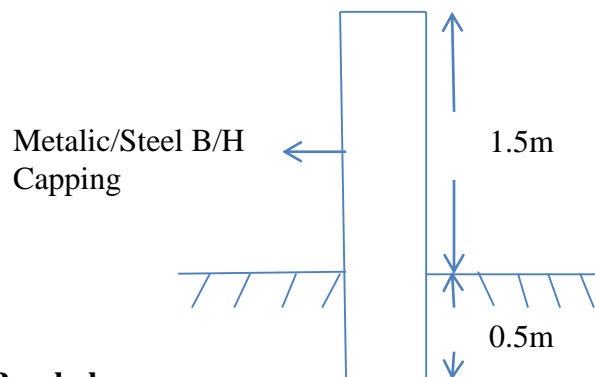
The contractor shall also submit reports to DWRM as provided by the drilling permit regulations.

Water Sampling

Water samples for testing the physico-chemical quality will be taken at the end of the test pumping. The Contractor shall keep on site a minimum of 4 suitable one-litre capacity water containers, and shall collect and store water samples as directed by the Supervisor.

Capping of Borehole

During borehole construction, installation, development and test pumping, the Contractor shall install a metallic/steel pipe 2m long, thickness of 4mm, with a cap supported with hinges and a locking system. The cap should fit properly on the pipe not to allow insects and to enter into the borehole. The steel pipe which is about half a meter (0.5 m) below the ground and one and a half (1.5 m) above the ground. The Contractor shall be responsible for any objectionable materials that may fall into the borehole and any effect it may have on water quality or quantity until completion of the works and acceptance by the Supervisor.



Acceptance of Boreholes

The borehole shall only be acceptable by the Supervisor upon satisfactory completion of all drilling operations, installation of casing and screens, development works, and test pumping.

Loss Of Equipment

Any equipment lost down a borehole must be removed by the Contractor or the borehole will be considered a lost bore. A replacement borehole will have to be constructed and test pumped at the Contractor's expense. The Contractor shall be entitled to NO payment for such tools or equipment.

Lost Bore

Should any incident to the plant, behavior of the ground, jamming of the tools, or casing, or any other cause prevent the satisfactory completion of the borehole, a borehole shall be deemed to be lost and no payment shall be made for that bore or for any materials not recovered therefore, nor for any time spent during drilling or while attempting to overcome problems.

In the event of a lost bore, the Contractor shall construct a borehole at a site indicated by the Supervisor. The option of declaring any bore lost shall rest with the Contractor, subject to the approval of the Supervisor.

A lost bore shall be treated as follows:

- a) The Contractor may salvage as much casing and screen from the lost borehole as possible, and may use it if not damaged in a replacement borehole, with the approval of the Supervisor.
- b) Any material supplied by the Employer and salvaged damaged shall become the property of the Contractor, and the Contractor shall compensate the Employer accordingly.
- c) The lost bore shall be sealed by concrete, cement grout, or neat cement, which shall be placed from the bottom upward by methods approved by the Supervisor that will avoid segregation or dilution of materials.
- d) The upper 2 meters of the lost bore shall be backfilled with native top soil. Sealing of such abandoned boreholes shall be done in such a manner as to avoid accidents or subsidence, and to prevent it from acting as a vertical conduit for transmitting contaminated surface or subsurface waters into the water bearing formations.

Standby Time

In the event of delays occurring as a result of action or inaction by the Employer, for which the Contractor would be entitled to claim Standby Time, the Contractor should notify the Supervisor immediately in writing that such claims are becoming applicable. Standby Time is only effective if all the Contractors plant, equipment and personnel are on site, available for work and in a serviceable condition. Standby Time shall not exceed the standard working day as defined in the Contract Data, and any claim shall only be deemed to start at the date and time of a notice in writing to the Supervisor.

Clearing The Site

On completion of each borehole the site must be left clean and free from all debris, hydrocarbons and waste, and all pits filled to the satisfaction of the Supervisor. A site not delivered clean may render the borehole unacceptable.

Environmental Guidelines and Code of Conduct

Groundwater exploration and development work should be conducted in an environmentally and socially sensitive and responsible manner. These guidelines are intended to ensure that all parties are aware of the potential impacts of their activities, and carry out the work in an appropriate way.

These guidelines are intended as a written statement of intent for Contractors to adhere to, and to which recourse can be made in the event of a perceived undesirable impact. Contractors are required to familiarize all employees with the content and spirit of these guidelines. This document will also be made available to District authorities for their use in similar work.

a) Camps

If and where field camps are needed, their construction and removal should be carried out along the following lines:

- Permission for camp areas must be obtained in writing from the relevant local authorities.
- Suitable latrines and other sanitary arrangements at the camps and sites where work is in progress should be availed to the crew.
- Access roads and the camp area should be sited to cause minimum disturbance. No trees should be cut down, the use of firewood must be restricted to dead wood only and should not conflict with the needs of the residents of the area.
- No permanent structures should be built at the camp.
- The camp should be removed; the site cleared and cleaned free of all debris, waste and hydrocarbons at end of the Contract and local authorities should be shown the cleared site.
- All rubbish (except for oils and other mechanical or chemical waste) should be buried or removed.
- Waste oils, chemical and mechanical waste should be stored and removed to Government/Municipal designated dumping sites or recycling plants.

b) Human Relations

- People, water, land and livestock must be respected.
- Access routes should not normally transgress gardens. But if found necessary, permission to enter the gardens must be sought from the owner. Work should be done with minimal damage to fences, trees or crops.
- All conflicts / disagreements and any agreements (use of water supply etc.) no matter how trivial, must be logged and dated, with details of persons involved and subject matter, in a book for this purpose at the base camp.

c) Drillings Sites

- Each drilling site should be completely cleared of all waste after use. Drilling waste (chippings and mud) should be buried. Rubbish, waste oil and chemicals should be returned to the main camp for disposal as outlined in one (a) above.
- No spillage of oils or fuels should occur.
- On completion of each borehole the site must be left clean and free from all debris, hydrocarbons and waste, and all pits filled to the satisfaction of the

Supervisor.

ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY REQUIREMENTS

The Ministry of Water and Environment's Environmental and Social Safeguards Policy 2018 will apply to this Project. This is bound separately as Volume 4.

Code of Conduct

1.0

Introduction

This serves to highlight on the general Code of Conduct for the implementation of works activity. At the institutional level of the implementing organization, Ministry of Water and Environment (MWE) sets this document as a commitment to ensure smooth implementation of the Project. Consistent with the Ministry's Environment and Social Safeguards Policy, the purpose of the Code of conduct is to ensure that the project entirely complies with all applicable laws and regulations. From the outset, MWE commits not to condone the activities of any implementing partner either as the Consultant, the Contractor or Subcontractors, that may strive to achieve results through the violation of the enabling laws or unethical business dealings including but not limited to payments for illegal acts, concealment of noncompliance, collusion, environmental abuse, and others.

1.1 Purpose of the Code of Conduct

The purpose of the Code of Conduct is to ensure that all project activities are above the minimum standards required by the national laws, World Bank Safeguards Policies, best industry practice and consistent with the Ministry's Environment and Social Safeguards Policy. This document generally serves to guide the project team including the Contractors and Supervision Consultants of the expectations of the client by highlighting a requirement for them to develop detailed Code of Conduct that align their activities with the expectations of the Client.

Overall, MWE expects the Consultant and the Contractor to take full accountability for the performance of their staff in line with the General Conditions of the Contract, national laws and regulations and World Bank Safeguards Policies. They are expected to ensure that their actions are not interpreted as being, in any way, in contravention of the relevant laws and

regulations governing the project operations.

1.2 General Conduct of all the Project Employees

MWE expects all the project staff at all levels to conduct themselves in ethically acceptable standards. As such, consuming alcohol at the project sites, disrespect and inappropriate behavior towards project affected persons and affected community members, gambling and similar unprofessional activities are strictly prohibited while on the job. All the project staff including those employed under subcontractors shall not engage in sexual harassment/exploitation or even conduct themselves in a way that can be construed as such, including for instance, using inappropriate language, keeping or posting inappropriate materials in their work area, or accessing inappropriate materials on their computer or sharing pornographic content through any medium with the project staff.

Whereas all efforts should be made to ensure that harassment in all forms (be it physical or verbal) that creates tension at work, interferes with work or makes the working environment hostile is avoided, there is need to avoid the abuse by some workers of the available measures through false allegations.

2.0 Avoidance of the Conflicts of Interest

The basic expectation of MWE is that all the project staff maintain a high degree of integrity by performing their duties conscientiously, honestly and certainly in line with the best interests of the Organization. MWE requires all workers to refrain from using their positions or the knowledge gained as a result of their positions for private or personal advantage.

Regardless of the circumstances, where the project workers realize that a given course of action they have pursued, or are pursuing, or are rather contemplating pursuing could place them in a conflict of interest with the project, they should with immediate effect communicate all the facts to their supervisors.

3.0 Prompt Communication

As a minimum, MWE expects its staff and all the implementing partners (Contractors, Sub Contractors, Consultant) to make every effort to ensure efficient, accurate, and timely information sharing on all issues and incidents associated with day-to-day project activities. The Client expects and the Contractors will respond promptly and courteously to all requests for information and to complaints from workers and project hosting communities.

4.0 Environmental, Health and Safety Requirements

MWE is committed to the observation of environmental, health, social and safety requirements pursuant to the national laws and World Bank safeguards. MWE's Environment and Social Safeguards management teams shall proactively oversee the operations of the Contractors' activities to ensure that;

- i. Project activities are conducted in an environmentally responsible and socially acceptable and culturally sensitive manner;
- ii. A Contractor's Environmental and Social Management Plan (ESMP) is comprehensive and adequately integrates the voluntary commitments in the ESIA's ESMP conditions provided in the different permits, licenses and approvals issued, and the general specifications for road and bridge works.
- iii. Raise a red flag in instances where on-the-ground conditions might be harmful to the environment, human health and safety;
- iv. The project implementation team is responsive to environmental concerns raised by the partners, Lead Agencies, local communities and other stakeholders.
- v. The project team respects and ultimately complies with sound environmental standards (both international and local), principles and laws.
- vi. Monitoring and reporting the project's impact (positive and adverse) of the project activities on local environmental conservation and protection.
- vii. Model good environmental stewardship

5.0 General Obligation of Partners

As a requirement, MWE expects the Contractor and the Supervising Consultants to develop satisfactory codes of conduct that contain obligations on all project staff (including sub-contractors and day workers) that are suitable to address the following issues, as a minimum. The issues to be addressed include:

- viii. Compliance with applicable international and local social and environmental safeguards laws, rules, and regulations
- ix. with applicable health and safety requirements (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment) – risk assessment and mitigation
- x. Zero tolerance to the promotion and use of illegal substances by staff
- xi. Non-Discrimination (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability, or political conviction or any other condition)
- xii. Promote community participation in project implementation, including regular interactions with community members (for example to convey an attitude of respect and non-discrimination)
- xiii. against sexual harassment for staff, communities and other actors (for example to

- prohibit use of language or behavior, in particular towards women or children, that is inappropriate, exploitative, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
- xiv. Protect against any form of violence or exploitation (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading or exploitative behavior)
 - xv. Protection of children against any form of exploitation or maltreatment related to the project implementation, (including prohibitions against exploitative labour, defilement, or otherwise unacceptable behavior with children, limiting interactions with children, and ensuring their safety in project areas)
 - xvi. with sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)
 - xvii. Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
 - xviii. reasonable work instructions (including regarding environmental and social norms)
 - xix. and proper use of property (for example, to prohibit theft, carelessness or waste)
 - xx. Duty to report violations of this Code, Gender consideration, sensitivity and mainstreaming in the project implementation, including sanitation facilities, allocation of work and duties etc.
 - xxi. Non retaliation against workers who report violations of the Code, if that report is made in good faith
 - xxii. The Safety Committee in place meets regularly to proactively address the occupational health and safety gaps/ challenges facing the project implementation activities,
 - xxiii. A Grievance Redress Mechanism in place with a respected robust Grievance Redress Committee (GRC) whose membership is clearly representative of the different categories of workers on the project e.g. the workers’ union representatives, female staff representatives, foreign staff, etc.
 - xxiv. Develop subsidiary plans including the traffic management plan, Safety Plan, waste management plans and others and ensure that these plans are effectively implemented.

6.0 Conclusion

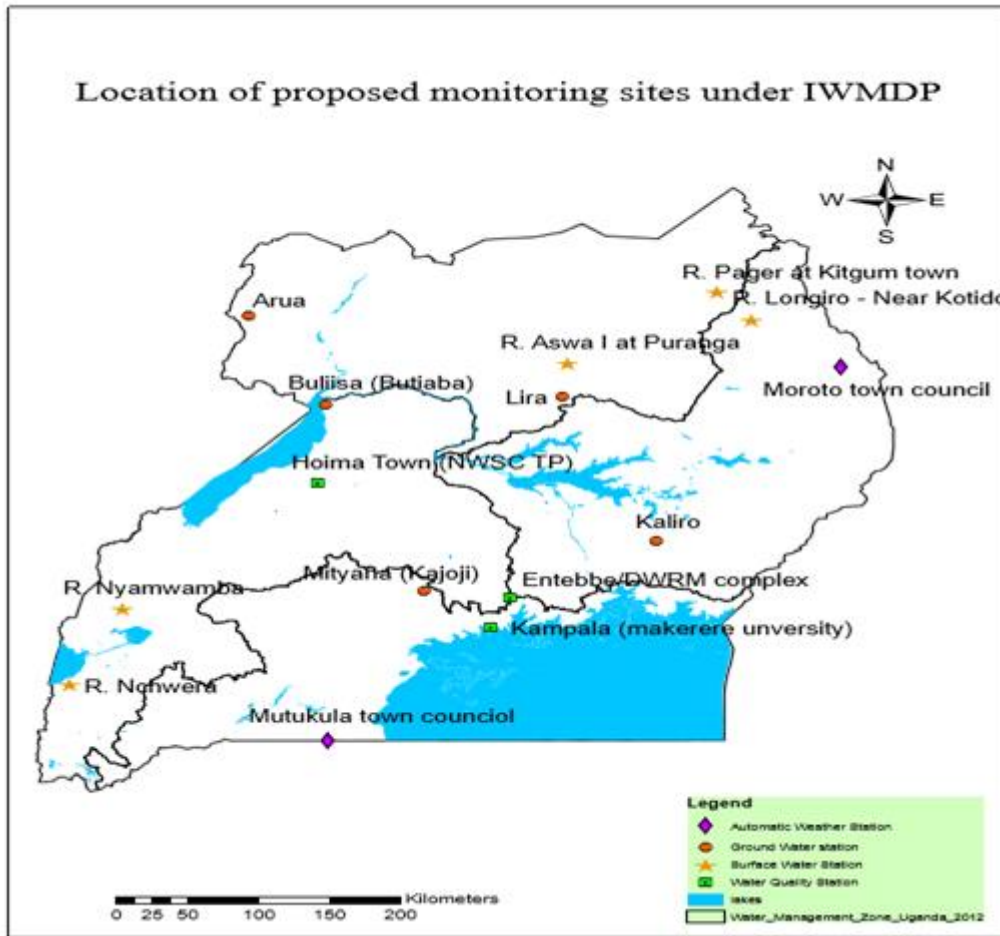
The Contractor and the Consultant are respectively expected to develop Code of Conduct following the above framework, which should be written in plain language (and translated in relevant local languages) and signed by each worker to indicate that they have:

- a. received a copy of the code;
- b. had the code explained to them;
- c. acknowledged that adherence to this Code of Conduct is a condition of employment; and understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

Drawings

This is bound separately as Volume III.

Supplementary Information



PART 3 – Conditions of Contract and Contract Forms

Section VIII - General Conditions of Contract

These General Conditions of Contract (GCC), read in conjunction with the Particular Conditions of Contract (PCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

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General Conditions of Contract

A. General

1. Definitions

1.1 Boldface type is used to identify defined terms.

- (a) The Accepted Contract Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
- (b) The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- (c) The Adjudicator is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- (d) Bank means the financing institution **named in the PCC**.
- (e) Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.
- (f) Compensation Events are those defined in GCC Clause 42 hereunder.
- (g) The Completion Date is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- (h) The Contract is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- (i) The Contractor is the party whose Bid to carry out the Works has been accepted by the Employer.
- (j) The Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.
- (k) The Contract Price is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.

- (l) Days are calendar days; months are calendar months.
- (m) Dayworks are varied work inputs subject to payment on a time basis for the Contractor’s employees and Equipment, in addition to payments for associated Materials and Plant.
- (n) A Defect is any part of the Works not completed in accordance with the Contract.
- (o) The Defects Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Contractor.
- (p) The Defects Liability Period is the period **named in the PCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- (q) Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- (r) The Employer is the party who employs the Contractor to carry out the Works, **as specified in the PCC**.
- (s) Equipment is the Contractor’s machinery and vehicles brought temporarily to the Site to construct the Works.
- (t) “In writing” or “written” means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- (u) The Initial Contract Price is the Contract Price listed in the Employer’s Letter of Acceptance.
- (v) The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the PCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- (w) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- (x) Plant is any integral part of the Works that shall have a

mechanical, electrical, chemical, or biological function.

- (y) The Project Manager is the person **named in the PCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- (z) PCC means Particular Conditions of Contract.
- (aa) The Site is the area **defined as such in the PCC**.
- (bb) Site Investigation Reports are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (cc) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- (dd) The Start Date is **given in the PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- (ee) A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (ff) Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- (gg) A Variation is an instruction given by the Project Manager which varies the Works.
- (hh) The Works are what the Contract requires the Contractor to construct, install, and turn over to the Employer, **as defined in the PCC**.

- 2. Interpretation** 2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.

- 2.2 If sectional completion is **specified in the PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
- (a) Agreement,
 - (b) Letter of Acceptance,
 - (c) Contractor’s Bid,
 - (d) Particular Conditions of Contract,
 - (e) General Conditions of Contract, including Appendices,
 - (f) Specifications,
 - (g) Drawings,
 - (h) Bill of Quantities,¹ and
 - (i) any other document **listed in the PCC** as forming part of the Contract.
- 3. Language and Law**
- 3.1 The language of the Contract and the law governing the Contract are **stated in the PCC**.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer’s Country when
- (a) as a matter of law or official regulations, the Borrower’s country prohibits commercial relations with that country; or
 - (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.
- 4. Project Manager’s Decisions**
- 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.

¹ In lump sum contracts, delete “Bill of Quantities” and replace with “Activity Schedule.”

- 5. Delegation** 5.1 Otherwise **specified in the PCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.
- 6. Communications** 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
- 7. Subcontracting** 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.
- 8. Other Contractors** 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as **referred to in the PCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.
- 9. Personnel and Equipment** 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 9.3 If the Employer, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.
- 10. Employer's and Contractor's Risks** 10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.
- 11. Employer's** 11.1 From the Start Date until the Defects Liability Certificate has

Risks

been issued, the following are Employer's risks:

- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

- (a) a Defect which existed on the Completion Date,
- (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
- (c) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the PCC** for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;

- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
 - (d) personal injury or death.
- 13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.
- 13.5 Both parties shall comply with any conditions of the insurance policies.
- 14. Site Data**
 - 14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the PCC**, supplemented by any information available to the Contractor.
- 15. Contractor to Construct the Works**
 - 15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
- 16. The Works to Be Completed by the Intended Completion Date**
 - 16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.
- 17. Approval by the Project Manager**
 - 17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.
 - 17.2 The Contractor shall be responsible for design of Temporary Works.
 - 17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

- 17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.
- 18. Safety and Protection of the Environment**
- 18.1 The Contractor shall be responsible for the safety of all activities on the Site.
- 18.2 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
- 19. Discoveries**
- 19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
- 20. Possession of the Site**
- 20.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the PCC**, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.
- 21. Access to the Site**
- 21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
- 22. Instructions, Inspections and Audits**
- 22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and subconsultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
- 22.3 Pursuant to paragraph 2.2 e. of Appendix B to the General Conditions, the Contractor shall permit and shall cause its subcontractors and subconsultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Bank if

requested by the Bank. The Contractor's and its Subcontractors' and subconsultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).]

23. Appointment of the Adjudicator

23.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority **designated in the PCC**, to appoint the Adjudicator within 14 days of receipt of such request.

23.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority **designated in the PCC** at the request of either party, within 14 days of receipt of such request.

24. Procedure for Disputes

24.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Project Manager's decision.

24.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.

24.3 The Adjudicator shall be paid by the hour at the **rate specified in the PCC**, together with reimbursable expenses of the types **specified in the PCC**, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision shall be final and binding.

24.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and

in the place **specified in the PCC**.

25. Fraud and Corruption

- 25.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix A to the GCC.
- 25.2 The Employer requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

B. Time Control

26. Program

- 26.1 Within the time **stated in the PCC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.
- 26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period **stated in the PCC**. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount **stated in the PCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.
- 26.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended

- 27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued

- Completion Date** which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 28. Acceleration**
- 28.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.
- 28.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.
- 29. Delays Ordered by the Project Manager**
- 29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
- 30. Management Meetings**
- 30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.
- 31. Early Warning**
- 31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an

estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

- 31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

32. Identifying Defects

- 32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

33. Tests

- 33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

- 34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is **defined in the PCC**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

35. Uncorrected Defects

- 35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

- 36. Contract Price²** 36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.
- 37. Changes in the Contract Price³** 37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.
- 37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.
- 38. Variations** 38.1 All Variations shall be included in updated Programs⁴ produced by the Contractor.
- 38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

² In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

³ In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:

37.1 The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

⁴ In lump sum contracts, add "and Activity Schedules" after "Programs."

- 38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- 38.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.⁵
- 38.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;
- (a) the proposed change(s), and a description of the difference to the existing contract requirements;
 - (b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Employer may incur in implementing the value engineering proposal; and
 - (c) a description of any effect(s) of the change on performance/functionality.

The Employer may accept the value engineering proposal if the proposal demonstrates benefits that:

- (a) accelerate the contract completion period; or
- (b) reduce the Contract Price or the life cycle costs to the Employer; or
- (c) improve the quality, efficiency, safety or sustainability of the Facilities; or

⁵ In lump sum contracts, delete this paragraph.

(d) yield any other benefits to the Employer,

without compromising the functionality of the Works.

If the value engineering proposal is approved by the Employer and results in:

- (a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the PCC** of the reduction in the Contract Price; or
- (b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

39.1 When the Program,⁶ is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Project Manager.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed.⁷

40.5 The value of work executed shall include the valuation of Variations and Compensation Events.

40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later

⁶ In lump sum contracts, add "or Activity Schedule" after "Program."

⁷ In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."

information.

41. Payments

- 41.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

- 42.1 The following shall be Compensation Events:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
 - (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
 - (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - (e) The Project Manager unreasonably does not approve a subcontract to be let.

- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The advance payment is delayed.
- (j) The effects on the Contractor of any of the Employer's Risks.
- (k) The Project Manager unreasonably delays issuing a Certificate of Completion.

42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

42.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

43. Tax

43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days

before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currencies 44.1 Where payments are made in currencies other than the currency of the Employer’s Country **specified in the PCC**, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor’s Bid.

45. Price Adjustment 45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the PCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies to each Contract currency:

$$P_c = A_c + B_c \text{ Imc/Ioc}$$

where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c.”

A_c and B_c are coefficients⁸ **specified in the PCC**, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c;” and

Imc is the index prevailing at the end of the month being invoiced and Ioc is the index prevailing 28 days before Bid opening for inputs payable; both in the specific currency “c.”

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention 46.1 The Employer shall retain from each payment due to the Contractor the proportion **stated in the PCC** until Completion

⁸ The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the Contract Price.

of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an “on demand” Bank guarantee.

47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Employer at the rate per day **stated in the PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the PCC**. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor’s liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the PCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

49. Advance Payment

49.1 The Employer shall make advance payment to the Contractor of the amounts **stated in the PCC** by the date **stated in the PCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall

demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

50.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the PCC**, by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Dayworks

51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

51.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

52. Cost of Repairs

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is

completed.

- 54. Taking Over** 54.1 The Employer shall take over the Site and the Works within seven days of the Project Manager’s issuing a certificate of Completion.
- 55. Final Account** 55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor’s account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
- 56. Operating and Maintenance Manuals** 56.1 If “as built” Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates **stated in the PCC**.
- 56.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the PCC** pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager’s approval, the Project Manager shall withhold the amount **stated in the PCC** from payments due to the Contractor.
- 57. Termination** 57.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:
- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
 - (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 days;
 - (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 84 days of the date

of the Project Manager's certificate;

- (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (f) the Contractor does not maintain a Security, which is required;
- (g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the PCC**; or
- (h) if the Contractor, in the judgment of the Employer has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Employer may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as **specified in the PCC**. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

58.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to

the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

61. Suspension of Bank Loan or Credit

61.1 In the event that the Bank suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made:

- (a) The Employer is obligated to notify the Contractor of such suspension within 7 days of having received the Bank's suspension notice.
- (b) If the Contractor has not received sums due to it within the 28 days for payment provided for in Sub-Clause 40.1, the Contractor may immediately issue a 14-day termination notice.

APPENDIX A TO GENERAL CONDITIONS

Fraud and Corruption

(Text in this Appendix shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

- i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
- iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring mis procurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;¹ (ii) to be a nominated² sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders(applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect³ all accounts, records and other documents relating to the procurement process, selection

¹ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

³ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

and/or contract execution, and to have them audited by auditors appointed by the Bank.

APPENDIX B

Environmental, Social, Health and Safety (ESHS)

Metrics for Progress Reports

[Note to Employer: the following metrics may be amended to reflect the Employer's environmental, social, health and safety policies and/or the ESHS requirements of the project. The metrics that are required should be determined by the ESHS risks of the Works and not necessarily by the scale of the Works]

Metrics for regular reporting:

- a. *environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;*
- b. *health and safety incidents, accidents, injuries and all fatalities that require treatment;*
- c. *interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*
- d. *status of all permits and agreements:*
 - i. *work permits: number required, number received, actions taken for those not received;*
 - ii. *status of permits and consents:*
 - iii. *list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - *list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);*
 - *identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);*
 - *for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).*
- e. *health and safety supervision:*

- i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;
 - ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);
- f. *worker accommodations:*
- i. number of expats housed in accommodations, number of locals;
 - ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
 - iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g. *HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);*
- h. *gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);*
- i. *training:*
- i. number of new workers, number receiving induction training, dates of induction training;
 - ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - iii. number and dates of HIV/AIDS sensitization and/or training, no. workers receiving training (this reporting period and in the past); same questions for gender sensitization, flag person training.
 - iv. number and date of GBV /SEA sensitization and/or training, number of workers receiving training on code of conduct (in the reporting period and in the past), etc.
- j. *environmental and social supervision:*
- i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;

- ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. *Grievances*: list new grievances (e.g. allegations of GBV / SEA) received in the reporting period and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):
- i. Worker grievances;
 - ii. Community grievances
- l. *Traffic and vehicles/equipment*:
- i. traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
 - ii. accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
 - iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m. *Environmental mitigations and issues (what has been done)*:
- i. dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/spoil lorries with covers, actions taken for uncovered vehicles;
 - ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
 - iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;

- iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - v. spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
 - vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
 - vii. details of tree plantings and other mitigations required undertaken in the reporting period;
 - viii. details of water and swamp protection mitigations required undertaken in the reporting period.
- n. compliance:*
- i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
 - ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
 - iii. compliance status of GBV/SEA prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
 - iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
 - v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

Section IX - Particular Conditions of Contract

A. General	
GCC 1.1 (d)	The financing institution is: World Bank
GCC 1.1 (r)	<p>The Employer is</p> <p>Ministry of Water and Environment</p> <p>The Permanent Secretary,</p> <p>Attention: Head, Procurement & Disposal Unit</p> <p>Street Address: Plot 3-7 Kabalega Crescent Road, Luzira</p> <p>City: Kampala</p> <p>Country: Uganda</p> <p>Telephone: +256 414 220 229</p> <p>Facsimile number: +256 414 505 941</p>
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works shall be Six months from the commencement date.
GCC 1.1 (y)	<p>The Project Manager is</p> <p>Tom Kanyike</p> <p>Principal Hydrologist,</p> <p>Directorate of Water Resources Management</p> <p>Ministry of Water and Environment</p> <p>C: +256-772 047 183</p> <p>E: shukar@techie.com / tomu.kanyike@gmail.com</p>
GCC 1.1 (aa)	<p>The Site is located as shown under section VII and is defined in drawings</p> <p>Volume III: Detailed Drawings</p>
GCC 1.1 (dd)	The Start Date shall be 14 days after contract signing
GCC 1.1 (hh)	<p>The Works consist of: CIVIL WORKS FOR INSTALLATION OF HYDROMETRIC EQUIPMENT UNDER CATEGORIES I, II, & III</p> <p>Category I: 5 No. Digital Water Level Recording Stations</p> <p>Category II: 5 No. Ground Water Level Recording Stations</p> <p>Category III: 2 No. Automated Full Climate Stations</p>

GCC 1.1 (ii)	ESHS” means environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety.
GCC 2.2	Sectional Completions are: N/A
GCC 2.3(i)	The following documents also form part of the Contract: (i) the ESHS Management Strategies and Implementation Plans; and (ii) Code of Conduct (ESHS). (iii) Environmental Scoping report
GCC 3.1	The language of the contract is English The law that applies to the Contract is the law of Uganda
GCC 5.1	The Project manager may not delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: N/A
GCC 9.1	Key Personnel GCC 9.1 is replaced with the following: 9.1 Key Personnel are the Contractor’s personnel named in this GCC 9.1 of the Particular Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid. [insert the name/s of each Key Personnel agreed by the Employer prior to Contract signature.]
GCC 9.2	Code of Conduct (ESHS) The reasons to remove a person include behavior which breaches the Code of Conduct (ESHS) (e.g. spreading communicable diseases, sexual harassment, gender-based violence (GBV), sexual exploitation or abuse, illicit activity or crime).

GCC 13.1	<p>The minimum insurance amounts and deductibles shall be:</p> <p>The minimum insurance amounts and deductibles shall be:</p> <p>(a) For loss or damage to the Works, Plant and Materials: UGX 3,078,151,380.70, with UGX 34,000,000 maximum deductible.</p> <p>(b) For loss or damage to Equipment: 100% of the value of equipment required for the performance of the contract, with UGX 17,000,000 maximum deductible.</p> <p>(c) For loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract: UGX 3,000,000 with UGX 17,000,000 maximum deductible.</p> <p>(d) For personal injury or death:</p> <p>(i) Of the Contractor’s employees: UGX 51,000,000.</p> <p>(ii) Of other People: UGX 34,000,000</p>
GCC 14.1	Site Data are: <i>as specified under section VII</i>
GCC 16.1 (add new 16.2)	<p>ESHS Management Strategies and Implementation Plans</p> <p>The following is inserted as a new sub-clause 16.2:</p> <p>“ 16.2 The Contractor shall not carry out any Works, including mobilization and/or pre-construction activities (e.g. limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits), unless the Project Manager is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts. At a minimum, the Contractor shall apply the Management Strategies and Implementation Plans and Code of Conduct, submitted as part of the Bid and agreed as part of the Contract. The Contractor shall submit, on a continuing basis, for the Project Manager’s prior approval, such supplementary Management Strategies and Implementation Plans as are necessary to manage the ESHS risks and impacts of ongoing works. These Management Strategies and Implementation Plans collectively comprise the Contractor’s Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction activities (e.g. excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture). The approved C-ESMP shall be reviewed, periodically (but not less than every six (6) months), and updated in a timely manner, as required, by the Contractor to ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject</p>

	to prior approval by the Project Manager.”
GCC 20.1	The Site Possession Date(s) shall be: 2 weeks after signing of the agreement and the location as shown in section VII.
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: The President of Uganda Institute of Professional Engineers
GCC 24.3	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: <i>USD 50</i>
GCC 24.4	Institution whose arbitration procedures shall be used: the law of Uganda The place of arbitration shall be: Kampala, Uganda.
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within 10 working days from the date of the Letter of Acceptance.
GCC 26.2	<p>ESHS Reporting</p> <p>In addition to the progress report, the Contractor shall also provide a report on the Environmental, Social, Health and Safety (ESHS) metrics set out in Appendix B. In addition to Appendix B reports, the Contractor shall also provide immediate notification to the Project Manager of incidents in the following categories. Full details of such incidents shall be provided to the Project Manager within the timeframe agreed with the Project Manager.</p> <ul style="list-style-type: none"> (a) confirmed or likely violation of any law or international agreement; (b) any fatality or serious (lost time) injury; (c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary) (d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or (e) any allegation of gender-based violence (GBV), sexual exploitation or abuse, sexual harassment or sexual misbehavior, rape, sexual assault, child abuse or defilement, or other violations involving children.
GCC 26.3	The period between Program updates is 14 days. The amount to be withheld for late submission of an updated Program is

	N/A
C. Quality Control	
GCC 34.1	The Defects Liability Period is: 6 months .
D. Cost Control	
GCC 38.2	The Contractor shall also provide information of any ESHS risks and impacts of the Variation.
GCC 38.7	If the value engineering proposal is approved by the Employer the amount to be paid to the Contractor shall be 20% of the reduction in the Contract Price.
GCC 38.7	In the first paragraph insert new sub-paragraph (d): “(d) a description of the proposed work to be performed, a programme for its execution and sufficient ESHS information to enable an evaluation of ESHS risks and impacts;”
GCC 40	Add new GCC 40.7: 40.7 if the Contractor was, or is, failing to perform any ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following: (i) failure to comply with any ESHS obligations or work described in the Works’ Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion; (ii) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts; (iii) failure to implement the C-ESMP e.g. failure to provide

	<p>required training or sensitization;</p> <p>(iv) failing to have appropriate consents/permits prior to undertaking Works or related activities;</p> <p>(v) failure to submit ESHS report/s (as described in Appendix C), or failure to submit such reports in a timely manner;</p> <p>(vi) failure to implement remediation as instructed by the Engineer within the specified timeframe (e.g. remediation addressing non-compliance/s).</p>
GCC 44.1	The currency of the Employer’s Country is: Uganda shillings
GCC 46.1	The proportion of payments retained is: 10%
GCC 47.1	The liquidated damages for the whole of the Works are 0.5% per day. The maximum amount of liquidated damages for the whole of the Works is 15% of the final Contract Price.
GCC 49.1	The Advance Payments shall be: 30% and shall be paid to the Contractor no later than 60 Days from signing the contract
GCC 50.1	An Environmental, Social, Safety and Health (ESHS) Performance Security shall not be provided to the Employer.
GCC 50.1	The Performance Security amount is: N/A
E. Finishing the Contract	
GCC 56.1	<p>The date by which operating and maintenance manuals are required is: N/A</p> <p>The date by which “as built” drawings are required is: 14 days upon completion of each station</p>
GCC 56.2	The amount to be withheld for failing to produce “as built” drawings by the date required in GCC 58.1 is 5% of the contract sum
GCC 57.2 (g)	The maximum number of days is: 30 days
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is 10%

Section X - Contract Forms

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Notification of Intention to Award

[This Notification of Intention to Award shall be sent to each Bidder that submitted a Bid.]

[Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: *[email/fax]* on *[date]* (local time)

Notification of Intention to Award

Employer: *[insert the name of the Employer]*

Project: *[insert name of project]*

Contract title: *[insert the name of the contract]*

Country: *[insert country where RFB is issued]*

Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*

RFB No: *[insert RFB reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

- a) request a debriefing in relation to the evaluation of your Bid, and/or
- b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name:	<i>[insert name of successful Bidder]</i>
Address:	<i>[insert address of the successful Bidder]</i>
Contract price:	<i>[insert contract price of the successful Bid]</i>

2. Other Bidders *[INSTRUCTIONS: insert names of all Bidders that submitted a Bid. If the Bid's price was evaluated include the evaluated price as well as the Bid price as read out.]*

Name of Bidder	Bid price	Evaluated Bid price (if applicable)
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]

3. Reason/s why your Bid was unsuccessful

[INSTRUCTIONS: State the reason/s why this Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [insert date] (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: [insert full name of person, if applicable]

Title/position: [insert title/position]

Agency: [insert name of Employer]

Email address: [insert email address]

Fax number: [insert fax number] *delete if not used*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall

promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [insert date] (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Employer]*

Email address: *[insert email address]*

Fax number: *[insert fax number] delete if not used*

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see the [Procurement Regulations for IPF Borrowers \(Procurement Regulations\)](https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=4005) [https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=4005] (Annex III). You should read these provisions before preparing and submitting your complaint. In addition, the World Bank’s Guidance “[How to make a Procurement-related Complaint](http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework#framework)” [http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework#framework] provides a useful explanation of the process, as well as a sample letter of complaint.

In summary, there are four essential requirements:

1. You must be an ‘interested party’. In this case, that means a Bidder who submitted a Bid in this bidding process, and is the recipient of a Notification of Intention to Award.
2. The complaint can only challenge the decision to award the contract.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [insert date] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification, please do not hesitate to contact us.

On behalf of the Employer:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful Bidder¹. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- *directly or indirectly holding 25% or more of the shares*
- *directly or indirectly holding 25% or more of the voting rights*
- *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder*

RFB No.: *[insert number of RFB process]*

Request for Bid No.: *[insert identification]*

To: *[insert complete name of Employer]*

In response to your request in the Letter of Acceptance dated *[insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
<i>[include full name (last, middle, first), nationality, country]</i>			

<i>of residence]</i>			
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OR

(ii) *We declare that there is no Beneficial Owner meeting one or more of the following conditions:*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) *We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]”

Name of the Bidder: **[insert complete name of the Bidder]*_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ***[insert complete name of person duly authorized to sign the Bid]*_____

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*_____

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*_____

Date signed *[insert date of signing]* **day of** *[insert month], [insert year]*_____

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to “Bidder” in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Letter of Acceptance

[on letterhead paper of the Employer]

..... *[date]*

To: *[name and address of the Contractor]*

Subject: *[Notification of Award Contract No.]*

This is to notify you that your Bid dated *[insert date]* for execution of the
.*[insert name of the contract and identification number, as given in the PCC]* for
the Accepted Contract Amount of*[insert amount in numbers and words and name of
currency]*, as corrected and modified in accordance with the Instructions to Bidders is
hereby accepted by our Agency.

You are requested to furnish (i) the Performance Security and an Environmental, Social,
Health and Safety Performance Security *[Delete ESHS Performance Security if it is not
required under the contract]* within 28 days in accordance with the Conditions of
Contract, using for that purpose the of the Performance Security Form and the ESHS
Performance Security Form, *[Delete reference to the ESHS Performance Security Form
if it is not required under the contract]* and (ii) the additional information on beneficial
ownership in accordance with BDS ITB 47.1, within eight (8) Business days using the
Beneficial Ownership Disclosure Form, included in Section X - Contract Forms, of the
bidding document.

[Choose one of the following statements:]

We accept that _____ *[insert the name of Adjudicator proposed by
the Bidder]* be appointed as the Adjudicator.

[or]

We do not accept that _____ *[insert the name of the Adjudicator
proposed by the Bidder]* be appointed as the Adjudicator, and by sending a copy of this
Letter of Acceptance to _____ *[insert name of
the Appointing Authority]*, the Appointing Authority, we are hereby requesting such
Authority to appoint the Adjudicator in accordance with ITB 48.1 and GCC 23.1.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made theday of,, between
 . [name of the Employer]. (hereinafter “the Employer”), of the one part, and
 [name of the Contractor].(hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as [name of the Contract]. . . .
 .should be executed by the Contractor, and has accepted a Bid by the Contractor for the
 execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (a) the Letter of Acceptance
 - (b) the Letter of Bid
 - (c) the addenda Nos _____(if any)
 - (d) the Particular Conditions
 - (e) the General Conditions of Contract, including appendix;
 - (f) the Specification
 - (g) the Drawings
 - (h) Bill of Quantities;¹ and
 - (i) any other document **listed in the PCC** as forming part of the Contract;
3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

¹ In lump sum contracts, delete “Bill of Quantities” and replace with “Activity Schedule.”

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[name of the borrowing country]*. . . .on the day, month and year specified above.

Signed by: _____
for and on behalf of the Employer

Signed by: _____
for and on behalf the Contractor

in the
presence of: _____
Witness, Name, Signature, Address, Date

in the
presence of: _____
Witness, Name, Signature, Address, Date

Performance Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *_ [insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *_ [insert name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*,¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

¹ *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

² *Insert the date twenty-eight days after the expected completion date as described in GC Clause 53.1. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Performance Security - Performance Bond

By this Bond *[insert name of Principal]* as Principal (hereinafter called “the Contractor”) and *[insert name of Surety]* as Surety (hereinafter called “the Surety”), are held and firmly bound unto *[insert name of Employer]* as Obligee (hereinafter called “the Employer”) in the amount of *[insert amount in words and figures]*, for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a written Agreement with the Employer dated the _____ day of _____, 20 ____, for *[name of contract and brief description of Works]* in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer’s obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) complete the Contract in accordance with its terms and conditions; or
- (2) obtain a Bid or Bids from qualified Bidders for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Employer to Contractor under the Contract, less the amount properly paid by Employer to Contractor; or
- (3) pay the Employer the amount required by Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this _____ day of _____ 20 ____.

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

Environmental, Social, Health and Safety (ESHS) Performance Security

ESHS Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

ESHS PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its Environmental, Social, Health and/or Safety (ESHS) obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

¹ *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency (cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

² *Insert the date twenty-eight days after the expected completion date as described in GC Clause 53.1. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed*

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

[six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Employer]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called “the Applicant”) has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*¹ upon receipt by us of the Beneficiary’s complying demand supported by the Beneficiary’s statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
- (b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

¹ *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.*

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*..

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the *[insert day]* day of *[insert month]*, 2 *[insert year]*,² whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² *Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*