PRIME MINISTER’S OFFICE
INVITATION FOR BIDS

(Authorised Under Section 16(1) of the Public Procurement Act 2006)

WATERPROOFING WORKS AT OLD GOVERNMENT HOUSE, PORT LOUIS
PMO/19-20/Q23/ONB

Bids on appropriate forms are invited from local suppliers for the Waterproofing Works at Old Government House, Port Louis.

1. Other details of the requirements and conditions are contained in the bid documents.

2. The bidding documents will be available free of charge on websites of the Public Procurement Portal on publicprocurement.govmu.org and that of this Office on pmo.govmu.org.

3. Any clarifications sought by any bidder in respect of the item to be procured shall be addressed in writing to the Secretary to Cabinet and Head of the Civil Service, Prime Minister’s Office, New Government Centre, Port Louis, Attn: Manager, Procurement and Supply, Fax No. 201 3186 or 201 1481 so as to reach him at least fourteen (14) days before the deadline for the submission of the bids.

4. Bids in sealed envelope clearly marked “Waterproofing Works at Old Government House, Port Louis (PMO/19-20/Q23/ONB)” and indicating the closing date and time should be addressed to the Secretary to Cabinet and Head of the Civil Service and deposited in the Tender Box at the under-mentioned address on or before Friday 08 November 2019 up to 13.30 hours (local time) at latest.

5. Bids will be opened in the Conference Room of the Prime Minister’s Office, on the same day at 13.45 hrs in the presence of bidders/bidders’ representatives who may choose to attend.

6. The Prime Minister’s Office reserves the right to:
   (a) accept or reject any bid; and
   (b) annul the bidding process and reject all bids at any time prior to contract award as per provision of Section 39(1) of the Public Procurement Act 2006.

Prime Minister’s Office,
4th Floor, New Government Centre,
Port Louis

03 October 2019
PRIME MINISTER’S OFFICE

BIDDING DOCUMENTS

Issued on: 03 October 2019

for

Procurement of

Waterproofing Works at Old Government House, Port Louis

Procurement Reference No: PMO/19-20/Q 23/ONB

Prime Minister’s Office
Standard Bidding Document

Table of Contents

PART 1 – Bidding Procedures

Section 1 - Instructions to Bidders
Section II - Bidding Data Sheet
Section III - Bidding Forms
Section IV - Evaluation Criteria

PART 2 – Employer’s Requirements

Section V - Employer’s Requirements

PART 3 – Conditions of Contract and Contract Forms

Section VI. General Conditions of Contract
Section VII. Particular Conditions of Contract
Section VIII - Contract Forms
PART 1 – Bidding Procedures
## Section 1 - Instructions to Bidders

### Table of Clauses

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>General</td>
<td>1-2</td>
</tr>
<tr>
<td>1.</td>
<td>Scope of Bid</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Source of Fund</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Challenge and Appeal</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Fraud and Corruption</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Eligible Bidders</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>Qualifications of Bidders</td>
<td>5</td>
</tr>
<tr>
<td>B.</td>
<td>Contents of Bidding Document</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>Sections of Bidding Document</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Clarification of Bidding Document</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>Site visit/Pre-bid meeting</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Amendment of Bidding Document</td>
<td>5</td>
</tr>
<tr>
<td>C.</td>
<td>Preparation of Bids</td>
<td>6</td>
</tr>
<tr>
<td>11.</td>
<td>Cost of Bidding</td>
<td>6</td>
</tr>
<tr>
<td>12.</td>
<td>Language of Bid</td>
<td>6</td>
</tr>
<tr>
<td>13.</td>
<td>Documents Comprising the Bid</td>
<td>6</td>
</tr>
<tr>
<td>14.</td>
<td>Bid Submission Form and Schedules</td>
<td>6</td>
</tr>
<tr>
<td>15.</td>
<td>Alternative Proposal</td>
<td>6</td>
</tr>
<tr>
<td>16.</td>
<td>Bid Prices and Discounts</td>
<td>6</td>
</tr>
<tr>
<td>17.</td>
<td>Currencies of Bid and Payment</td>
<td>6</td>
</tr>
<tr>
<td>18.</td>
<td>Documents Comprising the Technical Proposal</td>
<td>6</td>
</tr>
<tr>
<td>19.</td>
<td>Period of Validity of Bids</td>
<td>6</td>
</tr>
<tr>
<td>20.</td>
<td>Bid Security/Bid Securing Declaration</td>
<td>6</td>
</tr>
<tr>
<td>21.</td>
<td>Format and Signing of Bid</td>
<td>6</td>
</tr>
<tr>
<td>D.</td>
<td>Submission and Opening of Bids</td>
<td>7</td>
</tr>
<tr>
<td>22.</td>
<td>Sealing and Marking of Bids</td>
<td>7</td>
</tr>
<tr>
<td>23.</td>
<td>Deadline for Submission of Bids</td>
<td>7</td>
</tr>
<tr>
<td>24.</td>
<td>Late Bids</td>
<td>7</td>
</tr>
<tr>
<td>25.</td>
<td>Withdrawal, Substitution, and Modification of Bids</td>
<td>7</td>
</tr>
<tr>
<td>26.</td>
<td>Bid Opening</td>
<td>7</td>
</tr>
<tr>
<td>E.</td>
<td>Evaluation and Comparison of Bids</td>
<td>8</td>
</tr>
<tr>
<td>27.</td>
<td>Confidentiality</td>
<td>8</td>
</tr>
<tr>
<td>28.</td>
<td>Clarification of Bids</td>
<td>8</td>
</tr>
<tr>
<td>29.</td>
<td>Determination of Responsiveness</td>
<td>8</td>
</tr>
<tr>
<td>30.</td>
<td>Nonconformities, Errors, and Omissions</td>
<td>8</td>
</tr>
</tbody>
</table>
31. Correction of Arithmetical Errors .............................................................. 15
32. Margin of Preference ............................................................................... 15
33. Evaluation of Bids .................................................................................. 15
34. Comparison of Bids ................................................................................ 16
35. Qualification of the Bidder ...................................................................... 16
36. Employer’s Right to Accept Any Bid, and to Reject Any or All Bids ........ 16

F.  Award of Contract ...................................................................................... 16

37. Award Criteria .......................................................................................... 16
38. Notification of Award ............................................................................... 16
39. Signing of Contract ................................................................................... 17
40. Performance Security ............................................................................... 17
41. Preference Security ................................................................................... 17
42. Advance Payment and Security ................................................................. 18
43. Plant and Materials on site ........................................................................ 18
44. Debriefing ................................................................................................. 18
Section I - Instructions to Bidders

A. General

1. Scope of Bid 1.1 The Public Body as defined\(^1\) in Section II “Bidding Data Sheet” (BDS) also referred to herein as Employer invites bids for the construction of Works, as described in the BDS and Section VII, “Particular Conditions of Contract” (PCC).

The name and identification number of the Contract are provided in the BDS and the PCC.

1.2 The successful Bidder shall be expected to complete the Works by the Intended Completion Period specified in the BDS.

1.3 Throughout these bidding documents, the terms:

(a) “writing” means any typewritten or printed communication, including e-mail and facsimile transmission,

(b) “day” means calendar day, and

(c) Singular also means plural.

2. Source of Fund 2.1 The Works shall be financed by the Public Body’s own budgetary allocation, unless otherwise stated in the BDS.

3. Challenge and Appeal 3.1 Unsatisfied bidders shall follow procedures prescribed in Regulations 48, 49 and 50 of the Public Procurement Regulations 2008 to challenge procurement proceedings and award of procurement contracts or to file application for review at the Independent Review Panel.

3.2 Addresses to forward Challenges or Application for Review are specified in the BDS.

4. Fraud and Corruption 4.1 The Government of the Republic of Mauritius requires that bidders/suppliers/contractors, participating in procurement in Mauritius, observe the highest standard of ethics during the procurement process and execution of contracts.

4.2 Bidders, suppliers and public officials shall be aware of the provisions stated in sections 51 and 52 of the Public Procurement Act which can be consulted on the website of the Procurement Policy Office (PPO): ppo.govmu.org

\(^1\) See Section IV, “General Conditions of Contract,” Clause I. Definitions.
4.3 The Employer will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

For the purposes of this Sub-Clause:

(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 a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a 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 deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an 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.

4.4 The Employer commits itself to take all measures necessary to prevent fraud and corruption and ensures that none of its staff, personally or through his/her close relatives or through a third party, will in connection with the bid for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to. If the Employer obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of Mauritius or if there be a substantive suspicion in this regard, he will inform the relevant authority (ies) and in addition can initiate disciplinary actions. Furthermore, such bid shall be rejected.
5. **Eligible Bidders**

5.1 (a) In accordance with CIDB Act 2008, Contractors currently operating in the construction industry have the statutory obligation to be registered with the Construction Industry Development Board (CIDB) accordingly.

(b) Subject to paragraph (e), Foreign contractors as defined in the CIDB Act will have to apply for and obtain a Provisional Registration prior to bidding for this project. If the contract is awarded to the foreign contractor the latter shall have to apply for and obtain a Temporary Registration before starting the project.

(c) Contractors whether local or foreign under an existing or intended joint venture will be eligible as a joint venture if, in addition to their respective individual registration, they obtain a Provisional Registration for the joint venture prior to bidding for this project. If an existing or intended joint venture is awarded the contract it shall have to apply for a Temporary Registration prior to starting the project.

(d) Sub-contractors undertaking works for value Rs 500 000 or above are subject to registration as applicable to Contractors.

(e) Paragraph (b) shall not apply to Foreign contractors who have been carrying construction works in the construction industry during the 20 years preceding 01 March 2017; and where at least two-thirds, or such other percentage as may be prescribed, of the total number of its or his employees are as citizens of Mauritius.

(f) A Foreign contractor referred to in paragraph (e) shall, for the purpose of registration, make an application with the CIDB and obtain a valid registration certificate prior to bidding for this project.

(g) Bidders are strongly advised to consult the website of the CIDB cidb.govmu.org for further details concerning registration of contractors.

5.2 (a) Subject to ITB 5.6, a Bidder, and all parties constituting the Bidder, may have the nationality of any country except in the case of open national bidding where the bidding documents may limit participation to citizens of Mauritius or entities incorporated in Mauritius, if so qualified in the BDS.

(b) Bidder may be natural person, private entity, or government-owned entity or any combination of them in the form of a joint venture.

(c) Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless
otherwise stated in the BDS:

(i) the Bid shall include all the information listed in ITB Sub-Clause 6.2 below for each joint venture partner;

(ii) the Bid shall be signed so as to be legally binding on all partners;

(iii) the Bid shall include a copy of the agreement entered into by the joint venture partners defining the division of assignments to each partner and establishing that all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; alternatively, a Letter of Intent to execute a joint venture agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement;

(iv) one of the partners shall be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and

(v) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

5.3 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 with one or more parties in this bidding process, if:

(a) they have a controlling partner in common; or

(b) they receive or have received any direct or indirect subsidy from any of them; or

(c) they have the same legal representative for purposes of this bid; or

(d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

(e) a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same subcontractor in more than one
bid; or

(f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or

(g) a Bidder, or any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer for the contract.

5.4 (a) A bidder that is under a declaration of ineligibility by the Government of Mauritius in accordance with applicable laws at the date of the deadline for bid submission and thereafter shall be disqualified


Links for checking the ineligibility lists are available on the PPO’s website: ppo.govmu.org

5.5 Government-owned enterprises in the Republic of Mauritius shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the Government.

6. Qualifications of Bidders

6.1 All bidders shall provide in Section III, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

6.2 Bidders shall include the information and documents listed hereunder with their bids, unless otherwise stated in the BDS. If, after opening of bids, it is found that any document is missing, the Employer may request the submission of that document subject to clause 30. The non-submission of the documents by the Bidder within the prescribed period may lead to the rejection of its bid.

(a) valid registration certificate with the CIDB;

(b) copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the Bidder;

(c) major items of construction equipment proposed to carry out the Contract;

(d) qualifications and experience of key site personnel and technical personnel proposed for the contract;
(e) report on the financial standing of the Bidder for the last three years, such as certified copies of Financial Statements/Audited Accounts as filed at the Registrar of Companies before the deadline set for submission of bids;

(f) evidence of adequacy of cash-flow capital for this Contract (access to line(s) of credit and availability of other financial resources);

(g) authority to seek references from the Bidder’s bankers;

(h) information regarding any litigation, current or during the last five years, in which the Bidder was/is involved, the parties concerned, the issues involved, the disputed amounts, and awards; and

(i) proposals for subcontracting components of the Works amounting to more than 10 percent of the Contract Price.

6.3 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria:

(a) duly registered with the CIDB under the grade that would allow him to perform the value of works for which he is submitting his bid

(b) registered with the CIDB under the class(es) and field of specialisation specified in the BDS;

(c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed in the BDS;

(d) a Contract Manager/Supervisor with five years’ experience in works of an equivalent nature and volume, including no less than three years as Manager or as otherwise specified in the BDS; and

(e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount specified in the BDS.²

Pending litigations against the Applicant or any partner of a Joint Venture may result in Disqualification.

B. Contents of Bidding Document

7. Sections of Bidding

7.1 The Bidding Document consists of all the Sections indicated below, and should be read in conjunction with any Addenda

² Usually the equivalent of the estimated payments flow over 4-6 months at the average (straight line distribution) construction rate. The actual period of reference shall depend on the speed with which the Government shall pay the Contractor’s monthly certificates.
7.2 The Invitation for Bids issued by the Employer is not part of the Bidding Document.

8. Clarification of Bidding Document

8.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer’s address indicated in the BDS. The Employer will respond in writing to any request for clarification, provided that such request is received 15 days prior to the deadline for submission of bids. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 10.

9. Site visit/Pre-bid meeting

9.1 Bidders, at their own responsibility and risk, are encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing their Bids and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidders’ own expense.

9.2 The Bidder or its designated representative is invited to attend a pre-bid meeting, as provided for in the BDS. The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Document

At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addenda and extend the deadline for submission of bids, if needed.
C. Preparation of Bids

11. Cost of Bidding

11.1 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 irrespective of the outcome of the bidding process.

12. Language of Bid

12.1 The Bid, supporting documents as well as all correspondence relating to the bid exchanged by the Bidder and the Employer shall be in English Language.

13. Documents Comprising the Bid

13.1 The Bid shall comprise the following:

(a) Bid submission Form (in the format indicated in Section III);

(b) Qualification information and documentary evidence establishing the Bidder’s qualifications to perform the contract;

(c) Technical Proposal as per ITB 18.1;

(d) completed Bill of Quantities / Activity Schedule;

(e) Bid Security as per the format provided in section III or as a subscription to a Bid Securing Declaration in the Bid Submission Form; and

(f) any other material required to be completed and submitted by bidders, as specified in ITB and the BDS.

14. Bid Submission Form and Schedules

14.1 The Bid Submission Form, Schedules, and all documents listed under ITB 13.1 shall be prepared using the relevant forms, if so provided.

15. Alternative Proposal

15.1 Alternative Technical Proposals and completion dates if allowed shall be indicated in Section V - Specifications. The evaluation methodologies for their consideration shall be given in Section IV.

16. Bid Prices and Discounts

16.1 The Contract shall be for the whole Works, as described in ITB Sub-Clause 1.1, based on the priced Activity Schedule/Bill of Quantities submitted by the Bidder.

16.2 Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by Bidders, shall not be paid for by the Public Body when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. Corrections, if any, shall be made by crossing out, initialing,
16.3 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 14 days prior to the deadline for submission of bids, shall be included in the rates, prices, and total Bid price submitted by Bidders.\(^5\)

16.4 The price to be quoted in the Bid Submission Form shall be the total price of bid after any discount offered.

The discount if any and the conditions of its application shall be indicated separately.

| 17. Currencies of Bid and Payment | 17.1 The bid price and rates shall be in Mauritian Rupees and fixed for the duration of the contract unless otherwise specified in the BDS.

17.2 Unless otherwise specified in BDS interim payment for Plant and Material on site is applicable as per GCC 39.7. |

| 18. Documents Comprising the Technical Proposal | 18.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in the Bidder Qualification Form (section III), in sufficient details to demonstrate the adequacy of the Bidders’ proposal to meet the work requirements and the completion time. |

| 19. Period of Validity of Bids | 19.1 Bids shall remain valid for a period of 90 days after the bid submission deadline prescribed by the Employer unless otherwise specified in the BDS.

19.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing. |

| 20. Bid Security/Bid Securing Declaration | 20.1 The Bidder shall furnish either a subscription to a Bid Securing Declaration or a Bid Security in its original form with its bid as part of its bid, if so required in the BDS.

20.2 Bid Security shall be in the form of a Bank Guarantee from a local commercial bank as per the format contained in section III and shall be valid for a period of 30 days beyond the validity period of the bid or beyond any period of extension. |

20.3 Any bid not accompanied by an enforceable and substantially compliant Bid Security or a subscription to a Bid Securing Declaration in the Bid Submission Form, if required in accordance with ITB 20.1, shall be rejected by the Employer |

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\(^5\) In lump sum contracts, delete “rates, prices, and.”
as non-responsive.

20.4 Bid Security shall be forfeited or the Bid Securing declaration exercised for non-compliance on the part of the Bidder for reasons mentioned in the Bid Security format contained in Section III or the Bid Suring Declaration contained as Appendix to the Bid Submission Form.

<table>
<thead>
<tr>
<th>21. Format and Signing of Bid</th>
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<tbody>
<tr>
<td>21.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 13.1 and clearly mark it “ORIGINAL”. In addition, the Bidder shall submit <strong>two copies</strong> of the bid and clearly mark each of them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.</td>
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</tbody>
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21.2 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.

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<tr>
<th>D. Submission and Opening of Bids</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Sealing and Marking of Bids</td>
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<tr>
<td>22.1 Bidders may always submit their bids by mail or by hand. Procedures for submission, sealing and marking are as follows:</td>
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<td>(a) Bidders submitting bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB 15, in separate sealed envelopes, duly marking the envelopes as “ORIGINAL”, “ALTERNATIVE” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB sub-Clauses 22.2.</td>
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<td>22.2 The inner and outer envelopes shall:</td>
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<td>(a) bear the name and address of the Bidder;</td>
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<td>(b) be addressed to the Employer as indicated in ITB 22.1;</td>
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<tr>
<td>(c) bear the specific identification of this bidding process indicated in accordance with ITB 1.1; and</td>
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<td>(d) bear a warning not to open before the time and date for bid opening.</td>
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<tr>
<th>23. Deadline for Submission of Bids</th>
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<tr>
<td>23.1 Bids shall be delivered to the Employer at the address and no later than the time and date <strong>specified in the BDS.</strong></td>
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</table>

The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in
accordance with ITB 10.

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<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. Late Bids</td>
<td>24.1 Late bids shall not be considered. They will be returned unopened</td>
</tr>
<tr>
<td>25. Withdrawal, Substitution, and Modification of Bids</td>
<td>25.1 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 Bid submission Form or any extension thereof.</td>
</tr>
<tr>
<td>26. Bid Opening</td>
<td>26.1 The Employer shall open the bids at the time place and address specified in the BDS in the presence of Bidders’ designated representatives who choose to attend.</td>
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26.2 The bidders’ names, the Bid Prices, the total amount of each bid, any discounts, any alternative bid, bid modifications and withdrawals, the presence or absence of bid security, and such other details as the Employer may consider appropriate, will be announced and recorded by the Employer at the opening.

**E. Evaluation and Comparison of Bids**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Confidentiality</td>
<td>27.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids and recommendation of contract award, shall not be disclosed to Bidders or any other person not officially concerned with such process.</td>
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<tr>
<td>27.2 Any attempt 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.</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Clarification of Bids</td>
<td>28.1 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. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetical errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 31.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Determination of Responsiveness</td>
<td>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 13.</td>
</tr>
<tr>
<td>29.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission.</td>
<td></td>
</tr>
<tr>
<td>29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 18, Technical Proposal, in particular, to confirm that all requirements of Section IV</td>
<td></td>
</tr>
</tbody>
</table>
(Employer’s 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. **Nonconformities, Errors, and Omissions**

30.1 Provided that a bid is substantially responsive, the Employer may waive any non-material non-conformity in the bid, request that the Bidder submit the necessary information or documentation, to rectify nonmaterial nonconformities in the bid related to documentation requirements but not related to any aspect of the price of the bid; and shall rectify quantifiable nonmaterial nonconformities related to the Bid Price.

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 unit price 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.

32. **Margin of Preference**

32.1 **Unless otherwise specified in the BDS**, Margin of preference shall not apply.

33. **Evaluation of Bids**

33.1 The Employer shall use the criteria and methodology defined in this clause and no other evaluation criteria or methodologies shall be permitted.

33.2 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 Quantities for admeasurement contracts or Schedule of Prices for lump sum contracts, but including Daywork
items, where priced competitively; and

(b) price adjustment for correction of arithmetic errors, discounts, non-conformities, due to the supplementary criteria as defined in Section IV, and Margin of Preference, if applicable.

33.3 If this Bidding Document allows Bidders to quote separate prices for different contracts, and to award multiple contracts to a single Bidder, the methodology to determine the lowest evaluated price of the contract combinations, including any discount offered in the Bid Submission Form, is specified in Section IV (Evaluation and Qualification Criteria).

33.4 If the bid for an admeasurement contract, which results in the lowest Evaluated Bid Price, is seriously unbalanced, front loaded or substantially below updated estimates or if any item in the Priced Activity Schedule is front loaded or contains an erroneous amount in the opinion of the Employer, the Employer may after clarification require the Bidder to produce detailed price analysis for any or all items that the amount of the performance security be increased at the expense of the Bidder.

34. **Comparison of Bids**

34.1 The Employer shall compare all substantially responsive bids in accordance with ITB 33 to determine the lowest evaluated bid.

35. **Qualification of the Bidder**

35.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated substantially responsive bid meets the qualifying criteria.

36. **Employer’s Right to Accept Any Bid, and to Reject Any or All Bids**

36.1 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.

**F. Award of Contract**

37. **Award Criteria**

37.1 Subject to ITB 36.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

38. **Notification of Award**

38.1 Prior to the expiration of the period of bid validity, the Employer shall, for contract amount above the prescribed threshold, notify the selected bidder of the proposed award and accordingly notify unsuccessful bidders. Subject to
Challenge and Appeal the Employer shall notify the selected Bidder, in writing, by a Letter of Acceptance for award of contract. The Letter of Acceptance shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”) and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract. Within seven days from the issue of Letter of Acceptance, the Employer shall publish on the Public Procurement Portal (publicprocurement.govmu.org) and the Employer’s website, the results of the Bidding Process identifying the bid and lot numbers and the following information:

(i) name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded; and


38.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

39. Signing of Contract

39.1 Promptly upon issue of Letter of Acceptance, the Employer shall send to the successful Bidder the Contract Agreement.

39.2 Within twenty-one (21) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

40. Performance Security

40.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security in accordance with the conditions of contract, using for that purpose the Performance Security Form included in Section VIII (Contract Forms).

40.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement within the prescribed delay shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

Preference Security

40.3 The successful bidder having benefitted from a Margin of Preference shall provide a Preference Security, as specified in the BDS. The amount for the Preference Security shall be the difference between the price quoted by the selected bidder and that of the lowest evaluated bid which would have been selected for award of contract, if the said Margin of Preference was not applicable.
41. Advance Payment and Security

41.1 The Public Body shall provide an Advance Payment on the Contract Price as stipulated in the GCC, subject to a maximum amount, as stated in the BDS. The Advance Payment shall be guaranteed by a security as per the format contained in Section VIII.

42. Plant and Materials on site

42.1 Unless otherwise specified in BDS interim payment for Plant and Material on site is applicable as per GCC 39.7.

43. Debriefing

43.1 The Employer shall promptly attend to all requests for debriefing for the contract, made in writing, and within 30 days from the date of the publication of the award or date the unsuccessful bidders are informed about the award, whichever is the case, by following regulation 9 of the Public Procurement Regulations 2008 as amended.
**Section II- Bidding Data Sheet**

### A. General

| ITB 1.1 | The Public Body is: **Prime Minister’s Office (Home Affairs)**  
|         | The Works are **Waterproofing Works at Old Government House, Port Louis** and consist of the following:  
|         | - Temporary relocation of air-conditioning split units and VRV’s *(to be carried out under supervision of ESD Engineer)*  
|         | - Temporary relocation of VRV bases.  
|         | - To provide for temporary protection of roof and works against rainfall with salle verte/blanche (to be done in phases).  
|         | - Removal of existing waterproofing membrane and cart away.  
|         | - Removal of existing screed and cart away.  
|         | - Repair of cracks on slab and treatment of expansion joints.  
|         | - Casting of new kickers  
|         | - Removal of existing profile sheets of bird proofing (sides only) to allow for waterproofing at edges.  
|         | - Laying of new screed to falls and cross falls.  
|         | - Laying of new waterproofing membrane to screed, kickers, upstand beams and all surfaces as directed by the Engineer.  
|         | - Construction of sheds with steel and Zinc-Aluminium alloy roofing sheets.  
|         | - Supply and fixing of new gutters and rainwater pipes  
|         | **Note**: **Removal and displacement of any other electrical items to be carried out under supervision of ESD Engineer.**  
|         | The name and identification of the Contract are: **Waterproofing Works at Old Government House, Port Louis PMO/19-20/Q 23/ONB**  
| ITB 1.2 | The Intended Completion period is **120 days** from start date.  
| ITB 2.1 | The Funding Agency is: **Prime Minister’s Office**  
| ITB 3.2 | (a) The address to file Challenges in respect of this procurement is:  
|         | **Secretary to Cabinet and Head of the Civil Service,**  
|         | **7th Floor, New Government Centre,**  
|         | **Port Louis**  
|         | (b) The address to file Application for Review is:  
|         | **The Chairman,**  
|         | **Independent Review Panel,**  
|         | **9th Floor, Wing B,**  
|         | **Emmanuel Anquetil Building,**  
|         | **Pope Hennessy Street**
|   | **Port Louis**  
|   | Tel : 2013921 |
| **ITB 5.4** | The list of debarred firms according to the Debarment process may be obtained from the web site of the Procurement Policy Office: ppo.govmu.org |
| **ITB 6.2** | The information required from bidders in ITB Sub-Clause 6.2 is modified as follows: *None* |
| **ITB 6.2 (g)** | The assessment of the financial soundness of the company shall be on a pass/fail basis on its overall performance including its profitability. |
| **ITB 6.3 (b)** | (A1) The Contractor shall demonstrate that it is registered with the CIDB under the following class(es): |
|   | (1) **Building Construction Works** and, |
|   | (2) **MEP** with specialization in the following area(s) **Air-conditioning and Ventilation System**. If the Contractor is not registered under the MEP class, he may appoint a Sub-Contractor which is registered under the MEP class with the CIDB. |
|   | (A2) The Contractor shall also demonstrate that it meets experience as **prime contractor** in the construction of a minimum of **TWO (2)** works of a nature and complexity equivalent to the Works over a period of **FIVE (5) Years**. |
|   | (Note : Work of similar nature and complexity’ comprises the laying of waterproofing and installation of air-conditioning systems and VRV’s with associated electrical works on buildings) |
| **ITB 6.3 (c)** | The essential equipment to be made available for the Contract by the successful Bidder shall be: |
|   | 1. Crane |
|   | 2. Burner and Industrial gas |
|   | 3. Compressor |
|   | 4. Breaker |
| **ITB 6.3 (d)** | The Contractor shall submit with his bid the proposed **key personnel** as described below: |
|   | (i) One (1) Site Manager (part-time) duly registered with the Council of Registered Professional Engineers of Mauritius (CRPE) as Civil Engineer and having at least (8) years of experience in works of similar nature. He may have some knowledge about VRV and A/C installations. |
|   | (ii) In the absence of requirement at para. (i), acceptable alternative may be considered. |
|   | (iii) One (1) Electrical Engineer (part-time) duly registered with the Council of Registered Professional Engineers of Mauritius (CRPE) as Electrical Engineer and having at least (5) years experience in VRV and A/C installations. |
(iv) In the absence of requirement at para. (iii), acceptable alternative may be considered.

(v) One (1) full-time Supervisor having a minimum of Ten (10) years’ experience in waterproofing works;

(vi) In the absence of requirement at para. (v), acceptable alternative may be considered.

(vii) One experienced Electrical Technician holding the Part II Electrical Engineering Technician’s Certificate 280 or 803 of the City and Guilds of London.

(viii) One experienced Technician specialised in the field of Refrigeration.

| ITB 6.3 (e) | The minimum amount of liquid assets and/or credit facilities net of other contractual commitments of the successful Bidder shall be 20% |

**B. Bidding Documents**

**ITB 8.1**

The Public Body’s address for clarification is:

Secretary to Cabinet and Head of the Civil Service,
7th Floor, New Government Centre,
Port Louis

Attention: D. Ramoo, Manager Procurement and Supply

Telephone: 201 2353
Facsimile number: 201 3186 or 201 1481
Electronic mail address: dramoo@govmu.org

A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer’s address indicated above not later than 14 days to closing date for submission of bid.

Any request for clarification received after the specified period will not be entertained.

**ITB 9.2**

A pre-bid meeting following a site visit has been scheduled for Thursday 17 November 2019 at 10.30 hrs at the Prime Minister’s Office.

Due consideration for attendance at pre-bid meeting and site visit will be given during evaluation of bids.

You may wish to confirm your presence by contacting Mr Reega, Assistant Manager Procurement & Supply, on Tel No. 201 3849 and to have access to the Government premises by contacting Mr Itnac on Tel. No. 201 1051.

**C. Preparation of Bids**

**ITB 13.1 (f)**

Any additional materials required to be completed and submitted by the Bidders
| ITB 17.1 | The Contract is not subject to price adjustment in accordance with GCC Clause 44. |
| ITB 17.2 | Interim Payment for Plant and Material on site is not applicable. |
| ITB 19.1 | The Bid shall be valid for 90 days after the deadline set for the submission of bid, the deadline being counted as day one of the validity period. |
| ITB 20.1 | The Bid shall include a subscription to a Bid Securing Declaration. |

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### D. Submission of Bids

| ITB 23.1 | The deadline for submission of bids shall be on: **08 November 2019**. |
| ITB 23.2 | The Employer’s address for the purpose of Bid submission is in the Tender Box located at:  
**Prime Minister’s Office,**  
**4th Floor,** **New Government Centre,**  
**Port Louis,**  
**Mauritius.**  
The deadline for the submission of bids is:  
**Date:** **Friday 08 November 2019**  
**Time:** **13.30 hours (local time) at latest** |

| ITB 26.1 | The bid opening shall take place at:  
**Prime Minister’s Office,**  
**7th Floor,** **Conference Room No 725**  
**New Government Centre,**  
**Port Louis,**  
**Mauritius.**  
**Date:** **Friday 08 November 2019**  
**Time:** **As from 13.45 hrs (local time).** |

---

### E. Evaluation and Comparison of Bids

| ITB 32 | 32.1 A Margin of Preference shall **NOT apply**. |
## F. Award of Contract

<table>
<thead>
<tr>
<th>ITB 37.1</th>
<th>The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITB 40.1</td>
<td>Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security in accordance with the conditions of contract, using for that purpose the Performance Security Form included in Section VIII. The Bank guarantee shall be 10% of the contract price inclusive of provisional and contingencies sum and VAT, from a recognised renowned commercial local bank.</td>
</tr>
<tr>
<td>ITB 40.2</td>
<td>Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement within the prescribed delay shall constitute sufficient grounds for the annulment of the award.</td>
</tr>
<tr>
<td>ITB 40.3</td>
<td>NOT Applicable</td>
</tr>
<tr>
<td>ITB 41</td>
<td>Advance Payment of 20% is applicable against a Bank Guarantee from a renowned Local Commercial Bank.</td>
</tr>
<tr>
<td>ITB 42.1</td>
<td>Interim Payment for Plant and Material on site is not applicable.</td>
</tr>
</tbody>
</table>

### Important Note

a. For contract of a value of Rs 5 million and above, the successful bidder shall, prior to award of contract, submit within a period of one week a Tax Clearance Certificate from the Mauritius Revenue Authority (MRA) to confirm that it has filed its tax returns and paid tax due.

b. In case, the Tax Clearance Certificate has not been submitted, the Ministry may consider to award the contract to the next lowest substantially responsive bidder who will have to equally comply with paragraph (a).

It is brought to the attention of the bidders that MRA has put in place a system for responsive bidders, on receipt of a letter from a Public Body requesting for a Tax Clearance Certificate, to apply for same electronically on MRA website [www.mra.mu](http://www.mra.mu). The bidder is requested to use the reference of the letter issued by the Public body to access the system.
Section III - Bidding Forms

Table of Forms

Bid Submission Form .................................................................25
Qualification Information .............................................................29
Bill of Quantities ........................................................................32
Bid Submission Form

The Bidder must prepare the Bid Submission Form on stationery with its letterhead clearly showing the Bidder's complete name and address.

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

Date: _______________
Bidder’s Reference No.: _______________
Procurement Reference No:_______________

To:

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 10;

(b) We offer to execute in conformity with the Bidding Documents the following Works:
________________________________________________________________________;

(c) The total price of our Bid after discounts, if any, offered in item (d) below is:
________________________________________________________________________;

(d) The discounts offered and the methodology for their application are:
________________________________________________________________________;

(e) Our bid shall be valid for a period of ________ [insert validity period as specified in ITB 19.1.] days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) We hereby confirm that we have read and understood the content of the Bid Securing Declaration attached hereto and subscribe fully to the terms and conditions contained therein, if required. We understand that non-compliance to the conditions mentioned may lead to disqualification.

(g) If our bid is accepted, we commit to obtain a Performance Security and a Preference Security (if applicable) in accordance with the Bidding Document;

(h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 5.4;

(i) We are not participating, as a Bidder in more than one bid in this bidding process other than alternative offers submitted in accordance with ITB 15;
(j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible under the laws of Mauritius;

(k) We are not a government owned entity / We are a government owned entity but meet the requirements of ITB 5.4;  

(l) We hereby “apply/do not apply” for Margin of Preference as provided in the bidding document;

(m) We have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption as per the principles described hereunder, during the bidding process and contract execution:

i. We shall not, directly or through any other person or firm, offer, promise or give to any of the Public Body’s employees involved in the bidding process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

ii. We shall not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.

iii. We shall not use falsified documents, erroneous data or deliberately not disclose requested facts to obtain a benefit in a procurement proceeding.

We understand that transgression of the above is a serious offence and appropriate actions will be taken against such bidders.

(n) We understand that this bid, together with your written acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(o) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and

(p) If awarded the contract, the person named below shall act as Contractor’s Representative:

____________________________________________________________________

Name:  

In the capacity of:  

Signed:  

Duly authorized to

---

6 Use one of the two options as appropriate.

7 Strike out as appropriate
sign the Bid for and on behalf of: ____________________________________________

Date: ____________________________________________

Seal of Company _________________________________________
Procurment Ref: PMO/19-20/Q 23/ONB

Bid Securing Declaration

By subscribing to the undertaking in respect of paragraph (f) of the Bid Submission form:

I/We* accept that I/we* may be disqualified from bidding for any contract with any Public Body for the period of time that may be determined by the Procurement Policy Office under section 35 of the Public Procurement Act, if I am/we are* in breach of any obligation under the bid conditions, because I/we*:

(a) have modified or withdrawn my/our* Bid after the deadline for submission of bids during the period of bid validity specified by the Bidder in the Letter of Bid; or

(b) have refused to accept a correction of an error appearing on the face of the Bid; or

(c) having been notified of the acceptance of our Bid by the Prime Minister’s Office during the period of bid validity, (i) have failed or refused to execute the Contract, if required, or (ii) have failed or refused to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We* understand this Bid Securing Declaration shall cease to be valid (a) in case I/we am/are the successful bidder, upon our receipt of copies of the contract signed by you and the Performance Security issued to you by me/us; or (b) if I am/we are* not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our* Bid.

In case of a Joint Venture, all the partners of the Joint Venture shall be jointly and severally liable.
Qualification Information

[The information to be filled in by bidders in the following pages shall be used for purposes of post-qualification or for verification of prequalification as provided for in ITB Clause 6. This information shall not be incorporated in the Contract. Attach additional pages as necessary. Pertinent sections of attached documents should be translated into English. If used for prequalification verification, the Bidder should fill in updated information only.]

1. Individual Bidders or Individual Members of Joint Ventures

1.1 Constitution or legal status of Bidder: [attach copy]

Place of registration: [insert]

Principal place of business: [insert]

Valid Registration certificate from the CIDB: [attach copy]

Evidence of signatory authorized to sign the bid (if applicable): [attach]

1.2 Where the specialization category for which the Bidder is required to be registered does not cover adequately the specialization required for the works Bidder shall provide [insert number] of works of a nature and amount similar to the Works performed as prime Contractor over the last [insert number] years. [Also list details of work under way or committed, including expected completion date(s).]

<table>
<thead>
<tr>
<th>Project/Contract name and country</th>
<th>Name of client and contact person</th>
<th>Type of work performed and year of completion</th>
<th>Value of contract (national currency )</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.3 Major items of Contractor’s Equipment proposed for carrying out the Works. [List all information requested below. Refer also to ITB Sub-Clause 6.3 (c).]

<table>
<thead>
<tr>
<th>Item of equipment</th>
<th>Description, make, and age (years)</th>
<th>Condition (new, good, poor) and number available</th>
<th>Owned, leased (from whom?), or to be purchased (from whom?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.4 Qualifications and experience of key personnel proposed for administration and execution of the Contract. [Attach biographical data. Refer also to ITB Sub-Clause 6.3 (d).]

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Years of experience (general)</th>
<th>Years of experience in proposed position</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1.5 Proposed subcontracts and firms involved. Refer to General Conditions of Contract Clause 7.

<table>
<thead>
<tr>
<th>Sections of the Works</th>
<th>Value of subcontract</th>
<th>Subcontractor (name and address)</th>
<th>Experience in similar work</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Bidders have to ascertain that sub-contractors executing works of amount Rs 500 000 are duly registered with the CIDB in accordance with CIDB Act 2008.

1.6 Financial reports for the last [insert number; usually 3] years: Financial Statements, Audited Accounts, etc. *[List below and attach copies]*

1.7 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents.

1.8 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Public Body.

1.9 Information on current litigation(s) in which the Bidder is involved.

<table>
<thead>
<tr>
<th>Other party(ies)</th>
<th>Cause of dispute</th>
<th>Amount involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.10 Statement of compliance with the requirements of ITB Sub-Clause 5.3.

1.11 Proposed program (service work and schedule). Description, drawings and charts, as necessary, to comply with the requirement of the bidding documents.

2. **Joint Ventures**

2.1 The information listed in 1.1 - 1.9 above shall be provided for each partner of the joint venture.

2.2 The information in 1.11 above shall be provided for the joint venture.
2.3 Attach the power of attorney or other acceptable document of the signatory (ies) of the Bid authorizing signature of the Bid on behalf of the joint venture.

2.4 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that

(a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;

(b) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and

(c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

3. Additional Requirements

3.1 Bidders should provide any additional information requested in the Bidding Document.
Bill of Quantities

The quantities indicated in the Bill are meant to provide a common basis for tendering and payment will be effected on actual quantities as executed on site.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Brief Description of Works</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate (Rs)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1</td>
<td>Preliminaries and General Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Contractor is to allow for costs related to Preliminaries and General Conditions of Contract requirements including the following but not limited to: setting out of the works, site management and Site Supervision Costs, Contractor’s office, overheads, tools, plants, scaffolding, store, stacking and storage of materials, Project Manager’s facilities, Transport facilities for inspection for Project Manager, insurances, watchmen, light, electricity, signboard, protection, security of workmen, etc. and works on site, temporary hoardings and gantries, police requirements etc. Bidders are required to submit their bid on a fixed price basis which is to include for all possible increase in costs of Labour, materials, freight, transport, fuel, changes in exchange rates, taxes excluding VAT, all cost related to insurances as per GCC13.1. Note 1: The Bidder is advised to visit and inspect the site for which he is tendering and to make his own assessment of the true extent and nature of works required, prior to submission of his offer as no claims will be allowed on the grounds of ignorance of the Conditions under which the works will be executed. Furthermore, The Contractor shall allow in his tender for all precautions be taken during the works in order not to damage any electric/telephone and data cables. The bidder should allow for the provision of safe means of working on roof in accordance with the Health and Safety Act (2005), in particular to Part VI of the act.</td>
<td>Sum</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sub-Total 1 Carried forward to Summary Sheet
<table>
<thead>
<tr>
<th>Item No</th>
<th>Brief Description of Works</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate (Rs)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1</td>
<td>Allow for the supply and fixing of salle verte/blanche on top of the roof for the protection of the works and to prevent leakage into the building during the works. Rate to include the supply and fixing of galvanised steel tubes properly braced to provide adequate structural stability, the supply and fixing of tarpaulins (green/white) in good condition, leak proof, on all sides and on top, provision of scaffolding as required and any miscellaneous cost which may arise. The salle verte shall be dismantled and removed from site after the completion of the waterproofing works.</td>
<td></td>
<td></td>
<td>Sum</td>
<td>Sub-Total 2 Carried forward to Summary Sheet</td>
</tr>
<tr>
<td>B.2</td>
<td>Allow for the removal of existing waterproofing membrane and cart away. Rate to include removal and temporary fixing of TV antenna to ensure continuous TV reception and putting back in place TV antenna.</td>
<td>m²</td>
<td>1900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.3</td>
<td>Allow for the removal of loose screed and cart away</td>
<td>m²</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.4</td>
<td>Allow for the treatment of cracks on roof slab</td>
<td>Sum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.5</td>
<td>Allow for the treatment of expansion joints</td>
<td>Sum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.6</td>
<td>Allow for the supply and laying of new screed of minimum thickness 25mm and slope of 1:100 to ensure adequate falls and crossfalls for no water ponding. Rate to include for ponding test on new screed to the satisfaction of the Engineer.</td>
<td>m²</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.7</td>
<td>Remove existing water tanks and re-fixing after completion of waterproofing works. Rate to include all associated plumbing works.</td>
<td>No</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.8</td>
<td>Allow for the deviation of all existing potable water pipes to facilitate waterproofing associated works.</td>
<td>Sum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.9</td>
<td>Allow to works around existing domes, chimneys, satellite dishes and other existing features. Works to include making good and preparation of surface to receive waterproofing works.</td>
<td>Sum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.10</td>
<td>Allow for the removal of existing profile sheets (sides only) of the bird proof and re-fixing after completion of waterproofing works on that part of the building.</td>
<td>m</td>
<td>112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item No</td>
<td>Brief Description of Works</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate (Rs)</td>
<td>Amount (Rs)</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>-----</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>B.11</td>
<td>Casting of RC bases 1000mmx500mm by 100mm thick on which the A/C split units will be fixed after new waterproofing is laid. The bases shall be laid on an additional waterproofing layer to prevent damage to the newly laid waterproofing.</td>
<td>No</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.12</td>
<td>Allow for the temporary relocation of VRV bases so that waterproofing works can be carried out. Rate to also include re-fixing of bases at their original locations after successful completion of waterproofing works. The bases shall be laid on an additional waterproofing layer to prevent damage to the newly laid waterproofing.</td>
<td>No</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.13</td>
<td>Supply and lay new waterproofing membrane or otherwise including enclosures around rain water pipes and any other surface ensuring water tightness. Rate to include 24-hour water test on the newly laid waterproofing to the satisfaction of the Engineer. Note: Waterproofing membrane or other approved waterproofing method should be laid according to manufacturer's instructions. Samples of waterproofing membrane or other method of waterproofing to be approved by the Engineer prior to laying.</td>
<td>m²</td>
<td>1900</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.1</td>
<td>Supply and fix new PVC gutter of nominal diameter 100mm to bird proof roof including flashing, complete with necessary fittings and accessories for fixing as per manufacturer's specifications. Rate to include scaffolding.</td>
<td>m</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.2</td>
<td>Supply and fix PVC rain water pipes of nominal diameter 100mm including all fittings required. Rate to include scaffolding.</td>
<td>m</td>
<td>225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.1</td>
<td>Allow for the casting of reinforced concrete kicker 150mmx 150mm on both sides of the cable tray as shown on Drawing G688/ST03. Rate to include for reinforcement, formwork, and epoxy compound Epidermix or equivalent.</td>
<td>m</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sub-Total 3 Carried forward to Summary Sheet
<table>
<thead>
<tr>
<th>Item No</th>
<th>Brief Description of Works</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate (Rs)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.2</td>
<td>Allow for the construction of steel cover to main power cables (in cable tray 600mm wide) and to covered shed on East side of building to prevent leakage. The frames shall be made of Galvanised SHS 80x80x5mm, 11.6kg/m, cut and welded to shape, and will be fixed with galvanised base plates on the new RC kickers, as shown on drawing G688/ST03. The purlins shall be made of Galvanised SHS 40x40x3.0mm, 3.41kg/m or equivalent. Rate to include scaffolding.</td>
<td>kg</td>
<td>2600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.3</td>
<td>Allow for the construction of steel structure staircase with handrail of approx. length 5m to be provided over the new cable tray cover to allow for access <em>(details to be provided on site)</em>. Rate to include for concrete bases.</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.4</td>
<td>Allow for the supply and fixing of pre-painted (both sides) and profilated, galvanised metal sheets or zinc &amp; aluminium sheets for covered shed roof and cable tray cover, including ridges and valleys and necessary fittings and accessories for fixing as per manufacturer's specifications.</td>
<td>m²</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>M&amp;E WORKS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.1</td>
<td>Removal and Re-installation of Split AC units including all accessories, such as Copper pipes, Refrigerant Gas, Slabs etc… on a temporary basis.</td>
<td>No</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.2</td>
<td>Displacement of VRV outdoor units with concrete bases.</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.3</td>
<td>Displacement of Water pumps</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.4</td>
<td>Disposal of faulty and un-used Outdoor units</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.5</td>
<td>Liaison with VRV supplier</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.6</td>
<td>Re-installation of VRV outdoor units and concrete bases after waterproofing works</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.7</td>
<td>Re-installation of water pumps with all required connection to make the pump operational</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.8</td>
<td>Re-installation of drainage pipes</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.9</td>
<td>Removal and Re-installation for Lightning Wires</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.10</td>
<td>Liaison with CEB and user department</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.11</td>
<td>Displacement of all power cables, cable tray and related electrical power distribution found on the roof</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.12</td>
<td>Testing and Commissioning</td>
<td>Lot</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sub-Total 4 Carried forward to Summary Sheet
### Cost Summary Table

<table>
<thead>
<tr>
<th>SUB TOTAL BROUGHT DOWN</th>
<th>AMOUNT (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brought forward from Sub-Total 1</td>
<td></td>
</tr>
<tr>
<td>Brought forward from Sub-Total 2</td>
<td></td>
</tr>
<tr>
<td>Brought forward from Sub-Total 3</td>
<td></td>
</tr>
<tr>
<td>Brought forward from Sub-Total 4</td>
<td></td>
</tr>
<tr>
<td>Net Total Excluding 15 % VAT</td>
<td></td>
</tr>
<tr>
<td>Contingency Sum</td>
<td>700,000</td>
</tr>
<tr>
<td>Net Total</td>
<td></td>
</tr>
<tr>
<td>Add 15 % VAT</td>
<td></td>
</tr>
<tr>
<td>Net Total Including 15% VAT &amp; Contingencies</td>
<td></td>
</tr>
</tbody>
</table>

---

**Bill of Quantities for Waterproofing Works at Old Government House, Port Louis, Authorised by:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Signature:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authorised for and on behalf of:</th>
<th>Company</th>
</tr>
</thead>
</table>
Section IV - Evaluation Criteria

This section contains supplementary criteria that the Employer shall use to evaluate bids.

1. **Evaluation**

   In addition to the criteria listed in ITB 33 the following criteria shall apply:

   (a) **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 V (Employer's Requirements).

   (b) **Multiple Contracts**

      Pursuant sub-clause 1.1 of the Instructions to Bidders, if Works are grouped in multiple contracts, evaluation will be as follows:

   (c) **Completion Time**

      An alternative Completion Time, if permitted under ITB 15.1, will be evaluated as follows:

   (d) **Technical Alternatives**

      Technical alternatives, if permitted under ITB 15.1, will be evaluated as follows:

   (e) **Margin of Preference**

      A Margin of Preference for employment of local manpower shall be **NOT be applicable**.
PART 2 – Employer’s Requirements
Section V - Employer’s Requirements

Table of Contents

Scope of works.................................................................40
Specifications.........................................................................40
Drawings ..............................................................................64
Scope of Works

The Works are **Waterproofing Works at Old Government House, Port Louis** and consist of the following:

- Temporary relocation of air-conditioning split units and VRV’s *(to be carried out under supervision of ESD Engineer)*
- Temporary relocation of VRV bases.
- To provide for temporary protection of roof and works against rainfall with salle verte/blanche (to be done in phases).
- Removal of existing waterproofing membrane and cart away.
- Removal of existing screed and cart away.
- Repair of cracks on slab and treatment of expansion joints.
- Casting of new kickers
- Removal of existing profile sheets of bird proofing (sides only) to allow for waterproofing at edges.
- Laying of new screed to falls and cross falls.
- Laying of new waterproofing membrane to screed, kickers, upstand beams and all surfaces as directed by the Engineer.
- Construction of sheds with steel and Zinc-Aluminium alloy roofing sheets.
- Supply and fixing of new gutters and rainwater pipes
Specifications

SPECIFICATIONS FOR CONCRETE AND REINFORCEMENT

1.01 MATERIALS
This section deals with reinforced and unreinforced concrete works, formwork and falseworks of any kind, and the reinforcement.

(1) Cement
Ordinary Portland cement and rapid hardening Portland cement shall comply with the requirements of MS 36: Portland cement (Ordinary and Rapid-Hardening). Each consignment of cement shall be accompanied by the manufacturer's certificate giving results of tests. If such certificate is not available, representative samples shall be taken from different bags or containers of each consignment, suitably packed and sent for testing, to prove its compliance with the requirements of MS 36 to an approved laboratory or where directed by the Engineer, all at the Contractor's expense.

All bagged cement shall be stored in a waterproof shed on a wooden floor raised at least 150 mm above the surrounding ground and any cement which shall have become injuriously affected by dampness or other causes shall at once be removed from the Site. Cement which has been re-bagged either by the importing agent or by the Contractor, whether through the breakage of the original bag or any cause, shall not normally be accepted, but may be used in special cases and in certain parts of the work, if the written approval of the Engineer is first obtained.

(2) Aggregates
Aggregates for concrete shall consist of naturally occurring material complying with the requirements of BS 882 Concrete Aggregates from Natural Sources. The fine aggregates for concrete shall consist of clean sharp sand or crusher dust or a mixture of sand and crusher dust and shall not contain any iron pyrites, coal, mica, shale or similar laminated materials, flaky or elongated materials, shells and other porous or fragile particles, soluble matters, sulphates, alkalis and other deleterious materials in such a form or in a sufficient quantity as to affect adversely the strength or durability of concrete, or in addition to the above for reinforced concrete, any materials which would attack the reinforcement. Aggregate shall be clean and free from adherent coatings, such as clay. The fine aggregate shall comply in all respects with the requirements of BS 882 for fine aggregate.

The coarse aggregate shall consist of crushed or natural gravel or shingle or alternatively of broken hard, close-grained stone of an igneous or other rock, to the approval of the Engineer. It shall be free from adherent coatings and shall, if necessary, be washed to achieve this, and shall conform to the following requirements.
(a) The amount of deleterious substance shall not exceed the following limits: -

<table>
<thead>
<tr>
<th>Material</th>
<th>Max. Permissible (%) by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay lumps</td>
<td>0.25</td>
</tr>
<tr>
<td>Material passing 75 micron BS Sieve</td>
<td>1.00</td>
</tr>
<tr>
<td>Calcium sulphate expressed SO</td>
<td>0.25</td>
</tr>
<tr>
<td>Sodium Sulphate Soundness (BS 1438 Appendix B) Weight loss after 5 cycles</td>
<td>12.00</td>
</tr>
<tr>
<td>Thin or elongated pieces (length greater</td>
<td>15.00</td>
</tr>
</tbody>
</table>
Maximum Flakiness Index (BS 812 sieve method)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>for 35mm aggregates</td>
<td>40</td>
</tr>
<tr>
<td>for 20mm aggregates</td>
<td>35</td>
</tr>
</tbody>
</table>

(b) The abrasion loss, as determined on representative samples in accordance with ASTM C131 shall not exceed 40%.
(c) The aggregate crushing value, as determined on representative samples in accordance with BS 812, shall not exceed 35% as an average or 40% as an absolute maximum.
(d) The drying shrinkage of the aggregate when tested in accordance with the British Building Research Establishment Standard test shall not exceed the following:
   i) for precast 0.04%
   ii) for all other concrete 0.06%.
### Grading of Aggregate

**FINE AGGREGATE**

i) Grading of fine aggregates shall comply with Grading Zones given in Table 2 of BS 882 which has been reproduced hereunder.

**TABLE NO 2 (BS 882) – Percentage by weight passing BS Sieve**

<table>
<thead>
<tr>
<th>BS Sieve Size (mm)</th>
<th>Grading Zone 1</th>
<th>Grading Zone 2</th>
<th>Grading Zone 3</th>
<th>Grading Zone 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>90-100</td>
<td>90-100</td>
<td>90-100</td>
<td>95-100</td>
</tr>
<tr>
<td>2.36</td>
<td>60-95</td>
<td>75-100</td>
<td>85-100</td>
<td>90-100</td>
</tr>
<tr>
<td>1.18</td>
<td>30-70</td>
<td>55-90</td>
<td>75-100</td>
<td>90-100</td>
</tr>
<tr>
<td>0.60</td>
<td>15-34</td>
<td>35-59</td>
<td>60-79</td>
<td>80-100</td>
</tr>
<tr>
<td>0.30</td>
<td>5-20</td>
<td>10-30</td>
<td>15-40</td>
<td>15-50</td>
</tr>
<tr>
<td>0.15</td>
<td>0-10</td>
<td>0-10</td>
<td>0-10</td>
<td>0-15</td>
</tr>
</tbody>
</table>

ii) Any fine aggregate which does not comply with the requirements of these Specification shall be immediately removed from the Site or placed in a stockpile for use in other parts of the Works, if it complies with the requirements thereof, as directed by the Engineer.

**COARSE AGGREGATE**

i) The Contractor shall arrange for the delivery of the coarse aggregate to Site in separate nominal sizes. The grading of such nominal size of aggregate shall be in accordance with the requirements of BS 882 as shown in Table No 3.

**TABLE NO 3 (BS 882) - Percentage by weight passing BS Sieve**

<table>
<thead>
<tr>
<th>BS Sieve Size</th>
<th>Nominal size of single-sized aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>63mm</td>
<td>100</td>
</tr>
<tr>
<td>5mm</td>
<td>85-100</td>
</tr>
<tr>
<td>37.5mm</td>
<td>0-30</td>
</tr>
<tr>
<td>20mm</td>
<td>0-20</td>
</tr>
<tr>
<td>14mm</td>
<td>85-100</td>
</tr>
<tr>
<td>10mm</td>
<td>0-5</td>
</tr>
<tr>
<td>5mm</td>
<td>0-5</td>
</tr>
<tr>
<td>2.36mm</td>
<td>0-2</td>
</tr>
</tbody>
</table>

ii) For Class 15(40) concrete, volumetric proportioning of coarse aggregate and of fine aggregate will only be permitted at the Engineer's discretion. For all other concrete mixes the Contractor will be required to produce coarse aggregate grading by weight batching the single sized aggregates.

iii) The single-sized aggregate shall be combined in proportions to give overall gradings for coarse aggregates in accordance with the requirements of BS 882 as set out in Table 4 below

**TABLE NO 4 (BS 882) - Percentage by weight passing BS Sieve**

### Grading of Aggregate

**COARSE AGGREGATE**

i) The Contractor shall arrange for the delivery of the coarse aggregate to Site in separate nominal sizes. The grading of such nominal size of aggregate shall be in accordance with the requirements of BS 882 as shown in Table No 3.

**TABLE NO 3 (BS 882) - Percentage by weight passing BS Sieve**

<table>
<thead>
<tr>
<th>BS Sieve Size</th>
<th>Nominal size of single-sized aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>63mm</td>
<td>100</td>
</tr>
<tr>
<td>5mm</td>
<td>85-100</td>
</tr>
<tr>
<td>37.5mm</td>
<td>0-30</td>
</tr>
<tr>
<td>20mm</td>
<td>0-20</td>
</tr>
<tr>
<td>14mm</td>
<td>85-100</td>
</tr>
<tr>
<td>10mm</td>
<td>0-5</td>
</tr>
<tr>
<td>5mm</td>
<td>0-5</td>
</tr>
<tr>
<td>2.36mm</td>
<td>0-2</td>
</tr>
</tbody>
</table>

ii) For Class 15(40) concrete, volumetric proportioning of coarse aggregate and of fine aggregate will only be permitted at the Engineer's discretion. For all other concrete mixes the Contractor will be required to produce coarse aggregate grading by weight batching the single sized aggregates.

iii) The single-sized aggregate shall be combined in proportions to give overall gradings for coarse aggregates in accordance with the requirements of BS 882 as set out in Table 4 below

**TABLE NO 4 (BS 882) - Percentage by weight passing BS Sieve**
### Section V - Employer’s Requirements

#### Size

<table>
<thead>
<tr>
<th>Size</th>
<th>30mm to 5mm</th>
<th>20mm to 5mm</th>
<th>12.5mm to 5mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>75mm</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.5mm</td>
<td>95-100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>20mm</td>
<td>30-70</td>
<td>95-100</td>
<td>100</td>
</tr>
<tr>
<td>14mm</td>
<td></td>
<td>90-100</td>
<td></td>
</tr>
<tr>
<td>10mm</td>
<td>10-35</td>
<td>25-55</td>
<td>40-85</td>
</tr>
<tr>
<td>5mm</td>
<td>0-5</td>
<td>0-10</td>
<td>0-10</td>
</tr>
</tbody>
</table>

iv) The amounts or proportions of each single-sized aggregate to be combined to form the coarse aggregate shall be varied from time to time as may be rendered necessary by the nature and source of the coarse and fine aggregates adopted by the Contractor, in order to produce at all times a concrete of the maximum density and workability with the minimum water cement ratio.

v) No claim of any kind will be accepted in respect of any such variation in the amounts or proportions of the single-sized aggregates and the Contractor shall allow in his tender for such variations. Under no circumstances shall more than one single-sized aggregate be delivered to the place of gauging in one truck or lorry.

### (4) STORING OF AGGREGATE

Aggregate shall be stored in single sizes in separate bins or on areas covered with tightly laid wood planks, sheet metal, hard compact gravel, concrete or other hard and clean surfaces, which surfaces shall be self-draining, and in such a manner that will preclude the inclusion of foreign material. Aggregate of different grading and sizes and from different sources shall be stored in separate piles and if these piles are close together they shall be separated by bulkheads. Adequate stocks of fine aggregates shall be maintained to ensure uniformity of moisture content when used.

The Engineer shall have the power to reject any aggregate, which does not conform to the above requirement. Rejected materials shall be immediately removed from site or disposed of at the expenses of the Contractor.

The variation of grading between the approved samples and subsequent consignments of single-sized aggregate shall not exceed 5 per cent.

### 1.02 NORMAL CONCRETE MIXES

Concrete mixes shall be designed in accordance with "Design of Normal Concrete Mixes" 1976, published by the UK Department of the Environment, or in accordance with other approved method.

### 1.03 STANDARD MIXES

i) The concrete shall attain the strength shown in Table No 5, both in the test cubes and throughout the whole of the placed work. The cement content must not fall below the minimum specified in Table No 5.

ii) Aggregates shall be batched by weight for all classes of concrete and hoppers shall be an approved adjustable type. With the written approval of the Engineer, volume batching may be permitted for batching aggregates for concrete Class 15(40). Where aggregates are batched by volume, stout gauge boxes, approved by the Engineer, shall be used. The volume of the gauge boxes shall take into account the bulking of the aggregates.
iii)  When bagged cement is used, the total volume or weight of aggregates per batch shall be such that a whole bag of cement is utilised; the use of cement from broken bags will not be permitted. When cement in drums or from a bulk-silo is used, the batching of the cement shall be by weight.

### TABLE NO 5 - CONCRETE SCHEDULE

<table>
<thead>
<tr>
<th>Concrete Class</th>
<th>Minimum Compressive Strength (N/mm²)</th>
<th>Minimum Cement Content (kg/m³)</th>
<th>Part of Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 7days</td>
<td>@ 28days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15(40)</td>
<td>10</td>
<td>15</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Blinding, Concrete surround to pipes, Concrete bedding &amp; backing to kerbs</td>
</tr>
<tr>
<td>20(20)</td>
<td>14</td>
<td>20</td>
<td>290</td>
</tr>
<tr>
<td>25(20)</td>
<td>17</td>
<td>25</td>
<td>340</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Retaining walls, Foundations, Service chambers, kerbs</td>
</tr>
<tr>
<td>30(20)</td>
<td>20</td>
<td>30</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rigid Pavement Box Culvert, Culverts, Gullies, Slotted Drain</td>
</tr>
</tbody>
</table>

**Notes**

1. The class of concrete is denoted by the specified minimum 28 days cube strength, in N/mm², of the works cubes. The maximum size of aggregate is 20 mm for all mix classes except for class 15(40) where 40 mm maximum aggregate size is allowed.
2. The design mixes are based on Portland cement complying with MS 36 or BS 4027, and natural aggregates complying with BS 882. No special cement or lightweight aggregates are to be used.

### 1.04 TRIAL MIXES

i)  No structural concrete shall be placed in the works until the relevant trial mixes have been approved by the Engineer.

ii)  As soon as possible after receiving the Engineer's order to commence work, and at least 5 weeks before commencing any trial mixes, the Contractor shall arrange to deliver samples of water, coarse and fine aggregates and cement to the Laboratory to enable the Engineer to carry out the required Laboratory tests referred to in Section 1 of the Specification.

iii)  After the Engineer has approved the materials and at least 5 weeks before the commencement of concreting, the Contractor shall prepare trial mixes to determine the relative proportions of water, coarse and fine aggregates and cement to produce concrete of a strength such that the average strength of the test cubes in any one day exceeds the specified works cube strength, as required in Table 1 by 33%. No cube test results may fall below the specified works cube strength.

iv)  At least 2 sets of 3 No. 150 mm test cubes will be made by the Engineer for each trial mix proposed by the Contractor for each class of concrete to be used. The cubes of one set shall be tested for strength at 7 days and the other at 28 days.

v)  No class of concrete shall be used in the works unless and until the Engineer has approved the Contractor's trial mix for that class of concrete. When the mix has been approved, no variation shall be made in the proportions, the original source of the cement and aggregate or in the type, size and grading zone of the latter without the consent of the Engineer, who may require further tests to be made.
Should the sources of the materials proposed for use in the production of concrete differ from those submitted by the Contractor for approval of trial mixes, the Contractor shall be required to submit samples from the new sources for testing and may, at the discretion of the Engineer, be required to submit trial mixes made with the materials from the raw sources for approval.

1.05  MIXING WATER
Mixing water for use with cement shall be from a source and of a quality approved by the Engineer. It shall be clean and free of oil, acid, alkali, salt, organic matter or other deleterious substances. When comparative tests are made with distilled water of known quality, any indications of unsoundness, marked change in time of set, or reduction of more than 10% of mortar strength, shall be sufficient cause for the rejection of the water under test. Water shall be treated in compliance with BS 3148.

1.06  WATER/CEMENT RATIO
The quantity of water used for each class of concrete shall be just sufficient to produce a dense concrete of adequate strength and workability for its purpose. The moisture content of the coarse and fine aggregate in stockpiles shall be periodically determined as directed by the Engineer, and due allowance for the water present in them shall be made when determining the amount of water to be added at the mixer.

1.07  MIXING ON SITE
Unless otherwise authorized by the Engineer, concrete shall be machine mixed at the Site. Concrete shall be thoroughly mixed in a mixer of an approved size and type, which will ensure a uniform distribution of the materials throughout the mass. The mixer shall be equipped with adequate water storage and with a device for accurately measuring and automatically controlling the amount of water used in each batch. A mechanical means shall be provided for recording the number of revolutions for each batch and automatically preventing the discharge of the mixer until the materials have been mixed to the approval of the Engineer.

The entire contents of the mixer shall be removed from the drum before materials for a succeeding batch are placed therein. No mixer having a rated capacity of less than one batch shall be used nor shall a mixer be charged in excess of its rated capacity. All concrete shall be mixed for a period of not less than 1 minute after all materials, including water, are in the mixer. During the period of mixing, the mixer shall operate at the speed for which it has been designed, but this speed shall not be less than 14 nor more than 20 revolutions per minute.

Prior to producing the first daily batch of concrete to be used in the works, or after the mixer has been cleaned, the mixer shall be operated with a sufficient quantity of water, cement and aggregates to thoroughly coat the inside of the mixer drum, to obviate a deficiency of these materials in the first batch of Works concrete produced. On completion of this coating process, the coating batch shall be removed from the mixer and deposited in an approved location away from the Works. Mixers, which have been out of use for more than 30 minutes, shall be thoroughly cleaned before further concrete is mixed. The mixing plant and concrete transporting equipment shall be thoroughly cleaned before changing from one type of cement to another. The contractor will allow in his tender for all costs involved in complying with the above requirements.
1.08 READY MIXED CONCRETE

Ready mixed concrete, as defined in BS 5328 and batched off the site may only be used with the approval of the Engineer and shall comply with all requirements of the Specification. Ready mixed concrete shall be mixed and delivered to the site of the works by means of one of the following combination of operations:-

(a) Mixed completely at a central plant and the mixed concrete transported to the point of delivery in truck agitators.

(b) Mixed partially at a central point and the mixing completed in a truck mixer.

(c) Mixed completely in a truck mixer.

Mixing at a central plant shall conform to the requirements for mixing on Site. The organization supplying premixed concrete shall have sufficient plant capacity and transporting apparatus to ensure continuous delivery at the rate required. Mixers may be stationary mixers or truck mixers. Agitators may be truck mixers operating at agitating speed or truck agitators. Each mixer and agitator shall have attached thereto in a prominent place a metal plate or plates on which is plainly marked the various uses for which the equipment is designed and the manufacturer's guaranteed capacity of the drum or container in terms of volume of mixed concrete and the speed of the rotation of mixing drum or blades.

Truck mixers, unless otherwise authorized by the Engineer, shall be of the revolving drum type, watertight, and so constructed that the concrete can be mixed to ensure a uniform distribution of the materials throughout the mass. All solid materials for the concrete shall be accurately measured as specified and charged into the drum at the proportioning plant. Except as subsequently provided, the truck mixer shall be equipped with a tank for carrying mixing water.

Only the prescribed amount of water shall be placed in the tank unless the tank is equipped with a device by which the quantity of water added can be readily verified. The mixing water may be added directly to the batch, in which case a tank shall not be required. Truck mixers may be required to be provided with means by which the mixing time can be readily verified by the Engineer.

Concrete transported in a truck mixer, agitator, or other transportation device shall be discharged at the site and placed in its final position in the forms within 45 minutes after the introduction of the mixing water to the cement and aggregate, or the cement to the aggregate except that in hot weather or under other conditions contributing to quick setting of the concrete, the maximum allowable time may be reduced by the engineer. The maximum volume of mixed concrete transported in an agitator shall be in accordance with the specified rating.

1.09 HANDLING AND PLACING OF CONCRETE

(1) General

In preparation for the placing of concrete, all sawdust, chips, and other construction debris and extraneous matter shall be removed from the interior of forms. Struts, stays and braces, serving temporarily to hold the forms in correct shape and alignment, pending the placing of concrete at their locations, shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and not buried in the concrete.
No concrete shall be placed until the Engineer has approved the formwork and reinforcement. The Contractor shall give at least 24 hours notice to the Engineer of the times he proposes to concrete and the Engineer may order that no concreting shall take place until either he or his representative is present. No concrete operation shall fall in a weekend or on a public holiday except where absolutely necessary and unless prior written approval of the Engineer is obtained.

(2) Handling
Concrete shall be transported in watertight containers in such a manner that will avoid the segregation of the constituent materials. The time elapsing between the initial mixing of the concrete and final placing in the work shall not exceed 45 minutes when Portland cement is used. Where other cements are used, the Engineer will stipulate the maximum time allowed. Concrete remaining unplaced at the end of this period shall not be placed in the Works but shall be removed from the Site and disposed of at the Contractor's expense.

(3) Placing
Concrete shall not be dropped through a height exceeding 1.5 metres. For lowering concrete through heights in excess of 1.5 metres special methods shall be used, such as chutes, tremies, bottom dumping hoppers, or bagged placing and only with the approval of the Engineer. All containers, troughs, chutes and apparatus through and in which the concrete is passed shall be kept clean and entirely free from hardened concrete or cement and free from contamination by extraneous material, and where there is an interruption of concreting exceeding 30 minutes, these shall be cleaned and hosed down with water.

When Concrete is placed in horizontal layers it shall not be more than 300 mm thick except as hereinafter provided. When less than a complete layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding batch has taken initial set to prevent injury to the green concrete and avoid surfaces of segregation between the batches.

Each layer shall be compacted so as to avoid the formation of construction joints with a preceding layer which has not taken initial set. When in-situ concrete has been in place for 4 hours no further concrete shall be placed against it for a further 20 hours.

The concrete placed immediately adjacent to existing concrete shall contain only two-thirds the normal quantity of coarse aggregate, and shall be thoroughly compacted and worked against the existing concretes. A competent steel fixer shall be in attendance the whole time concrete is being cast around reinforcement. Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed upon the reinforcement steel and the surface of forms shall be removed.

Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to injure or break the concrete steel bond at and near the surface of the concrete, while cleaning the reinforcement steel.

1.10 COMPACTION OF CONCRETE
Concrete, during and immediately after depositing, shall be thoroughly compacted to produce a dense homogeneous mass. The compaction shall be done by mechanical vibration subject to the following provisions:
i) The vibration shall be internal unless special authorisation of other methods is given by the Engineer or as provided herein.

ii) Vibrators shall be of a type and design approved by the Engineer. They shall be capable of transmitting vibration to the concrete at frequencies of not less than 4,500 impulses per minute.

iii) The intensity of vibration shall be such as to visibly affect a mass of concrete of 25 mm slump over a radius of at least 450 mm to 600 mm.

iv) The Contractor shall provide a sufficient number of vibrators to properly compact each batch immediately after it is placed in the forms.

v) Vibrators shall be manipulated so as to thoroughly work the concrete around the reinforcement and embedded fixtures, and into the corners and angles of the forms. Vibration shall be applied at the point of deposit and in the area of freshly deposited concrete. The vibrators shall be inserted and withdrawn out of the concrete slowly.

The vibration shall be of sufficient duration and intensity to thoroughly compact the concrete, but shall not be continued at any one point to the extent that localised areas of grout are formed. Application of vibrators shall be at uniformly spaced points and not farther apart than twice the radius over which the vibration is visibly effective.

vi) Vibration shall not be applied directly or through the reinforcement to sections or layers of concrete which have hardened to the degree that the concrete ceases to be plastic under vibration. It shall not be used to make concrete flow in the forms over the distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms.

vii) Vibration may be supplemented by such spading as is necessary to ensure smooth surfaces and dense concrete within the forms.

1.11 CONSTRUCTION JOINTS

(1) General
Construction joints shall be placed as directed by the Engineer.

(2) Bonding
Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer, in a manner that will not leave loosened particles of aggregate or damage concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance, and saturated with water. The placing of concrete shall be effected continuously from joint to joint.

The face edges of all joints which are exposed to view shall be carefully finished true to line and elevation. When the placing of concrete is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints as far as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel.

Where a "feather edge" might be produced at a construction joint, an inset form shall be used to produce a blocked out portion in the preceding layer which shall produce an edge thickness of not less than 150 mm in the succeeding layer. Work shall not be discontinued within 450 mm of the top of any face.
Keyways, spaces between structural members, holes, pockets, spaces under structural members, and other locations where grout could escape shall be watertight before placing grout. No load shall be allowed on grout that has been in place less than 4 days, unless otherwise permitted by the Engineer. All improperly placed, cured or otherwise defective grout shall be removed and replaced by the Contractor at his expense.

1.12 PROTECTION AND CURING OF CONCRETE
Immediately after compaction and for 10 days thereafter concrete shall be protected against harmful effects of weather including rain, drying winds, rapid temperature changes, running or surface water and shock loads. It shall be protected by keeping it covered with damp hessian, straw, damp sand or other approved material and kept moist. All curing methods to be used shall be subject to the approval of the Engineer. The formwork shall also be kept damp and, if struck earlier than seven days, shall be replaced for the remaining period with other approved damp material. All concrete surfaces in contact with earth fill material shall be waterproofed with two coats of approved bituminous emulsion, either brushed or sprayed on, and on such surfaces curing membrane shall not be used. Care shall be taken to ensure that no bituminous paint where used is exposed to view after backfilling of the structures. All unsightly marks or spray shall be removed and the concrete made good at the Contractor’s expense.

1.13 CONSISTENCY OF CONCRETE
The consistency of concrete shall be frequently checked by means of a slump test performed by the Contractor and the Engineer in accordance with relevant BS mentioned in Section 1 of the Specification. The maximum and minimum slump required to produce a concrete of sufficient workability to be placed and compacted in accordance with the Specification shall be agreed with the Engineer, and any concrete, which fails to comply with these requirements, shall be removed from the Site and disposed of at the Contractor’s expense.

1.14 TOLERANCES
The concrete work shall be constructed as accurately as possible and the following tolerances will be permitted in the finished concrete work:

i) in the cross-sectional dimensions of structures not more than 3 mm.
ii) in dimensions, other than cross-sectional dimensions of structures not more than 6 mm.
iii) in any surface the irregularity shall not exceed 6 mm measured from a 3 m long straight edge.
iv) no member shall be out of line by more than 6 mm.
v) no wall shall be out of plumb by more than 0.1% or, if battered, out of batter by more than 6 mm in 6 m heights.

1.15 SAMPLING AND TESTING
Immediately on starting production on site, samples of concrete shall be taken as follows: On each of the first 4 days of concreting, for each class of concrete, shall be made 6 test cubes from 2 separate samples. Three test cubes from each samples to be tested at 7 days, the other 3 at 28 days. One test result shall be the average crushing strength from the three cubes in the same sample, tested either at 7 days or at 28 days. For the concrete to be acceptable the following conditions must be satisfied:

(a) not more than one individual result in the same test shall fall below the specified works cube strength.
(b) no individual result to fall below 90% of the specified works cube strength.
(c) no test result (average of three cubes in one sample) to fall below the specified works cube strength.

When at least 4 consecutive working days concrete production has been proved satisfactory, the frequency of testing may be reduced at the Engineer's discretion. The frequency and number of tests required by the Engineer for any concrete subsequently used in the Works will be at the discretion of the Engineer, and the Contractor will be deemed to have included for all costs required in the carrying out of the tests for trial mixes, and subsequent concrete quality control tests, in his tender for all parts of the Works, and for the whole duration of the contract.

1.16 LOADING CONCRETE STRUCTURES
No concrete structure will be subjected to loading including its own mass which will induce a compressive stress of one third of its compressive strength at time of loading or of the specified 28 days strength.

1.17 FAULTY CONCRETE
Any concrete which, in the opinion of the Engineer, fails to comply with the Specification shall be declared defective, and shall be cut out, removed from the site and any steelwork, reinforcement or other material damaged by the cutting out shall be replaced at the approval of the Engineer and at the Contractor's expense. The contractor may submit to the Engineer details of his proposals for rectifying the defects and shall comply with the Engineer's instructions regarding the method of carrying out the work. Notwithstanding the Engineer's approval, should the remedial work prove again unsatisfactory, the Contractor shall further make good all defective and rejected work at his own expense.

1.18 PRECAST CONCRETE

(1) General
Precast concrete structural members shall generally comply with the requirements of British Standard Code of Practice 116, except where varied by the requirements of these Specification or the Drawings. The Contractor shall set up on Site an adequate precasting yard undercover, capable of handling all the precast concrete works and shall provide a suitably qualified Engineer to supervise the working on the yard all to the satisfaction of the Engineer. The contractor shall provide full details and drawings showing his proposals for the precasting yard, and until approval is given in writing no work on erection of the yard or producing precast concrete shall commence.

(2) Concrete Grades
Concrete grades shall be all as shown on the Drawings and in accordance with the Schedule of Concrete Mixes.

(3) Casting Method
The precast units shall each be cast complete in one operation, on suitable and sufficient platforms and moulds, all to the satisfaction of the Engineer. Before casting is commenced the Contractor shall submit, for the approval of the Engineer fully detailed drawings showing the proposed layout of casting beds, together with the details of the method of assembling and dismantling of the moulds, and lifting assembly of the units. In cases where the finished thickness of the concrete is small, and compaction by internal or surface vibration will be difficult, the mould may be constructed so that external vibration of the shutter will satisfactorily compact the concrete, or vibrating tables may be
used. The soffit shutter shall be adequately supported to prevent any settlement that might cause cracking of the concrete.

Provision shall be made to hold firmly and maintain in position all projecting reinforcement, bolts, screwed sockets and lifting holes, so that they are correctly located in the completed unit or member concerned.

(4) Weather Protection and Curing
The precast units shall at all times be cast under suitable shelter to provide complete protection from the sun, rain and drying winds. They shall remain under the shelter for at least seven days or until the units are strong enough to be lifted from the casting beds, whichever is the longer period. Similar to in-situ concrete, all exposed precast concrete shall be protected and cured as described in Sub-section 6.12. Thereafter, the units may be transferred to a storage area or be erected in their final position.

(5) Surface Finishes Generally
The methods used for compacting the concrete must be such that pinholes or air holes on the surface are avoided. Upon removal of the formwork, any units having a concrete face with rough, uneven, segregated, honeycombed or imperfect finish, or which shall be permanently discoloured, may be rejected at the Engineer's discretion. Where carrying out of remedial work is approved by the Engineer, irregularities shall be eliminated by grinding, or where an area shows air holes, these shall be filled and thoroughly rubbed over to leave the desired surface. Unsightly encrustations and stains shall be removed from all exposed surfaces. Remedial work of all kinds must be carried out strictly in accordance with the Specification and any further instructions which may be given by the Engineer. Any units that are rejected shall be disposed of away from the Site at the Contractor's expense.

(6) Lifting and Handling of Units
No items may be lifted from the casting beds until they have gained sufficient strength to avoid damage through lifting, handling, stacking or erection. Notwithstanding any guidance given by the Engineer on the concrete strength necessary to prevent damage, the Contractor shall be entirely responsible for the sufficiency of strength of units before lifting. Any items found damaged or cracked during and after lifting operation will be rejected by the Engineer, and rejected items must not be incorporated in the works and must be disposed of and replaced at the Contractor's expense.

Before casting, the Contractor shall submit to the Engineer, for his approval, full details of the proposed method of hoisting precast units including the location of proposed lifting points. The contractor shall be responsible for the design and provision of extra reinforcement that may be required to facilitate the handling of the precast units and his tendered price should include for this. The edges of precast units shall be protected by fenders of timber or other approved material during the lifting, handling and erection stages.

(7) Stacking of Precast Units
Where members are stored, they shall be firmly supported at such bearing positions that will ensure that the stresses induced in them are always less than the permissible design stresses. Ample space is to be provided for the storage and stacking of the units. Units shall not be walked on or come into contact with the ground or with dirty or greasy hands or with ropes and cables. Nor shall wet slabs come into contact with dirty packs or pieces of timber which will discolour them. The units shall be stacked in such a way that the faces are protected both from damage and from staining. Where precast units have
reinforcement left projecting, great care must be taken to ensure that any rust from these bars will not stain the finished concrete surfaces.

(8) Tolerances
The dimensional tolerances shall be in accordance with the requirements of British Standard Code of Practice 116, except where otherwise specified or indicated on the Drawings.

1.19 FORMWORK, FALSEWORK AND SURFACE FINISH FOR STRUCTURES

(1) Definitions
"Forms" shall mean formwork or shuttering and include all temporary moulds for forming the concrete to the required shape, together with any special lining that may be required to produce the concrete finish specified.

"Falsework or Centering" shall include for furnishing, placing and removal of all temporary construction such as framing, props and struts required for the support of forms.

(2) Materials
All timber used for forms, falsework and centering shall be sound wood, well seasoned and free from loose knots, shakes, large cracks, warping and other defects. Before use on the Works, it shall be properly stacked and protected from injury of any source. Any timber which becomes badly warped or cracked prior to the placing of concrete shall be rejected. All shuttering for all outside surfaces above final ground level shall be provided with a suitable lining to produce a smooth surface finish, and shall be termed "Wrot" shuttering. Irrespective of nature of position, all joints in sheeting shall be sufficiently tight to prevent leakage of concrete fines or slurry.

If the Contractor proposes to use steel forms, he shall submit to the Engineer dimensioned drawings of all the component parts, and give details of the manner in which it is proposed to assemble or use them. Steel forms will only be permitted if it is sturdy in construction and if the manner of its use is approved by the Engineer.

Struts and props shall, where required by the Engineer, be fitted with double hardwood wedges or other approved devices so that the moulds may be adjusted as required and eased gradually when required. Wedges shall be spiked into position and any adjusting device locked before the concrete is cast.

(3) Forms
All forms shall be of wood or metal and shall be built mortar tight and of sufficient rigidity to prevent distortion due to the pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping of opening of joints due to shrinkage.

The forms shall be substantial and unyielding and shall be so designed that the finished concrete will conform to the proper dimensions and contours shown on the drawings. The design of the forms shall take into account the effect of vibration of concrete and surcharge as and when it is placed. They shall be so constructed that they can be removed without shock, vibration or damage to the concrete. All dirt, chips, sawdust and other foreign matter shall be removed from the moulds before any concrete is deposited in them.
All exposed arise edges of concrete shall be provided with 25 mm by 25 mm triangular fillets inside the forms, unless otherwise directed by the Engineer.

Openings for the inspection and cleaning of insides of forms for walls shall be constructed in such a way that they can be closed properly before concreting commences.

Form clamps, bolts and anchors shall be used to fasten forms. The use of wire ties, to hold forms in position during placing of concrete, will not be permitted. Bolts or clamps shall be positive in action and shall be of sufficient strength and number to prevent spreading or springing of the forms.

They shall be of such type that they can be entirely removed or cut back 40 mm or more below the finished surface of the concrete surface. The bolts shall be positioned to give a regular pattern as agreed by the Engineer. All forms for the outside surfaces shall be constructed with stiff wales at right angles to the studs and all form clamps shall extend through and fasten such wales.

The shape, strength, rigidity, water tightness and surface smoothness of reused forms shall be maintained at all times. Any warped or bulged timber must be replaced. Forms that are unsatisfactory in any respect shall not be re-used.

All forms shall be treated with approved mould oil or similar material or be soaked with water immediately before placing concrete, to prevent adherence of concrete. Any material which will adhere to or discolour concrete shall not be used.

All forms shall be set and maintained true to the line designated until the concrete is sufficiently hardened. Forms shall remain in place for periods which shall be as specified hereinafter. When forms appear to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer may order the work stopped until the defects have been corrected.

All forms shall be approved by the Engineer before concrete is placed within it. The Contractor shall, if required by the Engineer, provide the latter with copies of his calculations of the strength and stability of the form or falsework, but notwithstanding the Engineer's approval of these calculations, nothing shall relieve the Contractor of his responsibility for the safety or adequacy of the forms and falsework.

All formwork joints shall form a regular pattern with horizontal and vertical lines., especially for exposed face of concrete.

(4) Falsework and Centering

Detailed plans for falsework or centering shall be supplied by the Contractor to the Engineer at least 14 days in advance of the time the Contractor begins construction of the falsework. Notwithstanding the approval by the Engineer of any designs for falsework submitted by the Contractor, the Contractor shall be solely responsible for the strength, safety and adequacy of the falsework and centering.

All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads from the weight of green concrete and shuttering and incidental construction loads.

Falsework or centering shall be founded upon solid footings safe against undermining and protected from softening. Falsework which cannot be founded on satisfactory footings shall be supported on piling which shall be spaced, driven and removed in a manner approved by the Engineer. The Engineer may require the Contractor to employ screw
jacks, or hard wood wedges to take up any settlement in the formwork either before or during the placing of concrete.

Falsework shall be set to give the finished structure the required grade and camber specified on the Drawings.

(5) Forms For Construction Joints
Where permanent or temporary joints are to be made in horizontal or inclined members, stout stopping off boards shall be securely fixed across the mould to form a watertight joint. The form of the permanent construction joint shall be as shown on the Drawings. Temporary construction joints shall have blocks of timber at least 75 mm thick, slightly tapered to facilitate withdrawal and securely fixed to the face of the stopping off board. The area of the key or keys so formed shall be at least 30% the area of the member. The blocks shall be kept at least 50 mm from the exposed face of the concrete.

Where reinforcement passes through the face of a construction joint, the stopping off board shall be drilled so that the bars can pass through, or the board shall be made in sections with a half round indentation in the joint faces for each bar so that, when placed, the board is a neat and accurate fit and no grout leaks from the concrete through the bar holes or joints.

(6) Removal of Forms and Falsework
In determining the time for the removal of forms, falsework and centering, due consideration shall be given to the grade of concrete, the method of compaction used, location and character of the structure, the weather and other conditions influencing the setting of the concrete, the materials used in the mix, and the loading which the weather would sustain after removal of such forms and falseworks.

Forms shall be removed in such a manner as will not injure the concrete and no formwork shall be removed before the concrete has sufficiently set and hardened. The minimum periods which shall elapse between the placing and compacting of normal Portland cement concrete and the removal of the forms for the forms for the various parts of the structure are given below, but compliance with these requirements shall not relieve the Contractor of his obligation to delay the removal of the forms if the concrete has not gained sufficiently strength:

<table>
<thead>
<tr>
<th>Part of Structure</th>
<th>Minimum Removal Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sides of wall</td>
<td>2 days</td>
</tr>
<tr>
<td>Soffits of slab</td>
<td>7 days</td>
</tr>
</tbody>
</table>

The Engineer may modify the above requirements and the Contractor shall obtain the Engineer's written approval for any decrease in the times of striking the formwork given above. The Contractor shall notify the Engineer when he proposes to remove any formwork, and no formwork shall be struck except in the presence of the engineer or his representative, and in no case without the written approval of the Engineer.

(7) Remedial Treatment of Surfaces
Immediately after the forms have been removed, all fins and projections shall be removed and rubbed down to a smooth surface. All form bolts shall be trimmed down to a depth of at least 40 mm below the surface and, together with minor cavities and air holes in the surface if any, shall be cleaned out, removed of all loose or aggregate materials and roughened to form a good key. These holes shall then be filled with cement mortar to match the strength and colour of the concrete and after it has thoroughly hardened, the surface shall be rubbed down to an even finish and shall be of a uniform colour with the rest of the structure.
On surfaces which are to be buried in the ground or surfaces which are to be enclosed, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform colour are not required. Ordinary surface finish, unless otherwise specified, shall be considered as a final surface finish to all surfaces which are to be buried in the ground or covered with fill material.

(8) Unformed Surfaces
1. Clause U1: The concrete shall be uniformly levelled and screeded to produce a plain, textured or ridged surface as described in the Contract. No further work shall be applied to the surface unless it is used as the first stage for a Class U2 or Class U3 finish.
2. Class U2: After the concrete has hardened sufficiently, the concrete Class U1 surface shall be floated by hand or machine sufficiently only to produce a uniform surface free from screed marks.
3. Class U3: When the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, a Class U1 surface shall be steel trowelled under firm pressure to produce a dense, smooth uniform surface free from trowel marks.

1.20 STEEL REINFORCEMENT FOR STRUCTURES

(1) Materials
All reinforcing steels except pre-stressed reinforcing steel shall conform to MS10. The Contractor shall, when called upon by the Engineer, provide representative sample pieces for testing.

Alternatively, the reinforcement of concrete may comply with the following requirements:

<table>
<thead>
<tr>
<th>Hot rolled steel bars / Mild Steel</th>
<th>BS 4449</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Tensile Steel</td>
<td>BS 4449</td>
</tr>
<tr>
<td>Medium Tensile Steel</td>
<td>BS 4449</td>
</tr>
<tr>
<td>High Tensile Steel</td>
<td>BS 4449</td>
</tr>
<tr>
<td>Cold Worked Steel</td>
<td>BS 4461</td>
</tr>
<tr>
<td>Steel Fabric</td>
<td>BS 4483</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>BS 970</td>
</tr>
</tbody>
</table>

All reinforcement shall be from an approved manufacturer, and, if required by the Engineer, the Contractor shall submit a test certificate of the rolling. The Contractor shall when requested by the Engineer, provide sample pieces for testing in an approved Materials Testing Laboratory, all at the Contractor's expense.

All reinforcement shall be free from scale, rust, grease, paint or other substances likely to reduce the bond between the steel and the concrete.

All bending shall be done in an approved machine with the steel cold and in accordance with BS 4466.

(2) Storage
When placed in the Works, reinforcement shall be free from coatings of dirt, detrimental scale, paint, oil or other foreign substance.
Reinforcement shall be stored off the ground and be protected from rusting, coatings of deleterious material and excessive distortions. Any bar that, in the opinion of the Engineer, has been adversely affected by storage shall be cleaned, or removed from the Site and replaced by the Contractor at his own expense.

(3) Fabrication
Bar reinforcement shall be cut and bent to shapes shown on the Drawings and according to bending schedules, prepared by the Contractor and approved by the Engineer.

All bars shall be bent cold, unless otherwise permitted by the Engineer. All hooks and bends, unless otherwise shown on the Drawings, shall be to BS 4466. The Contractor shall satisfy himself as to the accuracy of any bar bending schedule supplied and shall provide all reinforcement in accordance with the Drawings.

Bar reinforcement shall be bundled and each bundle of steel shall be tagged with identifying tags, showing the size and mark of the bar.

(4) Fixing
The reinforcement shall be fixed rigidly and accurately in the forms in accordance with the details shown on the Drawings so that the specified spacing and concrete cover are maintained throughout. Reinforcement shall be firmly and securely laid in position by tying at intersections with No. 16 gauge soft iron wire, with the ends of the wire turned into the main body of the concrete, or they may be spot welded by the electric arc process in accordance with the general requirements for welding specified.

Distances from the forms shall be maintained by means of blocks or other approved supports. Blocks to keep reinforcement away from contact with the forms shall be precast mortar or concrete blocks of approved shape and dimensions and of the same strength and colour as the adjacent concrete. Subject to Engineer's approval, appropriate plastic cover spacers may also be used.

No concrete shall be deposited in the forms until the Engineer has inspected the reinforcement and has given permission to place concrete.

(5) Splicing and Lapping
All reinforcement shall be provided in full lengths as indicated on the Drawings or bending schedule. Splicing of bars, except where shown on the Drawings, will not be permitted without the written approval of the Engineer. Splices shall be staggered as far as possible.

In lapped splices, the bars shall be placed in contact and wired together and in the manner specified in the Code of Practice for Reinforced Concrete BS 8110.

Mesh or matt reinforcements shall overlap each other sufficiently to maintain a uniform strength and shall be securely fastened at ends and edges. The edge lap shall not be less than 40 diameters of the mesh reinforcement bar or two mesh widths, whichever is the greater.
1.1 PLUMBER

1.9.1. General

All materials and workmanship shall comply with the latest editions of the British/European/South African or other approved Standard’s Specification, Codes of Practice, By laws and regulations of all Statutory Authorities concerned.

The Contractor shall include for producing all working drawings, details, builder’s work and holes drawings necessary to carry out the work and as required by the Architect/Engineer. The drawings shall be based upon the Architects diagrammatic drawings and shall be submitted, in duplicate progressively at least two months prior to the programmed commencement of work coordination and approval of the Architect/Engineer. All alterations to drawings, whether due to co-ordinations or otherwise, shall be carried out by the contractor. The contractor shall provide the Architect/Engineer with four copies of each approved drawings in addition to those required for his own use.

At completions of the Contract, the Contractor shall provide the Architect/Engineer with one complete set of negatives indicating the “As installed” installation and three prints of the said drawings complete with all operational and maintenance instructions value charts, and test certificates. These drawings shall be provided to the Architect/Engineer at practical completion of the works, failing which the Architect/Engineer reserves the right to withhold an appropriate portion of the first retention money.

All work shall be tested in sections as required and before being covered up, for the Architect/Engineer and statutory authorities. Before any test is carried out, a minimum of seven days notice shall be given to the Architect/Engineer.

Where access is indicated to soil, waste and rainwater pipe fittings, the Contractor shall ensure that all accessible. Before testing, all access doors shall be removed, inspected, the washer greased and then reassembled by the Contractor.

1.9.2. Lead in flats flashings, aprons etc.

The lead used shall be best milled sheet lead of approved manufacture. No solder to be used in laying of lead except where quite unavoidable and no continuous strip of lead to be more than 2.00mlong. Overlaps to be not less than 75 mm. Lead flashings, aprons, soakers and other lead work where required to be fixed shall be secured with copper nails. Lead work shall comply with the following weights:

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight (kgs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead gutters &amp; Flats</td>
<td>29.3</td>
</tr>
<tr>
<td>Flashings and aprons</td>
<td>24.4</td>
</tr>
<tr>
<td>Soakers</td>
<td>19.5</td>
</tr>
</tbody>
</table>

1.9.3. Soil ventilating pipes

Soil ventilating pipes shall be not less than 63 mm internal diameter cast iron pipes conforming to B.S. and fitted with the necessary junctions and bends. All joints shall be made with a gasket of tarred hemp and caulked with a mixture of neat cement just moist. The pipes shall be secured to the wall with approved holderbats which shall be securely fixed to the wall with rawbolts.

Ventilating pipes shall be carried at least 900 mm above caves level and shall be fitted with approved coated wire balloon.

1.9.4. The Contractor shall include for all charges for tapping and connection to public
Rising Main water main, including all necessary excavations and reinstatement of public roads.

1.9.5. Galvanised pipes and fittings for water services

All internal and external water services, fittings, wastes, overflows and the like shall be in screwed and socketted galvanised wrought iron or steel tubes and tubulars; the former complying with BS 788 for water (medium) and the latter with BS 1387 for B class. Pipes above ground level shall be fixed to walls with approved type galvanised malleable iron built in clips, brackets, holderbats or pipe clips, the spacing of which shall not exceed 900 mm.

The jointing of galvanised piping and fittings shall be made with proprietary brands of jointing paste or compound complying with BS 1260 and if these are not obtainable by a method to be approved by the Architect/Engineer.

Unless otherwise specified or detailed on drawings the internal diameter of service pipe shall comply with the following:

<table>
<thead>
<tr>
<th>Diameter of supply or feed pipe</th>
<th>No. of Tappings shall not exceed</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 mm</td>
<td>2 - 13 mm</td>
</tr>
<tr>
<td>19 mm</td>
<td>4 - 13 mm</td>
</tr>
<tr>
<td>25 mm</td>
<td>13 mm or 2 - 19 mm</td>
</tr>
<tr>
<td>25 mm</td>
<td>11-13 mm or 2-25 mm</td>
</tr>
<tr>
<td>31 m</td>
<td>16 - 13 mm or 6 - 19 mm</td>
</tr>
<tr>
<td></td>
<td>3 - 25 mm or 2 - 31 mm</td>
</tr>
</tbody>
</table>

1.9.6. Water taps

All bib, pillar, globe and stop taps shall be of the screw down pattern and comply in every respect with BS 1010. The size specified or shown on the drawing shall mean the maximum bore of the seating.

1.9.7. Stopcock boxes

Brass stopcocks shall be provided at the immediate entry of the water services into the building and at the other points as indicated on the drawings and shall be of a pattern approved by the Architect/Engineer.

Stopcock boxes where required externally shall be constructed of 150 mm earthenware pipe cut to the required length and fixed vertically over the stopcock on two concrete blocks and the earth wall consolidated round the sides. Top of pipe to be fitted with 225 mm x 225 mm x 25 mm, thick precast concrete cover reinforced with 13 mm chicken wire netting and fitted with a lifting ring.

1.9.8. Testing of water services

The whole of the water services laid or fixed by the expense in the presence of the Architect/Engineer and shall comply with his requirements and any defects made good to his satisfaction. In the absence of instructions regarding the test it shall be an air pump and pressure gauge test the pressure applied at 35 to 53 grms per cm2 for one hour at the end of which period the loss in pressure shall not be greater than 1/50th of lb. per 225 mm2.

1.9.9. Waste pipes

Waste from sinks and shower to be in 38mm bore pipe and from lavatory basins to be 31 mm. All wastes to be fitted with C.P. bottle traps. All waste to be carried through external walls to discharge over gully gratings. All wastes pipes shall be at each change of direction of pipe fitted with a tee, and at one end with screwed plug for cleaning purposes. The external gully to be connected to the nearest manhole. Wastes from urinals to be taken in 50mm diameter cast iron
pipe with trap at urinal end and connected by 50mm pipe externally to the nearest manhole. All laid to fall.

1.9.10. Overflow pipes

Overflow pipes are to be fitted to all W.C. cisterns, tanks and baths and in each case the overflow pipe shall be 6 mm. larger in diameter than the water supply to the unit. Overflow pipes to W.C. cisterns shall be taken through an external wall to finish 150mm beyond the face of the wall.

1.9.11. Supply of Sanitary Ware

Baths, W.C’s. basins, sinks and other sanitary units shall be of approved manufacture, and shall comply with the relevant B.S, SABS or equivalent. They shall be of the type and designs shown on the drawings or to the Architect’s/Engineer’s instructions. The whole of the units shall be properly fixed and connected to the water service complete with wastes and overflows as described.

1.9.12. Rainwater Pipes

Rainwater pipes shall be approved rigid P.V.C. rainwater unless otherwise described. Pipes shall be properly fixed to walls with approved clips at distance to be directed by the Architect/Engineer.

1.9.13. Drain, Pipes for Soil drainage

All pipes for soil drainage which include the conveyance of discharges from WCs, basins, sinks, urinals, baths and showers shall be salt glazed earthenware pipes, bends, junctions and tapers complying in all respects with B.S. No. 65 for “British Standard Pipes” and must be stencilled with the registered mark of the B.S.I. Other fittings shall comply with the dimensions laid down in B.S. 539. If the above type of pipe is unobtainable then best Commercial Quality may be used on conditions prior approval of the Architect/Engineer is obtained.

1.9.14. Drain pipes for water drainage

Pipes conveying storm or surface water shall be second quality distinguished by a black band.

1.9.15. Laying of drain pipes

The pipes to be laid in straight runs to even and regular falls, and put together with great care, the spigot of one pipe shall have one lap of tarred gaskin wrapped round it and then placed into the socket of the pipe previously laid. After adjustment the gaskin shall be caulked lightly home but not so as to occupy more than one quarter of the socket depth. The socket shall then be completely filled with cement mortar (1:1) and a fillet shall be formed round the joint, with a trowel forming an angle of 45 degrees with the barrel of the pipe. The joint inside to be struck with a scraper, so as to give a perfectly clear and unobstructed waterway.

1.9.16. Fall in drains

All pipes except where otherwise shown shall be 125mm internal diameter laid to a fall of 1:50.

1.9.17. Concrete bed to drains

Concrete (1:3:6) shall be laid 150mm thick to form bed for drains where the soil is found to be soft. After the pipes have been tested, it shall be haunched up on both sides to a height of 3/4th of the internal diameter of the pipe.

1.9.18. Concrete

All pipes passing under buildings or under roadways shall, in addition to a 150mm concrete bed under, be completely surrounded in concrete of the same
1.9.19. Gully traps

Provide trapped gullies, complete with gratings in positions shown on drawings, set on concrete and surrounded in concrete, and jointed to drain as described.

1.9.20. Manholes

Manholes are to be constructed in the positions shown on the drawings. The internal dimensions of the manholes shall vary according to their depth and shall be as follows:

<table>
<thead>
<tr>
<th>Depth of manhole from top of invert to finished ground level</th>
<th>Internal dimensions of manhole shall not be less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 600mm</td>
<td>600 x 450mm</td>
</tr>
<tr>
<td>Up to 900mm</td>
<td>750 x 600mm</td>
</tr>
<tr>
<td>Up to 1200mm</td>
<td>825 x 675mm</td>
</tr>
<tr>
<td>Up to 1500mm</td>
<td>900 x 750mm</td>
</tr>
</tbody>
</table>

Exceeding 1500mm in depth the Contractor shall apply to the Architect/Engineer for details.

Manholes shall be constructed in concrete (1:3:6) cast in-situ hacked for key and finished above the benching with 6mm thick rendering of cement and sand mixed in the proportions of 1 to 2. The thickness of the concrete walls shall vary according to the depth and shall be as follows:

<table>
<thead>
<tr>
<th>Depth of manhole from top of invert to finished ground level</th>
<th>Thickness of concrete to manhole walls shall not be less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 600mm deep</td>
<td>100mm thick</td>
</tr>
<tr>
<td>Exceeding 600mm but not exceeding 1500mm</td>
<td>150mm thick</td>
</tr>
</tbody>
</table>

Exceeding 1500mm in depth the Contractor shall apply to the Architect/Engineer for details.

The floor of manholes shall be 150mm thick and the channels and benching shall be formed above the level of the floor in fine concrete (1:2:4) average 225mm thick with a polished fall and carried up 450mm above invert level and finished off at an angle of 45o rounded off and dished to main and branch channels. The cement for benching to be sulphate-resisting cement. Step irons shall comply with B.S. 1247 and shall be placed at intervals of 450mm vertically with 300mm offset between alternate steps.

Manhole covers other than those in roadways shall be 600 x 450mm cast iron medium weight with frame set flush in 125mm concrete cover slab Mix C, reinforced in cases where the internal size of the manhole situated inside the building shall be bedded in grease and shall be of an approved type fixed with bolts and screws. Manhole covers for manholes in roads or drives shall be of an approved heavy iron pattern and the contractor shall apply to the
Architect/Engineer for details including the construction of the manhole.
SPECIFICATIONS OF THE WATERPROOFING SYSTEM

The Subcontractor for waterproofing works must be registered as specialist waterproofing contractor with the Ministry of Public Infrastructure, National Development Unit, Land Transport & Shipping.

1.0 The waterproofing system

The waterproofing system, unless otherwise specified, shall meet the following performance specifications:

Either

a SBS elastomeric bitumen system in double layers, torched bonded, and of total minimum thickness of 4.2mm with a granular finish

Or

any other alternative system or concrete waterproofing method, provided it is duly supported with all technical specifications and backup information and literature to allow a proper assessment of the treatment proposed and its suitability for tropical climates and subject to approval.

2.0 Performance Specifications of the waterproofing system

2.1 The system shall, unless specified otherwise, be resistant to foot traffic and light concentrated loads associated with installation and maintenance operations.

2.2 The system shall comply with European, South African or American standards.

2.3 The system and its installation shall conform strictly to the Manufacturer’s specifications.

2.4 The system should be able to withstand and resist suction pressure created from cyclonic winds of up to 280km/h.

3.0 Preparation of surface to receive Waterproofing treatment

3.1 The waterproofing Contractor shall ensure that the slope of the substrate is adequate to prevent water-ponding and is according to Manufacturer’s specifications.

3.2 All concrete surfaces to be waterproofed shall be reasonably smooth and free from holes and projections, which might puncture or otherwise damage the waterproofing treatment to be applied.

3.3 The surface of the substrate shall also be dry and shall be thoroughly cleaned of dust and loose materials prior to the laying of the waterproofing system.

3.4 Prior to the application of the new treatment, the waterproofing Contractor shall be required to issue a certificate stating that the surface is ready to receive the new waterproofing treatment and is according to the Manufacturer’s Specifications. It is hereby made clear that, should the waterproofing system fails to perform as required, no discharge of responsibilities shall be allowed on the grounds of the existing conditions prior to the application of the waterproofing system.

4.0 Inspection of Waterproofing Treatment

4.1 The waterproofing treatment shall be carried out in the presence of the Engineer’s representative between 9.00 a.m to 4.00 p.m and to the satisfaction of the Engineer.
4.2 The Contractor shall ensure that the waterproofing treatment is free from wrinkles, buckles, blisters (trapped air) and other damage. Any damaged or defects to the waterproofing system shall be corrected at the Contractor’s cost, and to the Engineer’s approval.

4.3 The Contractor shall carry out a water test on the finished work, and seek the Engineer’s approval for the same. The test shall consist in filling the whole treated area with water (after plugging the rain water pipes outlets) and retaining the water on the treated surface for 24 hours, or as directed by the Engineer. Any leak / defect found shall be repaired at the Contractor’s cost and another water test carried out to confirm the same, the whole to the Engineer’s satisfaction.

4.4 The Contractor shall clean adjacent surfaces of spillage and spattering of any adhesive materials used in the works.

5.0 Water Test

5.1 The Contractor shall allow in his rates for a water test to be carried out after laying the screed to fall, to confirm the absence of any water-ponding. The Test shall be verified and approved by the Engineer.

5.2 The contractor shall allow in his rates for a 24-hour water test to be carried out after laying of new waterproofing membrane to verify for any leakage. The Test shall be verified and approved by the Engineer.

6.0 Guarantee Certificate

6.1 On satisfactory completion of the waterproofing works, the Contractor shall submit a certificate of guarantee against leakage, defective materials and defective installation of the completed waterproofing system. Any such defects or leakage occurring during the guarantee period shall be promptly and completely attended to, including all affected work, at no additional cost to the Employer.

6.2 The said guarantee shall be in effect for a period of ten (10) years from the date of the Practical Completion Certificate. The guarantee shall be signed by the Contractor and shall be submitted to the Engineer with a copy to the Employer.
ROOFING SHEET

The Roofing Sheet shall be pre-painted (both sides) and profilated, Zinc-Aluminium Alloy sheets of nominal thickness 0.75mm thick and composed of nominal 150g of zinc coating, to roof including ridges, valleys, flashing and necessary fittings and accessories for fixing all as per manufacturer’s specifications.

Guarantee Certificate
On satisfactory completion of the roofing works, the Contractor shall submit a certificate of guarantee against corrosion, leakage, defective fittings and accessories and defective installation. Any such defects or leakage occurring during the guarantee period shall be promptly and completely attended to, including all affected work, at no additional cost to the Employer.

The said guarantee shall be in effect for a period of Ten (10) years from the date of the Practical Completion Certificate. The guarantee shall be signed by the Contractor and shall be submitted to the Employer.
METHOD STATEMENT

The Contractor shall adopt the following outlined methodology for the execution of the works and shall submit a method statement together with his Program of Works:

At no time should the whole waterproofing be removed. The works shall be carried out in sections such that the Contractor is able to complete and the test the waterproofing before moving to another part of the roof.

1. Identification of services at the section the Contractor intends to start working.
2. Relocation of A/C, VRV’s (including bases), antennas, water tanks and any other services to other parts of the roof (M&E related works shall be supervised by the ESD Engineer)
3. Erection of salle verte/blanche so as to prevent leakage into the building and protections of the works during rainfall.
4. Removal of existing waterproofing membrane and cart away.
5. Removal of existing screed and cart away.
6. Supply and fixing of new rainwater pipes 110mm diameter and cancelling of existing concealed one.
7. Construction of RC kickers (as per layout and details) where required.
8. Laying of new screed to falls and cross falls.
9. Carrying out ponding test on screed to Engineer’s Satisfaction.
10. Erection of new steel structures as per drawings.
12. Carrying out water test on final waterproofing layer to Engineer’s satisfaction.
14. Laying of additional waterproofing layers at the new location of A/C split units and VRV’s.
15. Casting of new bases for A/C split units and relocation of VRV bases to their original locations.
16. Relocation of all other services and antennas to their original locations.
M& E SPECIFICATIONS

1. Introduction
This section deals with the removal and re-installation of M & E Services such as Split ACs, VRVs, Electrical Cables, Cable Trays, Cable conduit with power cables and Water pumps.

2. Scope of Works
The scope of work shall consist of but not limited to the following:
- Removal of AC outdoor units and accessories;
- Removal of Water pumps and accessories;
- Re-installation of the AC outdoor units after waterproofing works;
- Scrap and carting away unused Outdoor units;
- Re-installation of the Water pumps after waterproofing works;
- Displacement of power cable with cable tray;
- Removal and re-installation of wires for Lightning Protection;
- Carry out associated Electrical, Mechanical & Civil works as required.

3. Instruction to tenderers

3.1. Manner of Execution
The works shall be executed in the manner set out in the specifications or where not set out, to the satisfaction of the ESD Engineer and all reasonable variations on site shall be carried out in accordance with such directives as the Engineer may give. All items given in drawings are indicative only. Exact positions shall be finalised with the Engineer prior execution of works.

4. Conditions of Contract

4.1. Site Visit
Bidders are advised to conduct a site visit before submission of tender so as to be fully acquainted with the nature of the site and extent of work involved.

4.2. Breakdown of Contractor’s Price & Schedule of Materials
This schedule has been prepared with a view to provide a common basis for tendering. Before submission of tender, it is deemed that the bidder has acquainted him with all conditions prevailing on site. All the drawings, specifications and Breakdown of Contractor’s Price are complementary and should be read accordingly.

In case of discrepancies, omissions or errors, the tenderer shall inform the Project Manager prior to submission of the tender. No extra claim shall be entertained afterwards on this issue.
4.3. Permanent Site Staff
The contractor shall have within its company the following qualified staff:
(a) One experienced Electrical Technician holding the Part II Electrical Engineering Technician’s Certificate 280 or 803 of the City and Guilds of London.
(b) One experienced Technician specialised in the field of Refrigeration.

5. Specifications

5.1. Procedure for Displacement of Split AC outdoor units
1. Inform the ESD officer regarding the area where waterproofing work is scheduled.
2. Measure the pressure of the gas in the pipes and record.
3. Pump down the AC to store maximum refrigerant gas in the condenser unit.
4. Close all valves.
5. Remove power cables from the AC unit.
6. Remove the drain pipes accordingly.
7. Remove the AC and support.
8. Place the AC unit in a safe location for storage;
9. Proceed with waterproofing works.

5.2. Procedure for Displacement of VRV system
Contact respective supplier for removal and carry-out the following under his supervision:
1. Inform the ESD officer regarding the area where waterproofing work is scheduled.
2. Measure the pressure of the gas in the pipes and record.
3. Pump down the AC to store maximum refrigerant gas in the condenser unit.
4. Close all valves.
5. Remove power cables and communication cables from the AC unit.
6. Cut and remove refrigerant pipes.
7. Remove cable tray.
8. Remove the drain pipes accordingly.
9. Displace the outdoor unit using crane or other facilities in a safe location for storage;
10. Proceed with waterproofing works.

5.3. Procedure for Disposal of faulty and un-used Split AC outdoor units
1. Inform the ESD officer regarding the area where waterproofing work is scheduled.
2. Check power supply on the unit and cut power where connected.
3. Remove outdoor unit and discard.
4. Discard existing slabs or support.
5. Remove the drain pipes accordingly.
6. Remove respective indoor units and accessories.
7. Proceed with waterproofing works.
5.4. Procedure for re-installation of Split AC outdoor units
1. Ready-made concrete slabs of height 150 mm with protecting layers shall be placed in the required position to support the outdoor unit.
2. Re-install the outdoor unit in its respective position.
3. Apply cold waterproof paint where drilling was carried out as per Civil Engineer’s instruction;
4. Copper pipes shall be welded to make the reconnection with the indoor units.
5. Where copper pipes have not been cut but has been damaged, its respective making good shall be done by the contractor.
6. Re-install insulation where damaged.
7. Power cables shall be reconnected to the outdoor unit.
8. New conduits and cable trays shall be installed for the feeder cables.
9. The pressure level shall be verified again prior to start AC;
10. Top up the line with refrigerant where necessary.
11. Relocate the drain pipes as appropriate.
12. The AC unit shall be tested continuously for 3 consecutive days and remedial works shall be done where necessary.
13. Commissioning shall be completed accordingly.

5.5. Procedure for re-installation of VRV system
Contact respective supplier for re-installation and carry-out the following under his supervision:
1. The existing slab to be checked prior to re-installation
2. Re-install the outdoor unit in its respective position.
3. Install new cable tray;
4. New Copper pipes to be installed up to where it was sheared;
5. It shall then be welded for the connection with the indoor units.
6. Where copper pipes have not been cut but has been damaged, its respective making good shall be done by the contractor.
7. Install new insulation where damaged.
8. Power cables and communication cables shall be reconnected as required.
9. Conduits shall be re-installed for the feeder cables where appropriate.
10. All the valves are opened and the pressure level is verified again.
11. Top up the line with refrigerant where necessary.
12. Relocate the drain pipes as appropriate.
13. The VRV outdoor unit and indoor units have to be synchronized together.
14. The AC unit shall be tested continuously for 3 consecutive days and remedial works shall be done where necessary.
15. Commissioning shall then be considered completed.

5.6. Procedure for Displacement of Water Pump
The client to contact the National Assembly and the MPI Maintenance Team prior to remove the pumps: -
1. Await final approval from the user side prior to removal;
2. Disconnect the power supply;
3. Isolate the water line:
4. Remove the water pumps;
5. Place the water pumps in a safe location for storage;
6. Proceed with waterproofing works;

5.7. Procedure for re-installation of water pumps
1. Ready-made concrete slabs of height 150 mm with protecting layers shall be placed in the required position to support the pumps.
2. Re-install the unit in its respective position.
3. Reconnect the water line;
4. Reconnect the power cable and control cables;
5. Conduits shall be installed for protection of the cables.
6. The unit shall be tested and remedial works shall be done where necessary.
7. Commissioning shall then be considered completed.

5.8. Procedure for displacement of power cable
The client to contact the National Assembly and the ESD Team prior to remove the power cables found on the roof of the building:
1. The contractor must obtain final approval before starting the displacement work;
2. Power cut must be done prior to start of work;
3. The contractor shall remove the metal cover with care;
4. Place it in a safe location;
5. Remove one cable at a time with care
6. Place the cable on roller on the side of the cable tray;
7. Remove the cable tray;
8. Proceed with waterproofing underneath the cable routing;
9. Place concrete slab at various position to support the cable tray;
10. Place the cable tray;
11. Place the power cable back on the tray with care;
12. Every safety precaution must be observed during the works, such as using insulated gloves, safety shoes, etc.;
13. ESD to provide final clearance regarding the positioning and completion of works;
14. Re-energise the power system;
15. Commissioning shall then be considered completed.

Note:
1. There are other power cables also on the building which can be easily moved around to perform waterproofing works. The contractor shall displace the cable as necessary in the presence of ESD.
2. The contractor shall make liaison with the CEB and client for power cut. Allowance shall be made in the BCP for any cost that might arise for completion of the work.
### Drawings

<table>
<thead>
<tr>
<th>No</th>
<th>Drawing Title</th>
<th>Drawing Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Survey Layout</td>
<td>G688/ST01</td>
</tr>
<tr>
<td>2</td>
<td>Proposed Drainage Layout</td>
<td>G688/ST02</td>
</tr>
<tr>
<td>3</td>
<td>Proposed cable Tray cover, Proposed Cover shed &amp; Sections</td>
<td>G688/ST03</td>
</tr>
</tbody>
</table>
**SECTION V: SPECIFICATIONS AND COMPLIANCE SHEET**

Procurement Reference Number: ______________________________

*Bidders should complete columns C and D with the specification and performance of the Works offered. Also state “comply” or “not comply” and give details of any non-compliance/deviation to the specification required. **Attach detailed technical literature if required.** Authorise the specification offered in the signature block below.*

* Columns 1A and B to be completed by Public Body.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Specifications and Performance Required</th>
<th>Compliance of Specifications and Performance Offered</th>
<th>Details of Non-Compliance/Deviation (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td><strong>The waterproofing system</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>The waterproofing system, unless otherwise specified, shall meet the following performance specifications:</td>
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<td></td>
<td>Either</td>
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<td></td>
<td>a SBS elastomeric bitumen system in double layers, torched bonded, and of total minimum thickness of 4.2mm with a granular finish, as described below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) The first layer should be a SBS (Styrene – Butadiene – Styrene) elastomeric bitumen system reinforced with non-woven glass fibre Md (50gm2) torched applied with a minimum thickness of 1.7mm</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(b) The second layer should be a SBS (Styrene – Butadiene – Styrene) elastomeric bitumen system reinforced with non woven glass fibre matt having a minimum thickness of 2.5mm. This layer should have a granular finish colour white for better reflection and applied by torch.</td>
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<td></td>
<td>Or</td>
<td></td>
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<tr>
<td></td>
<td>Any other alternative system, provided it is duly supported with all technical specifications and backup information and literature to allow a proper assessment of the treatment proposed and subject to approval.</td>
<td></td>
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</tr>
</tbody>
</table>
2.0 **Performance Specifications of the waterproofing system**

2.1 The system shall, unless specified otherwise, be resistant to foot traffic and light concentrated loads associated with installation and maintenance operations. There shall be no infiltration of water at the bottom of VRV air conditioning system and bottom of electrical cables on the roof of Old Government House which will cause leakage inside the building. The method adopted for waterproofing must not damage any chillers together with pipes, air conditioning ducts, electrical cables, solar panels, etc during the execution of the works on the three floors.

2.2 The system shall comply with European, South African or American standards.

2.3 The system and its installation shall conform strictly to the Manufacturer’s specifications.

2.4. The system should be able to withstand and resist suction pressure created from cyclonic winds of up to 280km/h.

3.0 **Preparation of surface to receive Waterproofing treatment**

3.1 The waterproofing Contractor shall ensure that the slope of the substrate is adequate to prevent water-ponding and is according to Manufacturer’s specifications.

3.2 All concrete surfaces to be waterproofed shall be reasonably smooth and free from holes and projections, which might puncture or otherwise damage the waterproofing treatment to be applied.

3.3 The surface of the substrate shall also be dry and shall be thoroughly cleaned of dust and loose materials prior to the laying of the waterproofing system.

3.4 Prior to the application of the new treatment, the waterproofing
<table>
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<tr>
<th>Item No</th>
<th>Specifications and Performance Required</th>
<th>Compliance of Specifications and Performance Offered</th>
<th>Details of Non-Compliance/Deviation (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>Contractor shall be required to issue a certificate stating that the surface is ready to receive the new waterproofing treatment and is according to the Manufacturer’s Specifications. It is hereby made clear that, should the waterproofing system, fails to perform as required, no discharge of responsibilities shall be allowed on the grounds of the existing conditions prior to the application of the waterproofing system.</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

### 4.0 Inspection of Waterproofing Treatment

4.1 The waterproofing treatment shall be carried out in the presence of the Engineer’s representative between 9.00 a.m to 4.00 p.m and to the satisfaction of the Engineer.

4.2 The Contractor shall ensure that the waterproofing treatment is free from wrinkles, buckles, blisters (trapped air) and other damage. Any damaged or defects to the waterproofing system shall be corrected at the Contractor’s cost, and to the Engineer’s/Architect’s approval.

4.3 The Contractor shall carry out a water test on the finished work, and seek the Engineer’s approval for the same. The test shall consist in filling the whole treated area with water (after plugging the rain water pipes outlets) and retaining the water on the treated surface for 24 hours, or as directed by the Engineer. Any leak/defect found shall be repaired at the Contractor’s cost and another water test carried out to confirm the same, the whole to the Engineer’s satisfaction.

4.4 The Contractor shall clean adjacent surfaces of spillage and spattering of any adhesive materials used in the works.

### 5.0 Water Test

5.1 The contractor shall allow in his rates
### Item No Specifications and Performance Required

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<thead>
<tr>
<th>Item No</th>
<th>Specifications and Performance Required</th>
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<tbody>
<tr>
<td>A*</td>
<td>for a water test to be carried out after laying the screed to fall, to confirm the absence of any water-ponding. The Test shall be verified and approved by the Engineer.</td>
</tr>
<tr>
<td>B*</td>
<td>5.2 The contractor shall allow in his rates for a 24-hour water test to be carried out after laying of new waterproofing membrane to verify for any leakage. The Test shall be verified and approved by the Engineer.</td>
</tr>
</tbody>
</table>

### Compliance of Specifications and Performance Offered

<table>
<thead>
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<th>Compliance of Specifications and Performance Offered</th>
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### Details of Non-Compliance/Deviation (if applicable)

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<th>Details of Non-Compliance/Deviation (if applicable)</th>
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</table>

### 6.0 Guarantee Certificate

6.1 On satisfactory completion of the waterproofing works, the Contractor shall submit a certificate of guarantee against leakage, defective materials and defective installation of the completed waterproofing system. Any such defects or leakage occurring during the guarantee period shall be promptly and completely attended to, including all affected work, at no additional cost to the Employer.

6.2 The said guarantee shall be in effect for a period of ten (10) years from the date of the Practical Completion Certificate. The guarantee shall be signed by the Contractor and shall be submitted to the Employer.

### 7.0 HEALTH AND SAFETY

Description of the means that will be used in order to work at Levels 4, 5, 6, 7 and roof, especially near the edges, which are not provided with parapet wall. The methods shall be in compliance with Health and Safety Act 2005, especially with PART VI.

### 8.0 Profilated and Pre-painted (both sides) Zinc-Aluminium Alloy Roofing Sheet of 0.75mm nominal thickness to comply with British or European Standards.

Submission of Certificate of Guarantee for Ten (10) years against corrosion, leakage, defective fittings and accessories and
### Section V - Employer’s Requirements

<table>
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<tr>
<th>Item No</th>
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<tr>
<td></td>
<td>A*</td>
<td>C</td>
<td>D</td>
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<tr>
<td>9.0</td>
<td>Testing and commissioning of all Air-conditioning split units and VRV's after completion of all works.</td>
<td></td>
<td></td>
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</tbody>
</table>

**Specification and Compliance Sheet Authorised by:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Signature:</th>
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<th>Date:</th>
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<table>
<thead>
<tr>
<th>Authorised for and on behalf of:</th>
<th>Company:</th>
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<tr>
<th>Office No:</th>
<th>Mobile No:</th>
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</table>
PART 3 – Conditions of Contract and Contract Forms
Section VI. General Conditions of Contract

The General Conditions of Contract (GCC) applicable for this procurement is available on the web site of the Procurement Policy Office ppo.govmu.org under Ref. No. W/GCC 10/03-18

The GCC can be used for both admeasurement contracts and lump sum contracts.
Section VII. Particular Conditions of Contract

These clauses should be read in conjunction with the General Conditions of Contract

A. General

| GCC 1.1 (r) | The Employer is: Prime Minister’s Office (Home affairs), New Government Centre, Port Louis. |
| GCC 1.1 (v) | The Intended Completion Date for the whole of the Works shall be **120 days** from the start date. |
| GCC 1.1 (y) | The Project Manager is: The Director (Civil Engineering) of the Ministry of Public Infrastructure, Land Transport & Shipping, Phoenix or his Representative- Tel 601-1600, Fax: 686-4506 |
| GCC 1.1 (aa) | The Site is located at Old Government House, Port Louis. |
| GCC 1.1 (dd) | The Start Date shall be **7 days after handing over of site.** |
| GCC 1.1 (hh) | The Works consist of: |
| | - Temporary relocation of air-conditioning split units and VRV’s (**to be carried out under supervision of ESD Engineer**) |
| | - Temporary relocation of VRV bases. |
| | - To provide for temporary protection of roof and works against rainfall with salle verte/blanche (to be done in phases). |
| | - Removal of existing waterproofing membrane and cart away. |
| | - Removal of existing screed and cart away. |
| | - Repair of cracks on slab and treatment of expansion joints. |
| | - Casting of new kickers |
| | - Removal of existing profile sheets of bird proofing (sides only) to allow for waterproofing at edges. |
| | - Laying of new screed to falls and cross falls. |
| | - Laying of new waterproofing membrane to screed, kickers, upstand beams and all surfaces as directed by the Engineer. |
| | - Construction of sheds with steel and Zinc-Aluminium alloy roofing sheets. |
| | - Supply and fixing of new gutters and rainwater pipes |

**Note:**

(i) Removal and displacement of any other electrical items to be carried out under supervision of ESD Engineer.

(ii) Should Contractor intends to use movable and demountable scaffolding in the driveway, the said temporary structures can only be erected, after prior approval by Client. Day and time to be determined by client.
| GCC 2.2 | Sectional Completions are **NOT APPLICABLE** |
| GCC 2.3(i) | The following documents also form part of the Contract: *Annexed Plans.*  
*Annexed Plans will be made available during the Pre-Bid Meeting.* |
| GCC 3.1 | The language of the contract is English  
The law that applies to the Contract is the law of Mauritius. |
| GCC 5.1 | The Project manager **may** delegate any of his duties and responsibilities. |
| GCC 8.1 | Schedule of other contractors: *if applicable* |
| GCC 13.1 | Except for the cover mentioned in (d)(i) hereunder, the other insurance covers shall be in the joint names of the Contractor and the Employer and the minimum insurance amounts shall be: |
| | (a) for the Works, Plant and Materials: (for *Total value of Contract. This cover shall be in the joint name of the two parties*) |
| | (b) for loss or damage to Equipment: *(Rs 1,000,000 (One million rupees))* |
| | (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract *(Rs 20,000,000 (Two million rupees))* |
| | (d) for personal injury or death:  
| | (i) of the Contractor’s employees: *(Rs 5,000,000 (Five million rupees for any occurrence with the number of occurrences unlimited)).*  
| | (ii) of other people: *(Rs 5,000,000 (Five million rupees for any one occurrence with the number of occurrences unlimited)). This cover shall be in the joint name of the two parties covering any third party and extend to the Employer’s representatives.* |
| | (e) for loss or damage to materials on-site and for which payment have been included in the Interim Payment Certificate, where applicable. |
| GCC 14.1 | Site Data are: *if applicable* |
### GCC 20.1
The Site Possession Date shall be: **7 days** from Letter of Acceptance.

### GCC 23.1 & GCC 23.2
Appointing Authority for the Adjudicator: **No Adjudicator shall be appointed for this Contract.**

### GCC 24.
In case a dispute of any kind arises between the Employer and the Contractor in connection with, or arising out of, the contract or the execution of works or after completion of works and whether before or after repudiation or other termination of Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Employer’s Representative, the matter in dispute shall, in the first place, be referred in writing to the employer’s representative, with a copy to the other party.

The Employer and the Contractor shall make every effort to resolve the dispute amicably by direct informal negotiation. If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Public Body or the Contractor may give notice to the other party of its intention to refer the matter to:

“the competent courts of Mauritius”

### GCC 24.3
Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: **Not applicable.**

### B. Time Control

### GCC 25.1
The Contractor shall submit for approval a Program for the Works within **7 days** from the date of the Letter of Acceptance.

### C. Quality Control

### GCC 33.1
The Defects Liability Period is: **365 days.**

### D. Cost Control

### GCC 41.1 (l)
Minimum amount of rainfall of **5mm occurring per day** for waterproofing works (to be supported by meteorological data for the measuring station nearest to the site.

Cyclone warning Class 3 prevailing in Mauritius

### GCC 43.1
The currency of the Employer’s country is: **Mauritian Rupees.**

### GCC 44.1
The Contract is **not** subject to price adjustment.

### GCC 45.1
The proportion of payments retained is: **10%**

### GCC 46.1
The liquidated damages for the whole of the Works are **Rs 20,000** per day.

The maximum amount of liquidated damages for the whole of the Works is
### Particular Conditions of Contract

<table>
<thead>
<tr>
<th>Section</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GCC 48.1</strong></td>
<td>Advance Payment of 20% is applicable against a Bank Guarantee from a renowned Local Commercial Bank.</td>
</tr>
<tr>
<td><strong>GCC 49.1</strong></td>
<td>Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security in accordance with the conditions of contract, using for that purpose the Performance Security Form included in Section VIII. The Bank guarantee shall be 10% of the contract price inclusive of provisional and contingencies sum and VAT, from a recognised renowned commercial local bank.</td>
</tr>
</tbody>
</table>

### E. Finishing the Contract

<table>
<thead>
<tr>
<th>Section</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GCC 55.1</strong></td>
<td>The date by which operating and maintenance manuals are required is N/A. The date by which “as built” drawings are required is N/A</td>
</tr>
<tr>
<td><strong>GCC 55.2</strong></td>
<td>The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is N/A</td>
</tr>
<tr>
<td><strong>GCC 57.2 (g)</strong></td>
<td>The maximum number of days is: <strong>40 days</strong></td>
</tr>
<tr>
<td><strong>GCC 59.1</strong></td>
<td>The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is <strong>15%</strong>.</td>
</tr>
</tbody>
</table>
Section VIII - Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

Table of Forms

Letter of Acceptance ................................................................. 84
Contract Agreement ................................................................. 85
Performance Security ............................................................... 87
Form for Preference Security ...................................................... 51
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 Appendix to Bid]. . . . . . . for the Accepted Contract Amount of the equivalent 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 (insert name of Public Body).

You are requested to furnish the Performance Security within 21 days in accordance with the General Conditions of Contract, using for that purpose the Performance Security Form included in Section VI (Contract Forms) of the Bidding Document.

Authorized Signature: ..........................................................................................................................

Name and Title of Signatory: .................................................................................................................

Name of Agency: .................................................................................................................................

Attachment: Contract Agreement
Contract Agreement

THIS AGREEMENT made the . . . . day of . . . . . . . . . . . . , between . . . . . . . . (hereinafter “the Employer”), of the one part, and . . . . . . . . . . . . . . . . . . (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as . . . . . . . . . . . . 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 Bid
   (c) the Addenda Nos . . . . . . [insert addenda numbers if any]. . . .
   (d) the Appendix to the General Conditions of Contract
   (e) the General Conditions of Contract;
   (f) the Specification
   (g) the Drawings; and
   (h) the completed Schedules,

3. In consideration of the payments to be made by the Employer to the Contractor as indicated 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.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Mauritius on the day, month and year indicated above.
Signed by: ______________________________
for and on behalf of the Employer

in the presence of: ______________________________
Witness, Name, Signature, Address, Date

Signed by: ______________________________
for and on behalf the Contractor

in the presence of: ______________________________
Witness, Name, Signature, Address, Date
Performance Security

Bank’s Name and Address of Issuing Branch or Office

Beneficiary: Name and Address of Public Body

Date

PERFORMANCE GUARANTEE No.

We have been informed that name of the Contractor (hereinafter called "the Contractor") has entered into Contract No. reference number of the Contract dated with you, for the execution of 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 security is required.

At the request of the Contractor, we name of Bank hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of amount in figures (amount in words) such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire not later than twenty-eight days from the date of issuance of the Certificate of Completion/Acceptance Certificate, calculated based on a copy of such Certificate which shall be provided to us, or on the day of , whichever occurs first. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Seal of bank and

Signature(s)
Sample Form of Preference Security

Form of Preference Security
(Bank Guarantee)

To: __________________________________________________________ [name of Employer]
_________________________________________________________________ [address of Employer]

WHEREAS __________________________________________ [name and addresses of the contractor] (hereinafter called “the Contractor”), has undertaken in pursuance to Contract No. ________ dated ______________________ to execute __________________________ ________ [name of Contract and brief Description of Works], (hereinafter called “the Contract”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a local commercial bank for the sum specified therein as security for compliance with his obligation stated in Sub-Clause 49.2 of the Conditions of Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of ______________________ [amount of Guarantee], we undertake to pay you, upon your first written demand and without your having to substantiate such demand any sum within the limit of ______________________ [amount of Guarantee].

We hereby waive the necessity of demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in anyway release us from liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee is valid until the date of the Completion Certificate.

Signature and Seal of the Guarantor

Name of Bank __________________________________________
Address __________________________________________

Date __________________________________________

---

9 Amount to be inserted by the Guarantor in accordance with Sub-Clause 49.2 of the General Conditions of Contract