

Ref Number: CSML/SWMP/TOILET/RFP/004

Date: 07/03/2019

Cochin Smart Mission Limited



Smart City
MISSION TRANSFORM-NATION

Request for Proposals
FOR
CONSTRUCTION OF PUBLIC TOILET FACILITIES IN
KOCHI

MANAGING DIRECTOR
COCHIN SMART MISSION LIMITED (CSML)
10th Floor, Revenue Tower, Park Avenue, Kochi - 682 011,
India. **PHONE: 0484-2350355**
E-MAIL: csmltenders@gmail.com

NOTICE INVITING TENDER (NIT)

Cochin Smart Mission Limited
 10th Floor, Revenue Tower, Park Avenue,
 Kochi - 682 011, India.
 Phone: 0484-2350355, 2380980
 E-mail: csmltenders@gmail.com

CSML/SWMP/TOILET/RFP/004**Date: 07/03/2019**

Cochin Smart Mission Limited (CSML) invites online bids from eligible bidders through website www.csml.co.in, www.kochimetro.org and www.etenders.kerala.gov.in - under organization name – “Kochi Metro Rail Ltd.” for “**Construction of Public Toilet Facilities in Kochi**”

The details are as under.

Sl. No.	Event's Name	Information
1.	Organization	Cochin Smart Mission Limited (CSML)
2.	Project	Smart City Projects under Smart City Mission
3.	NIT No.	CSML/SWMP/TOILET/RFP/004 dated 07/03/2019
4.	Name of Work	CONSTRUCTION OF PUBLIC TOILET FACILITIES IN KOCHI
5.	Project duration	8 months + Defect Liability Period of 12 months
6.	Form of Contract and Class of Contract	Open Tender two cover bidding (E- Tender) National Competitive Bidding
7.	Type of Quotation	Item rate - BOQ based contract
8.	Estimated Cost of the work	Rs. 1.80 Crores (Rupees One Crore and Eighty Lakhs Only)
9.	Tender document Fee	Rs.11,800/- (Rupees Eleven Thousand Eight Hundred Only) through Online e-Tendering Payment Gateway only (https://etenders.kerala.gov.in)
10.	Earnest Money Deposit (EMD)	Rs. 1,60,000 (Rupees One Lakh Sixty Thousand Only) in the form of Bank guarantee issued by a scheduled commercial bank in India With respect to guarantees issued in favour of CSML, Applicant/contactors/Bidder has to submit the copy of SFMS advice /Swift advice along with the original paper guarantees. SFMS/Swift advice to be issued to our below account with Axis Bank

Sl. No.	Event's Name	Information												
		and the paper guarantee will be operative only after receiving the SFMS/Swift advice at our Bank. <table><tr><td>Bank</td><td>Axis Bank Limited</td></tr><tr><td>Account name</td><td>COCHIN SMART MISSION LIMITED</td></tr><tr><td>Account Number</td><td>918020079716734</td></tr><tr><td>IFSC Code</td><td>UTIB0000081</td></tr><tr><td>Branch</td><td>Kochi Branch</td></tr><tr><td>Swift Code</td><td>AXISINBB081</td></tr></table>	Bank	Axis Bank Limited	Account name	COCHIN SMART MISSION LIMITED	Account Number	918020079716734	IFSC Code	UTIB0000081	Branch	Kochi Branch	Swift Code	AXISINBB081
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Account Number	918020079716734													
IFSC Code	UTIB0000081													
Branch	Kochi Branch													
Swift Code	AXISINBB081													
11.	Bid Document Downloading Start Date	08 ^h March 2019												
12.	Last date of Online Submission of Bids	8 th April 2019, till 17:30 hrs.												
13.	Last date of submission of EMD and Power of Attorney (Hard copy)	12 th April 2019, till 15:00 hrs.												
14.	Date & Time for Opening of Bids	12 th April 2019, at 16:00 hrs.												
15.	Bid Validity	180 days												
16.	Officer Inviting Bids	Managing Director, CSML												
17.	Bid Clarification and Queries Addressed to	General Manager Email: csmltenders@gmail.com												

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Managing Director
Cochin Smart Mission Limited

e-Tender Submission Guidelines

- The Bid should be submitted online at website <http://etenders.kerala.gov.in> by the due date and time, as specified in the NIT. Late/delayed tenders submitted online after the due date and time, for whatsoever reasons will not be considered. The Server Date & Time as appearing on the website. <http://etenders.kerala.gov.in> shall only be considered for the critical date and time of tenders. Offers sent through post, telegram, fax, telex, e-mail, courier will not be considered.
- Partially completed/incomplete bids shall not be considered.

3. All communication shall be done online through website <http://etenders.kerala.gov.in> OR csmltenders@gmail.com
4. Bidders shall be required to arrange all resources, including Digital Signature Certificates and Internet Connections at their own cost, for participating in online tenders at <http://etenders.kerala.gov.in>.
5. M/s Cochin Smart Mission Limited (CSML) shall not be responsible for any delays what so ever in receiving as well as submitting offers, including connectivity issues. M/s. Cochin Smart Mission Limited (CSML) shall not be responsible for any other delays in submitting any documents wherever applicable.
6. M/s. Cochin Smart Mission Limited (CSML) will not be responsible for the cost incurred in preparation and submission of bids including the cost of digital certificate, regardless of the conduct of outcome of the bidding process.
7. **Two cover system**

If two bid systems are insisted, Bidders are required to submit offer in Two covers, namely

“Tender Submission Fee / Power of Attorney / Prequalification including Technical Bid “-- **Cover - I**
And
“Financial Bid” ---**Cover –II**

8. **Cover-I (Tender Submission Fee / EMD / Power of Attorney / Prequalification including Technical Bid)**
 - a) **Tender Fee**– To be paid online at <http://etenders.kerala.gov.in> only.
 - b) **EMD** – To be paid in the form of Bank guarantee issued by a scheduled commercial bank in India in the format prescribed in RFP. The scanned copy of Bank Guarantee (EMD) to be uploaded in the e-tender website [www. etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). Original EMD to be submitted (in a sealed envelope mentioning name of work) in the Tender Box at the CSML office, 10th Floor, Revenue Towers, Park Avenue, Ernakulum – 682011 before due date and time for submissions of original EMD, Joint Venture Agreement and Power of Attorney (Hard copy) mentioned in NIT/ RFP/ Bidding document/ latest Corrigendum
 - c) **Power of Attorney (PoA)**– to be scanned and uploaded in the e-tender website. Original PoA to be submitted (in a sealed envelope mentioning name of work) in the Tender Box at the CSML office, 10th Floor, Revenue Towers, Park Avenue, Ernakulum – 682011 before due date and time for submissions of original EMD and Power of Attorney (Hard copy) mentioned in NIT/ RFP/ Bidding document/ latest Corrigendum.

- d) **Prequalification including Technical Bid**– Bidders are requested to upload the scanned copies of the following details along with documents indicated in NIT/ RFP/ Bidding document/ latest Corrigendum “online”.
- i) The scanned copy of the NIT/ Bidding document/ latest Corrigendum including Prebid Minutes and Addendum (if any) duly signed and stamped in all pages.
 - ii) Notarized, Scanned copies of Prequalification / Technical Qualification supporting documents, signed scanned copies of various forms, Letter of Technical Bid, including Technical Bid.
 - iii) All documents signed and scanned including GCC, SCC, Annexures to GCC, SCC as detailed in the Bidding document,

9. Cover-II (Financial Bid)

- Bidders are requested to quote rates in the Finance cover (BOQ) only.
 - Price bid to be uploaded only in e-tender website: <http://etenders.kerala.gov.in>
 - PLEASE DO NOT QUOTE/MENTION RATES ANYWHERE ELSE IN THE TENDER OTHER THAN BOQ
 - In the Bid submitted by the bidder, if the prices or price bid are disclosed anywhere else other than in the BOQ, the Bid / tender would be liable for disqualification and would summarily be rejected
10. In case if applicant does not hold any document, which need to be uploaded OR there is no need to upload the mentioned document please upload a scanned copy stating the reason for not uploading OR a blank sheet for proceeding with tendering. Provisions for uploading cannot be left blank.
11. Please note that queries related to enquiry specifications, terms & conditions etc. can be submitted to General Manager Email: csmltenders@gmail.com before the Last date & time for sending Pre-bid queries specified in the NIT.
12. Tender opening will be done online at the time and dates specified in NIT/ RFP/ Bidding document/ latest Corrigendum.
13. The bidders are requested to go through the instruction to the bidders in the website <http://etenders.kerala.gov.in>. The bidders who submit their bids for this tender after digitally signing using their Digital Signature Certificate (DSC), accept that they have clearly understood and agreed the terms and conditions in the website including the terms and conditions of this tender.
14. In case of any queries on e-tender, Bidder may Contact below mentioned helpdesk

e-tender helpdesk of Kerala IT Mission:	Phone number : 0484-2332262
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15. M/s. Cochin Smart Mission Limited (CSML) reserves the right to accept any offer in whole or in part or reject any or all offers without assigning any reason M/s Cochin Smart Mission Limited (CSML) reserves right to accept any or more offers in part. Decision of M/s. Cochin Smart Mission Limited (CSML) in this regard shall be final and binding on the bidder.
16. M/s. Cochin Smart Mission Limited (CSML) reserves the right to cancel any tender/ bidding process at any stage without assigning any reason.
17. Corrigendum / addendum, which form part of the tender document, shall be published in the e-tender website (<http://etenders.kerala.gov.in>) as well as CSML website <http://csml.co.in/tenders> and bidders are advised to check the websites regularly for the updates related to the tender before submitting the Bid.

Disclaimer

- I. The information contained in this Request for Proposal Document (“RFP Document”) or subsequently provided to Bidder/ s, whether verbally or in documentary form by or on behalf of Cochin Smart Mission Limited (“CSML”) is provided to Bidder(s) on the terms and conditions set out in this RFP Document and any other terms and conditions subject to which such information is provided.
- II. This RFP Document is neither an agreement nor an offer and is only an invitation by CSML to the entities that are qualified to submit their Proposal (Bidders) as stated in the Notice Inviting Bid.
- III. The purpose of this RFP Document is to provide the Bidders with information to assist the formulation of their Proposal.
- IV. This RFP Document may not be appropriate for all persons, and it is not possible for the CSML, their employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP Document.
- V. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP Document and where necessary obtain independent advice from appropriate sources.
- VI. The CSML, their employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP Document.
- VII. CSML may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP Document.
- VIII. CSML reserves the right not to proceed with the work, to alter the time table reflected in this document or to change the process of procedures to be applied for selection of Service Provider.
- IX. No reimbursement of cost of any type whatsoever paid to persons, or entities, expressing interest in the work.

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1. Instructions to Bidders / Applicants

1. INSTRUCTION TO BIDDERS

1.1. General Information and Guidelines

1.1.1. Purpose

AUTHORITY seeks the **services of Registered Bidders of Kerala PWD as Class – B Civil Contractor or contractors registered with Kochi Municipal Corporation, Cochin, Central PWD/Other Central or state Government Departments/State or Central Public Sector Undertakings, in equivalent category, for “Construction of Public Toilet Facilities in Kochi”**. This document provides information to enable the bidders to understand the broad requirements to submit their Proposals. The detailed scope of work is provided in [Section](#)

1.1.2. Consortium

- i) The Bidder for participation in the Selection Process, may be a single entity or a group of entities (the “Consortium”), coming together to execute the project. The term 'Bidder' used herein would apply to both a single Entity and a Consortium.
- ii) No Member at any given point of time, may assign or delegate its rights, duties or obligations under the Agreement/Contract except with prior written consent of AUTHORITY.
- iii) No bidder applying individually, or as a member of a Consortium, as the case may be, can be member of another consortia bidding for the project.
- iv) In the event the Bidder is a Consortium, it shall, comply with the following additional requirements:
 - a) Number of members in a consortium shall not exceed 3 (Three) including the Lead Member
 - b) The Members of the Consortium shall nominate one member as the Lead Member
 - c) The Members of the Consortium shall be responsible for successful implementation of the project throughout the terms of the contract.

- d) The Lead Member shall be authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to this RFP.
- e) The Members of the Consortium shall submit a declaration as set out in Annexure 1.5 inter alia consisting of the following:
 - (1) Undertake that each of the members of the Consortium shall have an independent, definite and separate scope of work which was allocated as per each member's field of expertise
 - (2) Commit to the profit and loss sharing ratio of each member
 - (3) Commit to the scope of work, rights, obligations and liabilities to be held by each member; specifically commit that the Lead Member shall be answerable on behalf of other members for the performance of obligations under this Agreement,
 - (4) Provide a brief description of the roles and responsibilities of individual members; and clearly define the proposed administrative arrangements (organization chart) for the management and execution.
 - (5) Include a statement to the effect that all the members of the Consortium shall be jointly and severally liable for all obligations in relation to the Agreement/Contract until the completion of the project in accordance with the Agreement/Contract;
- f) Any change of a Consortium Member other than the Lead Member can be done only under extreme circumstances such as non-performance of the Consortium member, insolvency or bankruptcy of the Consortium member, which shall be done only with the prior written approval of AUTHORITY. Provided that in the event of any such approved change of Consortium member, the new member (company) replacing outgoing Consortium member shall have same or higher financial, technical and legal qualifications as the outgoing member, and to the satisfaction of CSML. In the event AUTHORITY does not grant approval for the change of the Consortium member other than the Lead Member or suitably qualified replacement member (companies) are not available/ found, the exit of such Consortium member shall constitute a breach of the Contract.

- g) All members of the consortium are required to follow the highest level of work ethics, if any member of the consortium has a Conflict of Interest or indulges in Prohibited Practices; the whole Consortium is liable to be disqualified. Further, in the event any entity has been barred by the Central Government, any State Government, a statutory authority or a public sector undertaking, as the case may be, from participating in any project or bid, and the bar subsists as on the date of Last Date of Submission, it would not be eligible to submit a Proposal either by itself or as part of a Consortium. Lead member should have minimum 51% share in Consortium. Consortium agreement to be submitted.

1.1.3. Sub-Contracting

Sub-Contracting is not allowed for this RFP

1.1.4. Completeness of Bid

The Bid should be complete in all respects. Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP document in every respect will be at the Bidder's risk and may result in rejection of its Bid and forfeiture of the EMD.

1.1.5. Proposal Preparation Costs

- 1) The bidder shall submit the bid at its cost and expense. AUTHORITY shall not be held responsible for any cost incurred by the bidder. Submission of a bid does not entitle the bidder to claim any cost and rights over AUTHORITY and AUTHORITY shall be at liberty to cancel any or all bids without giving any notice.
- 2) All materials submitted by the bidder shall be the absolute property of AUTHORITY and no copyright etc. shall be entertained by AUTHORITY.

1.1.6. Pre-bid Meeting and Queries

AUTHORITY will not host a Pre-Bid meeting as the work being of general nature. However, if there are any queries, they may be shared through e-mail to csmltenders@gmail.com in the form and manner as prescribed in Annexure 5.

1.1.7. Amendment of RFP Document

- 1 All the amendments made in the document would be published on the e-Tendering Portal and shall be part of RFP.
- 2 The Bidders are advised to visit the e-tendering portal on regular basis to check for necessary updates. AUTHORITY also reserves the right to amend the dates mentioned in this RFP.

1.1.8. Supplementary Information to the RFP

If AUTHORITY deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue supplements to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.

1.1.9. CSML's Right to Terminate the Process

AUTHORITY may terminate the RFP process at any time and without assigning any reason. AUTHORITY reserves the right to amend/edit/add/delete any clause of this RFP Document. This will be informed to all and will become part of the RFP and information for the same would be published on the e-Tendering portal.

1.1.10. Site Visit and Verification of Information

- a) The Bidder are encouraged to visit and examine the site or sites and obtain for itself, at its own responsibility and risk, all information that may be necessary for submission of the bid and entering into the Contract. The costs of visiting the site or sites shall be at the Bidder's own expense.

- b) AUTHORITY will arrange for the Bidder and any of its personnel or agents to gain access to the relevant site or sites, provided that the Bidder gives AUTHORITY adequate notice of not less than 5 (Five) days prior to such proposed visit.
- c) No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.

1.2. Key Requirements of the Bid

1.2.1. RFP Document/Tender Fee

RFP can be downloaded free of cost from the website www.etenders.kerala.gov.in. RFP Document Fee of **Rs. 11,800/- (Rupees Eleven Thousand Eight Hundred Only)** shall be paid through online e- Tendering Payment Gateway only (<https://etenders.kerala.gov.in>) for submission of bid. The RFP document fee shall be non-refundable. Without the payment of tender fee the bids will be taken as incomplete and non-responsive and shall not be considered.

1.2.2. Earnest Money Deposit (EMD)

- 1 In terms of this RFP, a Bidder is required to submit EMD of Rs. 1,60,000 (Rupees One Lakh Sixty Thousand Only) in the form of Bank guarantee issued by a scheduled commercial bank in India issued in favour of Managing Director, Cochin Smart Mission Limited, Payable at Kochi. Validity of EMD: The validity of BG shall be 28 days beyond the validity of bid. Otherwise bids are likely to be rejected. Format of the EMD is provided in [Annexure 7 of the RFP](#).

With respect to guarantees issued in favour of CSML, Applicant/contactors/Bidder has to submit the copy of SFMS advice /Swift advice along with the original paper guarantees.

SFMS/Swift advice to be issued to our below account with Axis Bank and the paper guarantee will be operative only after receiving the SFMS/Swift advice at our Bank.

Bank	Axis Bank Limited
Account name	COCHIN SMART MISSION LIMITED
Account Number	918020079716734
IFSC Code	UTIB0000081
Branch	Kochi Branch
Swift Code	AXISINBB081

- 2 The Unsuccessful Bidder's EMD will be returned on issue of Letter of Acceptance (LOA) to the Successful bidder. The Bid Security, for the amount mentioned above, of the successful bidder would be returned upon submission of Performance Bank Guarantee for an amount equal to 10% of Total Contract Value in the format provided in Annexure 8 of the RFP.
- 3 No interest will be paid by AUTHORITY on the EMD amount and EMD will be refunded to the all Bidders (including the successful bidders) without any accrued interest on it
- 4 The Bid submitted without EMD, mentioned above, will be summarily rejected
- 5 The EMD may be forfeited:
 - a. If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
 - b. In case of a successful bidders, if the Bidder fails to sign the contract in accordance with the terms and conditions.
 - c. If during the bid process, a bidder indulges in any such deliberate act as would jeopardise or unnecessarily delay the process of bid evaluation and finalization.
 - d. If, during the bid process, any information is found false/fraudulent/malafide, and then AUTHORITY shall reject the bid and, if necessary, initiate action.
- 6 The decision of AUTHORITY regarding forfeiture of the EMD shall be final and binding upon bidders.

1.3. Bid Submission Instructions

1.3.1. Bid Submission Format

The entire Bid shall be submitted strictly as per the format specified in this RFP. Bids with any deviation from the prescribed format are liable for rejection.

1.3.2. Bid Submission Instructions

- Complete bidding process will be online (e-Tendering) in two covers system. Submission of bids shall be in accordance to the instructions given in the Table below:

Particulars	Instructions
Cover 1: Technical Proposal	<p>The Technical Proposal shall be prepared in accordance with the requirements specified in this RFP and the formats are prescribed in Annexure 2 of the RFP. Technical Proposal shall also include following:</p> <p>-</p> <p>Proof of submission of RFP Document Fee and Scanned copy of EMD</p> <p>The Pre-Qualification Proposal shall be prepared in accordance with the requirements specified in this RFP and the formats are prescribed in Annexure 1 of the RFP</p> <p>Pre-Qualification Proposal along with supporting documents should be submitted through online bid submission process. <u>Hard copy of Original Bank guarantee (towards EMD), Power of attorney, Technical Cover Letter, Financial Cover letter</u> shall be submitted in the Tender Box at CSML Office, 10th Floor, Revenue Towers, Park Avenue, Ernakulam – 682011 before the due date and time as per NIT / latest Corrigendum if any.”</p> <p>Technical Proposal should be submitted through online bid submission</p>

Particulars	Instructions
	process
Financial Proposal	<p>The Financial Proposal shall be prepared in accordance with the requirements specified in this RFP and in the formats prescribed in Annexure 3 of the RFP.</p> <p>Financial Proposal should be submitted through online bid submission process only. Submission in Financial Proposal in hard copy will result in rejection of bid</p>

Note: AUTHORITY will conduct the bid evaluation based on documents submitted through online e-tendering portal & hard copies submitted at the office of CSML.

2. The following points shall be kept in mind for submission of bids;
 - a) AUTHORITY shall not accept delivery of Bids in any manner other than that specified in this RFP. Bid delivered in any other manner shall be treated as defective, invalid and rejected.
 - b) The Bidder is expected to price all the items and services sought in the RFP and proposed in the technical proposal. The Bid should be comprehensive and inclusive of all the services to be provided by the Bidder as per the scope of work and in accordance with the terms and conditions as set out in the Contract.
 - c) AUTHORITY may seek clarifications from the Bidder on the technical proposal. Any of the clarifications by the Bidder on the technical proposal should not have any commercial implications. The Financial Proposal submitted by the Bidder should be inclusive of all the items in the technical proposal and should incorporate all the clarifications provided by the Bidder on the technical proposal during the evaluation of the technical offer.
 - d) Technical Proposal shall not contain any financial information.

- e) If any Bidder does not qualify the pre-qualification criteria stated in [Section 1.4.5](#) of this RFP, and if the Bidder does not meet the technical evaluation criteria including pre-qualification, the financial proposal of the Bidder shall be unopened in the e-Tendering system.
- f) It is required that the all the proposals submitted in response to this RFP should be unconditional in all respects, failing which AUTHORITY reserves the right to reject the proposal.

1.3.3. Late Bid and Bid Validity Period

Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall not be opened in the e-Tendering system. The validity of the bids submitted before deadline shall be till 180 days from the latest date of submission of the bid.

1.3.4. Modification and Withdrawal of Bids

No bid shall be withdrawn in the interval between the deadline for submission of bids and the expiration of the validity period specified by the Bidder on the bid form. Entire EMD shall be forfeited if any of the Bidders withdraw their bid during the validity period.

1.3.5. Non-conforming Bids

A Bid may be construed as a non-conforming proposal and ineligible for consideration:

- a) If it does not comply with the requirements of this RFP
- b) If the Bid does not follow the format requested in this RFP or does not appear to address the particular requirements of AUTHORITY.

1.3.6. Language of Bids

The Bids should be submitted in English language only. If any supporting documents submitted are in any language other than English, then the translation of the same in English language is to be duly attested by

the bidder and submitted with the bid, and English translation shall be validated at AUTHORITY's discretion.

1.3.7. Authentication of Bid

- a) Authorized person of the bidder who signs the bid shall obtain the authority letter from the bidder, which shall be submitted with the Bid. All pages of the bid and its annexures, etc. shall be signed and stamped by the person or persons signing the bid.
- b) The Bidder should submit a Power of Attorney as per the format set forth in [Annexure 6](#), authorizing the signatory of the Bid to commit the Bidder.

1.3.8. Acknowledgement of Understanding of Terms

By submitting a Bid, each Bidder shall be deemed to acknowledge that he has carefully read all sections of this RFP, including all forms, schedules, annexure, corrigendum and addendums (if any) hereto, and has fully informed itself as to all existing conditions and limitations.

1.4. Evaluation Process

- a) AUTHORITY will constitute a Bid Evaluation Committee (BEC) to evaluate the responses of the bidders
- b) The BEC constituted by AUTHORITY shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.
- c) The decision of the BEC in the evaluation of responses to the RFP shall be final. No correspondence shall be entertained outside the process of negotiation/ discussion with the Committee.
- d) The BEC may ask for meetings with the Bidders to seek clarifications on their proposals and may visit Bidder's client site to validate the credentials/ citations claimed by the bidder.
- e) The BEC reserves the right to reject any or all proposals on the basis of any deviations.

- f) Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.
- g) Please note that BEC may seek inputs from their professional, external experts in the Bid evaluation process.

1.4.1. Bid Opening

Total transparency shall be observed and ensured while opening the Bids. All Bids shall be opened in the presence of Bidder's representatives who choose to attend the Bid opening sessions on the specified date, time and address.

- a) AUTHORITY reserves the rights at all times to postpone or cancel a scheduled Bid opening.
- b) Bid opening shall be conducted in 2 (Two) Stages;
 - Stage 1 - RFP Document fee & Bid Security/EMD, Technical Proposal including Pre-Qualification Proposal
 - Stage 2 - Financial Proposal
- c) The venue, date and time for opening the Technical Proposal are mentioned in the Tender Notice in the RFP. The date and time for opening the Financial Proposals would be communicated to the qualified bidders.
- d) The Bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for AUTHORITY, the bids shall be opened at the same time and location on the next working day. In addition to that, if there representative of the Bidder remains absent, AUTHORITY will continue process and open the bids of the all bidders
- e) During Bid opening, preliminary scrutiny of the Bid documents shall be made to determine whether they are complete, whether required EMD has been furnished, whether the Documents have been properly signed, and whether the bids are generally in order. Bids not conforming to such preliminary requirements shall be prima facie rejected. AUTHORITY has the right to reject the bid after due diligence is done.

1.4.2. Evaluation of Technical Proposal

The evaluation of the Technical Proposals will be carried out in the following manner:

Evaluation of Pre-Qualification Proposals

- a) Authority shall open the tender submitted online and check for payment of Document Fee and Earnest Money Deposit (EMD) and then the Technical Proposal including Pre- Qualification Proposal will be opened. Technical proposal including Pre-qualification proposals will not be considered further if the mentioned requirements as per RFP are not fulfilled. *Each of the Pre-Qualification condition mentioned in Section 1.4.4 of the RFP is MANDATORY.* In case the Bidder does not meet any one of the conditions, the bidder will be disqualified.
- b) The Pre-Qualification proposal **MUST** contain all the documents in compliance with instructions given in the [Annexure 1](#).
- c) Response to the Pre-Qualification Requirements shall be evaluated in accordance with the requirements specified in this RFP and in the manner prescribed in [Section 1.4.4](#) of the RFP.

Further Evaluation of Technical Proposals

- a) Authority will review the technical bids of the short-listed bidders to determine whether the technical proposals are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at AUTHORITY's discretion.
- b) Deleted
- c) Deleted
- d) The Bidders are required to submit all required documentation in support of the evaluation criteria specified (e.g. Detailed Project citations and copy of work order, Completion Certificate, client contact information for verification, and all other components) as required for technical evaluation along with the Technical proposal.

- e) At any time during the Bid evaluation process, BEC may seek oral / written clarifications from the Bidders. The Committee may seek inputs from their professional and technical experts in the evaluation process.
- f) Authority reserves the right to do a reference check of the past experience stated by the Bidder. Any feedback received during the reference check shall be taken into account during the technical evaluation process.
- g) The Financial Proposals of Bidders who do not qualify technically shall be kept unopened in the e-Tendering system.
- h) AUTHORITY reserves the right to accept or reject any or all bids without giving any reasons thereof.
- i) AUTHORITY shall inform to the technically shortlisted Bidders about the date and venue of the opening of the financial proposals

1.4.3. Financial Proposal Evaluation

- a) All Bidders whose bids are responsive to pre-qualification criterion shall be considered as Technically qualified. All the technically qualified bidders will be notified to participate in Financial Proposal opening process.
- b) Financial Proposals for the technically qualified bidders will then be opened on the notified date and time and reviewed to determine whether the financial proposals are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at AUTHORITY's discretion.
- c) Financial Proposals that are not meeting the condition mentioned in [Annexure 3](#) shall be liable for rejection.
- d) Technically qualified bidder who has quoted all-inclusive lowest price, **(i.e. inclusive of GST, any other tax & levy charged by Central, State or at city level)** after arithmetic correction will be declared as L1 bidder.
- e)
 - i) If there is a discrepancy between the unit price and the line total amount that is obtained after multiplying unit price with the quantity, the unit price shall prevail and the line total

amount shall be corrected, unless in the opinion of the Employer there is an obvious gross misplacement of the decimal point in the unit price, in which case the line item total amount as quoted shall govern and unit price shall be corrected.

- ii) If there is error in a total corresponding to addition or subtraction of subtotals, the Sub totals shall prevail, and the total shall be corrected and
- iii) 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 such case the amount in figure shall prevail subject to (ii) above.
- iv) **If there is any discrepancy in the GST rate considered by the bidder in financial bid, it shall be the responsibility of the bidders to deposit correct amount of GST with the tax collecting authority & shall keep client harmless & indemnified. Bidder shall raise no claim to client on account of considering wrong rate of GST in financial bid. However, in case the GST council revises the rate of GST, bidder shall pass on such benefit resulting from revision in rate of GST to client.**

1.4.4. Pre-Qualification Criteria

The proposal failing to meet all of the below pre-qualification eligibility criteria shall be disqualified and will not be considered for technical evaluation process.

- 1) A Bidder shall be a registered contractor with Kerala PWD as Class – ‘B’ Contractor or contractors registered with Kochi Municipal Corporation, Cochin, Central PWD/Other Central or state Government Departments/State or Central Public Sector Undertakings, in equivalent category
- 2) Only those bidders having a valid and active registration, on the date of bid submission, shall submit bids online
- 3) Ineligible bidder or bidders who do not possess valid & active registration, on the date of bid submission, are strictly advised to refrain themselves from participating in this tender.

Sl. No	Basic Requirement	Specific Requirements	Documents Required
PQ1	Legal Entity	The Sole Bidder should be registered in India under Companies Act 1956/2013 (as amended) and should have been in operation for at least 3 years as on date.	Sole bidder shall furnish following <ul style="list-style-type: none"> • Copy of Certificate of Incorporation • Copy of Registration under Companies Act, 1956/2013 / Copy of Registration Certificates • Valid registration certificate as class B contractor with Kerala PWD or equivalent as on the date of submission of the technical bid
PQ2	Turnover	The Sole Bidder or the Lead Member of consortium should have average annual turnover of Rs. 48 lakh for last 3 audited financial years (2015-16, 2016-17 and 2017-18) ending March 2018.	<ul style="list-style-type: none"> • Certificate from the Statutory Auditor; Annual Audit Reports
PQ3	Experience	The Sole Bidder should have successfully completed (1) at least 1 (One) similar work with the project cost not less than Rs. 64 lakh In India during 1st February 2012 through 31st January 2019 for any PSU / Government Institution / Urban Local Bodies / government offices.	Sole bidder shall furnish following Copy of work order + Completion Certificate

Sl. No	Basic Requirement	Specific Requirements	Documents Required
		<p>Note: Similar work implies Civil Construction Work</p> <p><u>(For works done in India, Experience certificate issued by person not lesser than rank of executive engineer or who so ever issued the contract shall be provided).</u></p>	
PQ4	Blacklisting	The Sole Bidder should not have blacklisted by Central/State Government/ PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices as on date of submission of the proposal.	<ul style="list-style-type: none"> Undertaking by the authorized signatory as per the format given as Annexure 4

Note: 1) AUTHORITY reserves right to visit bidder's customer where such a similar project execution has taken place.

2) The bidder needs to submit appropriate supporting evidences to satisfy the criteria

1.4.5. Eligible Goods and Services, and OEM Criteria

- a) Deleted
- b) Deleted
- c) Deleted

d) Deleted

e) Deleted

1.5. Award of Contract

1.5.1. Award Criteria

The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of services and should be stated in INR only. Omissions, if any, in costing of any item shall not entitle the Bidder to be compensated and the liability to fulfil its obligations as per the Terms of Reference within the total quoted price shall be that of the Bidder.

The bidder who meets the Pre-Qualification requirement shall be qualified and financial Bid of such qualified bidder will be opened and bidder who has quoted lowest bid price inclusive of taxes & duties, GST etc post correction of arithmetic error will be considered as L-1 bidder.

1.5.2. Letter of Acceptance (LOA)

Prior to the expiration of the period of bid validity, AUTHORITY will notify the successful bidder in writing or by fax or email, to be confirmed in writing by letter, that its bid has been accepted. LOA will constitute the formation of the contract. Upon the successful bidder's furnishing of Performance Bank Guarantee, AUTHORITY will promptly notify each unsuccessful bidder.

1.5.3. Signing of Contract

AUTHORITY shall notify the successful bidder that its bid has been accepted. The successful bidder shall enter into contract agreement with AUTHORITY within the time frame mentioned in the Letter of Acceptance issued to the successful bidder by AUTHORITY

1.5.4. Failure to Agree with the Terms & Conditions of the RFP / Contract

Failure of the successful bidder to agree with the Terms & Conditions of the RFP / Contract shall constitute sufficient grounds for the annulment of the award, in which event AUTHORITY may invite the next best bidder for negotiations or may call for fresh RFP.

1.5.5. CSML's Right to Accept any Bid and to Reject any or All Bids

AUTHORITY reserves the right to accept or reject any Bid, and to annul the bidding process and reject any or all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for AUTHORITY's action.

1.6. Performance Bank Guarantee

- a) Within Twenty Eight (28) working days from the date of issuance of LOA, the Successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) an amount equivalent to 10% of contract value to AUTHORITY.
- b) The PBG shall be from a Scheduled Commercial Bank in the format prescribed in [Annexure 8](#), payable on demand, for the due performance and fulfilment of the contract by the bidder.
- c) All charges whatsoever such as premium; commission etc. with respect to the PBG shall be borne by the Successful Bidder.
- d) The PBG shall be valid till satisfactory completion of Post Implementation Support. The PBG may be discharged/returned by AUTHORITY upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the PBG. The PBG shall be valid up to the **completion of the project + 12 months for the Defect Liability Period + 60 days after**
- e) In case the project is extended after the project schedule as mentioned in the RFP, the PBG shall be accordingly extended by the Successful Bidder till the extended period.

- f) In the event of the Bidder being unable to service the contract for whatever reason AUTHORITY would invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of AUTHORITY under the contract in the matter, the proceeds of the PBG shall be payable to AUTHORITY as compensation for any loss resulting from the bidder's failure to complete its obligations under the Contract. AUTHORITY shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.
- g) AUTHORITY shall also be entitled to make recoveries from the bidder's bills, PBG, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.
- h) On satisfactory performance and completion of the order in all respects and duly certified to this effect by AUTHORITY, Contract Completion Certificate shall be issued and the PBG would be returned to the Successful Bidder.

Scope of Works and Terms of Reference

2. Scope of Work and Terms of Reference.

2.1. Scope of Work and Technical specification for Civil Works

The general character and the scope of the Work includes Site clearance, Procurement of materials, Renovation/reconstruction of 5 public toilets in West Kochi and Ernakulam.

2.1.1. Renovation and Upgradation of Existing Public Toilet Facilities in West Kochi & Ernakulam Market

Renovation/reconstruction of 5 public toilets across the ABD area of Kochi. Scope of works include Demolition, stacking of serviceable materials, availing statutory approvals from different authorities, construction of new civil structure, electrical works, plumbing and landscaping works as per bill of quantities, technical specification and tender drawings. The completed works to be handed over to KMC after virtual completion of the works.

The proposed location and scope for different sites are listed as below.

Table 3-2: Scope of works

S. No.	Public Toilet Location	Area (Sq. M)	Construction Type
1	Fort Kochi South Beach Toilet	140	Reconstruction
2	E-Toilet at Nehru Park	75	Reconstruction
3	Toilet block near Fort Kochi Taluk Hospital	38	Reconstruction
4	Mattancherry Bus Stop Toilet	60	Reconstruction
5	Toilet complex at Mather bazar road	20	Renovation

2.1.2. General guidelines

The building has to be constructed as per the approved Architectural/Structural/Electrical drawings. Inspection and testing of works shall be conducted by the employer as per latest CVC guidelines. Contractor has to follow the quality norms of IS Code. Responsibility of quality of work and materials solely lies on the contractor which shall be checked by PMC, KMRL and CSML in that order. Decision of CSML shall be final and binding in this regard.

Note-Details and drawings given in document are for information purpose only and successful bidder shall undertake confirmatory surveys for accuracy and completeness of data. It is in scope of successful Bidder to undertake Site surveys as per requirements, Geotechnical investigations/Engineering Surveys, hydrological investigations, Underground Utility Surveying of the site for shifting and creating new, obtaining all required approvals from the relevant authorities. The successful bidder shall have to prepare 'As Built Drawings' after execution depicting the exact construction carried out on site, in soft and hard copy format.

2.1.3. Scope of works For Civil Works

Renovation/reconstruction of 5 public toilets across the ABD area of Kochi. Scope of works include Demolition, stacking of serviceable materials, availing statutory approvals from different authorities, construction of new civil structure, electrical works, plumbing and landscaping works as per bill of quantities, technical specification and tender drawings. The completed works to be handed over to KMC after virtual completion of the works.

The selected location and scope for different sites may be listed as in [Table 3-2](#).

2.1.3.1 Description of Work Site

Cochin Smart Mission Limited (CSML) is implementing the Renovation/reconstruction of 5 public toilets across the ABD area of Kochi. under Area Based Development of Kochi Smart City. The location of the work and the general site particulars are shown in the Site Layout enclosed in the tender drawings.

2.1.3.2 Standard Specifications (Civil Works)

- a) The work in general shall be carried out as per **CPWD specifications, 2009 (Volume I to II)** with all the revisions published till the tender date. Additionally, the specifications for individual items given in the document shall be read in conjunction with CPWD specifications.

- b) For the items not covered under the specifications as stated above, the work shall be done as per relevant IS Codes, latest publications with correction slip.
- c) For the items not covered under any of the specifications stated above, the work shall be executed as per Manufacturer's specifications/ General Engineering Practice and/or as per direction of Engineer-in-charge.
- d) In the absence of any definite provisions or any particular issue in the aforesaid specifications, reference is to be made to the latest codes and specifications of BIS, IRC, BS, ASTM, AASHTO and CAN/CAS in that order. Where even these are silent, the construction and completion of works shall confirm to sound engineering practice as approved by Engineer-in-Charge. In case, if any dispute arises out of interpretation of the above, the decision of the Engineer-in-Charge shall be final and binding on the Contractor.
- e) Wherever reference is made in the Contract to specific standard codes to be met by the materials, plants and other supplies to be furnished and work performed and tested, the latest edition or revision of the relevant codes in effect shall apply, unless otherwise explicitly stated in the contract. Wherever such standards and codes are national or related to a particular country of region, other internationally recognized standards which ensure a substantially equal or higher performance than the standards and codes specified will be accepted subject to the Engineer-in Charge's prior review and written approval. Differences between standards must be fully described in writing by the contractor and submitted to the Engineer-in-Charge at least 15 days prior to the date when contractor desires the Engineer-in-Charge's approval.

If the Engineer-in-Charge determines that such proposed deviation do not ensure substantially equal performance, the contractor shall comply with the standards specified in the documents.

These Specifications contained herein shall be read in conjunction with other tender documents.

- i) The Work shall be carried out in accordance with the "Good for Construction" drawings and designs as would be issued to the Contractor by the Engineer duly signed and stamped by him. The Contractor shall not take cognisance of any drawings, designs, specifications, etc. not bearing Engineer's signature and stamp. Similarly, the Contractor shall not take cognisance of instructions given by any other Authority except the instructions given by the Engineer in writing.
- ii) The work shall be executed and measured as per metric units given in the Schedule of Quantities, drawings etc. (FPS units where indicated are for guidance only).
- iii) Absence of terms such as providing, supplying, laying, installing, fixing etc in the descriptions does not even remotely suggest that the Contractor is absolved of such providing, supplying

etc unless an explicit stipulation is made in this contract. The Owner shall bear no costs of materials, labour, equipment, duties, taxes, royalties etc.

- iv) The specifications may have been divided into different sections / sub-heads for convenience only. They do not restrict any cross-references. The Contractor shall take into account inter-relations between various parts of works/trades. No claim shall be entertained on the basis of compartmental interpretations.
- v) The classification of various items of works for purposes of measurements and payments shall be as per bills of quantities (BOQ). Except where distinguished by BOQ, the rates apply to all heights, depths, sizes, shapes and locations. They also cater for all cuts and wastes. No floor wise separation shall be made for the rates. Likewise, all heights of centering, shuttering, staging, formwork and scaffolding, trusses and erection methods are covered by the rates including multi stage propping for heights greater than one floor as per drawings.

2.1.4. Abbreviations

ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing Materials
BS	British Standard
CPWD	Central Public Works Department
DIN	Deutsches Institut für Normung e.V.
IRC	Indian Road Congress
IRS	Indian Railway Standards
IS	Indian Standards
JIS	Japanese Industrial Standard
MORTH	Ministry of Road Transport and Highways

2.1.5. Reference to the Standard Codes of Practice

The contractor shall make available at site all relevant Codes of practice as applicable.

2.1.6. Contractor to Provide

The Contractor shall provide and maintain at site throughout the period of works the following at his own cost and without extra charge, except for the items specified in the Bill of Quantities the cost being held to be included in the Contract Rates:

- i) General works such as setting out, site clearance before setting out and on completion of works. All weather approach roads to the site office should also be constructed and maintained in good condition.
- ii) Statutory clearances to be obtained by the contractor prior to starting of works. Statutory clearances include availing permit from Municipal Corporation, Archeological survey of India, Coastal regulatory zone management authority etc. The necessary statutory fees/charges should be paid by the contractor. On receipt of notice from authority and the same will be reimbursed by CSML on production of vouchers, challan (or) receipts as proof. There will be no additional payment for this, the contractor should adjust the amount in other items.
- iii) The contractor shall be responsible for availing new electricity connection and water connection as per procedures of respective authorities, Kerala water authority and Kerala state electricity board respectively. The contractor should take necessary actions for shifting the existing connections if any to a temporary facility and reinstate the same on completion of project as per the authority's rules. CSML will refund the statutory fee paid for shifting or new connection on furnishing vouchers, challan (or) receipts as proof from concerned authority. There will be no additional payment for this, the contractor should adjust the amount in other items.
- iv) All labour, materials, plant, equipment and temporary works, Overhead charges as well as general liabilities, obligations, insurance and risks arising out of GCC, required to complete and maintain the works to the satisfaction of the Engineer.
- v) Adequate lighting for night work, and also whenever and wherever required by the Engineer.
- vi) Temporary fences, barricades, guards, lights and protective work necessary for protection of workmen, supervisors, engineers, General public and any other persons permitted access to the site. Contractor shall provide proper signages as directed.
- vii) All fences, barricade shall be painted with colour shades as specified by the Engineer. The barricading should be of adequate height to ensure visual obstruction of work from public view.
- viii) All equipment, instruments, labour and materials required by the Engineer for checking alignment, levels, slopes and evenness of surfaces measurements and quality etc.

- ix) Design mixes and testing them as per relevant clauses of specifications giving proportion of ingredients, sources of aggregates and binder along with accompanying trial mixes. Test results to be submitted to the Engineer for his approval before adoption on works.
- x) Cost of Preparation and compliance with provision of a quality assurance control programme. Cost of safe guarding the environment.
- xi) A testing laboratory as specified by the Engineer equipped with the following minimum apparatus, materials and competent trained staff required for carrying out tests, as specified in the relevant sections of the specifications: -
 - a) One Set of standard sieves for testing grading of sand with mechanical sieve shaker.
 - b) Sieves with openings respectively of 4.75mm, 10mm, 20mm, 25mm, and 30mm for testing and grading of aggregates.
 - c) Weighing Balance of capacity up to 10 Kg. reading up to 5 gm.
 - d) Electric Thermostat controlled oven and pans for drying of sand and aggregates.
 - e) Glass measuring flasks of 1/2, 1 litre & 2 litre capacity.
 - f) Flask for determining moisture content of sand.
 - g) Slump cone with rod and V B Apparatus, flow table to measure slump or DIN Specifications.
 - h) Apparatus to measure permeability of concrete as per Appendix 1700/II of MOST
 - a. Specifications.
 - i) Minimum 24 Nos. steel moulds for 150mm x 150mm x 150mm concrete test cubes. It may be necessary to provide more steel cube moulds depending upon concreting programme.
 - j) 25mm dia vibrator for compaction of concrete in test cubes and also vibrating table.
 - k) Concrete cube testing machine of 200 tonnes capacity with 3 dial gauges electrically operated.
 - l) Work benches, shelves, desks, sinks and any other furniture and lighting as required by the Engineer.
 - m) Abrasion Flakiness & Impact testing Equipment for testing coarse aggregate.
 - n) Silt Testing Equipment.
 - o) Any other equipment specified by Engineer.
 - p) Concrete cube moulds

- q) UTM
- xii) Quality Assurance & Quality Control:
- a) The work shall conform to high standards of design and workmanship shall be structurally sound and aesthetically pleasing. The Contractor shall conform to the Quality standards prescribed, which shall form the backbone for the Quality Assurance and Quality Control system.
 - b) At the site, the Contractor shall arrange the materials, their stacking/storage in appropriate manner to ensure the quality. The Contractor shall provide all the necessary equipment and qualified manpower to test the quality of materials, assemblies etc., as directed by the Engineer. The tests shall be conducted at specified intervals and the results of tests properly documented. In addition, the Contractor shall keep appropriate tools and equipment for checking alignments, levels, slopes and evenness of the surfaces.
 - c) The Engineer shall be free to carry out such tests as may be decided by him at his sole discretion, from time to time, in addition to those specified in this document. The Contractor may provide the samples and labour for collecting the samples. Nothing extra shall be payable to the Contractor for samples or for the collection of the samples.

The test shall be conducted at the Site laboratory that may be established by the Contractor or at any other Standard Laboratory selected by the Engineer.

The Contractor shall transport the samples to the laboratory for which nothing extra shall be payable. In the event of the Contractor failing to arrange transportation of the samples in proper time the Engineer shall have them transported and recover two times the actual cost from the Contractor's bills.

All testing shall be performed in the presence of Engineer. Testing may be witnessed by the Contractor or his authorized representative if permitted by the Test House. Whether witnessed by the Contractor or not, the test results shall be binding on the Contractor.
 - d) The Engineer shall have the right at all times to inspect all operations including the sources of materials, procurement, layout and storage of materials, all equipment including the concrete batching and mixing equipment, and the quality control system. Such an inspection shall be arranged, and the Engineer's approval obtained prior to starting of the particular item of work. This shall, however, not relieve the Contractor of his responsibilities. All materials, which do not confirm to these specifications, shall be rejected and shall be removed from the site immediately. The Engineer shall have the powers to cause the Contractors to purchase and use materials from any particular source, as may in the Engineer's opinion be necessary for the proper execution of work.

2.1.7. Dimensions

Figured dimensions on drawings shall only be followed and drawings to a large scale shall take precedence over those to a smaller scale. Special dimensions or directions in the specifications shall supersede all others. All dimensions shall be checked on site prior to execution.

The dimensions where stated do not allow for waste, laps, joints, etc. but the Contractor shall provide at his own cost sufficient labour and materials to cover such waste, laps, joints, etc.

The levels, measurements and other information concerning the existing site as shown on the drawings are believed to be correct, but the Contractor should verify them for himself and also examine the nature of the ground as no claim or allowance whatsoever will be entertained on account of any errors or omissions in the levels or the description of the ground levels or strata turning out different from what was expected or shown on the drawings.

2.1.8. Setting out of Works

The Contractor shall set out the Works indicated in the Conditions of Contract. The Contractor shall provide suitable stones with flat tops and build the same in concrete for temporary benchmarks. All the pegs for setting out the Works and fixing the levels required for the execution thereof shall, if desired by the Engineer, likewise be built in masonry at such places and in such a manner as the Engineer may direct. The Contractor shall carefully protect and preserve all benchmarks and other marks used in setting out the works. The contractor will make overall layout of complete work and get it checked from engineer. The cost of all operations of setting out including construction of benchmarks is deemed to be included in the quoted rates as per Bill of Quantities.

- (a) All the survey work except levelling work shall be carried out using total stations with one second accuracy. The levelling work shall be carried out using Auto level.
- (b) The triangulations point given by CSML before start of work shall be maintained during execution and handed over back to CSML after completion of work.

2.1.9. Materials

2.1.9.1 Source of Materials

It shall be the responsibility of the contractor to procure all the materials required for construction and completion of the contract. The contractor shall indicate in writing the source of materials well in advance to the Engineer, after the award of the work and before commencing the work. If the

material from any source is found to be unacceptable at any time, it shall be rejected by the Engineer and the contractor shall forthwith remove the material immediately from the site as directed by the Engineer.

2.1.9.2 Quality

All materials used in the works shall be of the best quality of their respective kinds as specified herein, obtained from sources and suppliers approved by the Engineer and shall comply strictly with the tests prescribed hereafter, or where tests are not laid down in the specifications, with the requirements of the latest issues of the relevant Indian Standards.

2.1.9.3 Sampling and Testing

All materials used in the works shall be subjected to inspection and test in addition to test certificates. Samples of all materials proposed to be employed in the permanent works shall be submitted to the Engineer at least 45 days in advance for approval before they are brought to the site.

Samples provided to the Engineer for their retention are to be labelled in boxes suitable for storage. Materials or workmanship not corresponding in character and quality with approved samples will be rejected by the Engineer.

Samples required for approval and testing must be supplied sufficiently in advance if required quality and number to allow for testing and approval, due allowance being made for the fact that if the first samples are rejected further samples may be required. Delay to the works arising from the late submission of samples will not be acceptable as a reason for delay in completion of the works.

Materials shall be tested before leaving the manufacturer's premises, quarry or resource, wherever possible. Materials shall also be tested on the site and they may be rejected if not found suitable or in accordance with the specification, notwithstanding the results of the tests at the manufacturer's works or elsewhere or test certificates or any approval given earlier. The contractor will bear all expenses for sampling and testing, whether at the manufacturer's premises at source, at site or at any testing laboratory or institution as directed by the Engineer. No extra payment shall be made on this account.

2.1.9.4 Dispatch of materials

Materials shall not be dispatched from the manufacturer's works to the site without written authority from the Engineer.

In case of plumbing and electrical works the samples should be submitted to engineer in the MAR (Material approval request) format and shall got approved prior to procurement. MIR (material

inspection report) along with test report, bills and MAR approval sheet to be submitted on arrival of materials for inspection prior erection.

2.1.9.5 Test certificates

All manufacturer's certificates of test, proof sheets, etc showing that the materials have been tested in accordance with the requirement of this specification and of the appropriate Indian Standard are to be supplied free of charge on request to the Engineer.

2.1.9.6 Rejection

Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the Contractor at his own cost within two weeks or as instructed by the Engineer.

The Engineer shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.

2.1.9.7 Storing of Materials at site

All materials used in the works shall be stored on racks, supports, in bins, under cover etc as appropriate to prevent deterioration or damage from any cause whatsoever to the entire satisfaction of the Engineer.

The storage of materials shall be in accordance with IS 4082 "Recommendation on stacking and storage of construction materials on site" and as per IS 7969 "Safety code for handling and storage of building materials".

The materials shall be stored in a proper manner at places at site approved by the Engineer. Should the place where material is stored by the Contractor be required by the Employer for any other purpose, the Contractor shall forthwith remove the material from that place at his own cost and clear the place for the use of the Employer.

2.1.10. Water

i) Water from approved source

Potable water only shall be used for the works. Contractor shall have his own source of water duly approved by Engineer. The water shall be free from any deleterious matter in solution or in suspension and be obtained from an approved source. The quality of water shall conform to IS 456.

ii) Storage

The Contractor shall make his own arrangements for storing water, if necessary, in drums or tanks or cisterns, to the approval of the Engineer. Care shall be exercised to see that water is not contaminated in any way.

iii) Testing

Before starting any concreting work and wherever the source of water changes, the water shall be tested for its chemical and other impurities to ascertain its suitability for use in concrete for approval of the Engineer. No water shall be used until tested and found satisfactory. Cost of all such Tests shall be borne by the contractor.

2.1.11. Workmanship

All works shall be true to level, plumb and square and the corners, edges and arises in all cases shall be unbroken and neat.

Any work not to the satisfaction of the Engineer or his representative will be rejected and the same shall be rectified or removed and replaced with work of the required standard of workmanship at no extra cost.

2.1.12. Load Testing on Completed Structures

During the period of construction or within the defect liability period the Engineer may at his discretion order the load testing of any completed structure or any part thereof if he has reasonable doubts about the adequacy of the strength of such structure for any of the following reasons:

- a) Results of compressive strength on concrete test cubes falling below the specified strength.
- b) Premature removal of formwork.
- c) Inadequate curing of concrete.
- d) Over loading during the construction of the structure or part thereof.
- e) Carrying out concreting of any portion without prior approval of the Engineer.
- f) Honey combed or damaged concrete, which in the opinion of the Engineer is particularly weak and will affect the stability of the structure to carry the design load, more so in important or critical areas of the structure.
- g) Any other circumstances attributable to alleged negligence of the contractor which in the opinion of the Engineer may result in the structure or any part thereof being of less than the expected strength.

All the loading tests shall be carried out by the contractor strictly in accordance with the instructions of the Engineer, IS: 456 and as indicated hereunder. Such tests shall be carried out only after expiry of minimum 28 days or such longer period as directed by the Engineer.

The structure shall be subjected to a super-imposed load equal to 1.0 times the specified superimposed load assumed in the design. This load shall be maintained for a period of 24 hours before removal. During the test, struts strong enough to take the whole load shall be placed in position leaving a gap under the members as directed. The deflection due to the superimposed load shall be recorded by sufficient number of approved deflectometers capable of reading up to 1/500 of a cm and located suitably under the structure as directed by the Engineer.

The structure shall be deemed to have passed the test if the maximum deflection at the end of 24 hours of loading does not exceed the deflection given by the following expressions:

$$D = 0.001 L^2 / 25 T, \text{ where,}$$

$$D = \text{max deflection due to imposed load only}$$

$$L = \text{span of the member under load test (the shorter span in case of slabs).}$$

The span is the distance between centres of the supports or the clear distance between the supports plus the depth of the member, whichever is smaller. In case of cantilever, this shall be taken as twice the distance from the support to the end and deflection shall be adjusted for movement of the support.

$$T = \text{depth of member.}$$

If within 24 hours of the removal of the superimposed load, the structure does not recover at least 75% of the deflection under the superimposed load, the test loading shall be repeated after a lapse of 72 hours. If the recovery after the second test is less than 80% of the maximum deflection shown during the second test, the structure shall be considered to have failed to pass the test and shall be deemed to be unacceptable.

In such cases the portion of the work concerned shall be taken down or cut out and reconstructed to comply with the specifications. Other remedial measures may be taken to make the structure secure at the discretion of the Engineer. However, such remedial measures shall be carried out to the complete satisfaction of the Engineer.

All costs involved in carrying out the tests (except integrity test for piles) and other incidental expense thereto shall be borne by the contractor regardless of the result of the tests. The contractor shall take down or cut out and reconstruct the defective work or shall make the remedial measures instructed at his own cost.

If the load testing is instructed on any ground other than mentioned in a) to g) as mentioned above, then the cost of the same shall be reimbursed if the result of the tests are found to be satisfactory.

In addition to the above load tests, non-destructive test methods such as core test and ultrasonic pulse velocity test shall be carried out by the contractor at his own expense if so desired by the Engineer. Non-destructive testing of piles will be paid as per BOQ. Such tests shall be carried out by an agency approved by the Engineer and shall be done using only recommended testing equipment. The acceptance criteria for these tests shall be as specified by the testing agency or good engineering practice and as approved by the Engineer.

2.1.13. Structural Work

- i) Unless specified, only controlled concrete with design mix and weigh batching is to be used for the work.
- ii) Minimum cement content specified in CPWD specification 2009 (with upto date corrections slip) is purely from durability point of view. Larger content of cement shall have to provide if demanded by mix design.
- iii) Provision of cement slurry to create bond between plain / reinforced concrete surface and subsequent applied finishes shall not be paid extra.
- iv) Mix design using smaller aggregates of 10mm down shall also be done in advance for the use in the junction having congested reinforcement.
- v) Procedure of mixing the admixtures shall be strictly as per the manufacturer's recommendations if not otherwise directed by the Engineer.
- vi) All the water tanks and other liquid retaining concrete structures shall undergo hydro-testing. vii. Special benches shall be provided at site for stacking reinforcement bars of different sizes.
- vii) Formwork for beams of RCC areas shall be designed in such a way that the formwork of the adjacent slabs can be removed without disturbing the props / supports of the beams.
- viii) Wherever there are tension / suspended concrete members which are suspended from upper level structural members, the shuttering / scaffolding of such members at lower level shall have to be kept in place till the time the upper level supporting members gain minimum required strength. Cost of such larger duration of keeping in place the shuttering/scaffolding shall be deemed to be included in the price quoted for respective structural members.

- ix) Formwork is required for full height at all locations. Special precaution for such tall formwork shall be taken to ensure its safety. Extra costs for such formwork shall be deemed to have been included in the price quoted against relevant items.
- x) In the mobilisation period, the contractor shall carry out expeditiously and without delay the following works:
 - a) Material testing and mix designs of concrete as contemplated in the specifications.
 - b) Setting up of full-fledged site laboratory as per the requirements of these specifications.
 - c) Any other pre-requisite items required for final execution.
 - d) Site office for the use of the Engineer staff.
 - e) Casting yard with full facilities.
- xi) Casting yard to have following minimum facilities:
 - a) Casting beds as required.
 - b) All handling facilities for pre-cast elements.
 - c) Curing arrangements as required.
 - d) Stacking arrangements for pre-cast elements.
 - e) Storing of materials.
 - f) Proper drainage and approach roads.

2.1.14. Survey Works

The said work involves at the very start of work taking-over of reference point from the Engineer, establishment of control points, triangulation points, bench marks, grid layout for all the piers/column and other structures maintaining horizontal and vertical control within the permissible limits, incorporating changes (if any), submission of full data in the tabulation form and survey drawings including setting and layout of various works during the progress of work.

2.1.15. Barricading

The work covers barricading for the work done in quarters' site. The detailed scope of work is as follows

- i) Providing and installing the barricade of the design and type as shown in the typical sketch furnished as per the approved plan firmly to the ground and maintaining it during the progress of work.

- ii) Dismantling of barricading and other temporary installations from the site and cleaning the site as per direction of Engineer upon completion and acceptance of work.

Measurement

The barricading including all the fixtures shall be measured as per relevant item in BOQ. (Payment of the item shall be made on monthly basis over contract period including extended period if any. No extra payment shall be made for the extended period if any. No extra payment will be made for any lateral shifted barricading required for satisfactory execution of work.

2.1.16. Finishing Works

2.1.9.8 Sub-Contractor

Works dealing with proprietary materials/ products may be carried out by the Contractor through the Sub-Contractors as may be approved by the Engineer in writing. The Sub-Contractors must be firms of repute and long standing, having adequate experience and complete facilities to carry out all items of work required for completion as per Specifications and expected quality to the satisfaction of the Engineer. The Sub-Contractor must also have personnel experienced in preparing shop drawings. All such works shall be carried out under the direct supervision of the manufacturers of the proprietary materials/ products or their trained and accredited licensee. Works amounting to minimum Rs. 10,00,000/- value could be sub-contracted after seeking approval from the Engineer-In-Charge. Few of the works that could be sub-contracted are as follows:

Waterproofing

Caulking & Sealants

Application of Silicone water repellent solution where specified.

2.1.9.9 Guarantees and Building Maintenance for Finishes

The Contractor shall guarantee and undertake to maintain and rectify the various components of the Civil Works for their successful performance for the periods as specified below. The Contractor shall indemnify the Engineer for a similar period against any damage to property and injury to persons on account of any defective work or maintenance carried out by the Contractor. The format and text of the Guarantee and the Indemnity Bond shall be as followed in CPWD or as approved by the Engineer.

- a) Waterproofing for basements (which include raft, retaining walls, roof and expansion/separation joints in retaining walls) and roofs shall be guaranteed for 7 years. The waterproofing shall include all allied works on the roof such as concrete screed and the China

Mosaic roof finish/ stone cladding on the parapet between which the waterproofing treatment shall be sandwiched.

- b) Waterproofing for the other areas such as toilets, kitchens, chhajjas etc. shall be guaranteed for 7 years. The waterproofing shall include all allied works on the slab etc. such as concrete/ mortar screeding, if any, floor finish between which the waterproofing treatment shall be sandwiched.
- c) The contractor should submit additional bank guarantee for an amount equal to water proofing works at completion beyond the Defect liability period up to 7 years from date of completion.

2.1.9.10 Responsibility for Shop drawings, Samples and Mock-ups

Approval of shop drawings, samples and mock-ups for the various components shall not absolve the Contractor of his responsibility of completing the work to the specifications, standards, tests for performance and guarantees given in these documents and to a quality of finish as desired by the Engineer.

2.1.9.11 Cleaning

Surfaces on which finishes are to be provided shall be cleaned with water jets or oil free compressed air or power tools with wire brushes and detergents all as approved by the Engineer.

2.1.9.12 Expansion bolts/ fasteners:

- i) Unless specified otherwise all expansion bolts/ fasteners shall be fabricated from stainless steel sheet, strip or plate conforming to ASTM A 240 Gr 304 or bar to ASTM A 479 Gr 304 of approved make and design. The material of the bolt shall not cause any bimetallic corrosion with the reinforcing bars of the RCC/ brickwork or with any other fixings or doors or windows or skylights etc.
- ii) For steel backings the fasteners shall be prevented from contact with other metals, which would lead to bimetallic corrosion.
- iii) For brick masonry backing the sleeves of the expansion bolts shall be fixed in wedge shaped pockets having an area of 75mm x 75mm at the surface and 100mm x 100mm at the inner surface and shall be 125mm deep. The wedge could also be as a truncated cone of 75mm dia / 100mm dia. The dimensions shall be reviewed by the Engineer during execution of the work. The wedge shall be filled with PCC 1:1:2 (1 Cement, 1 Sand and 2 Coarse Aggregate) mixed with non-Shrink Compound in the proportion as recommended by the manufacturer.
- iv) The holes drilled for the expansion fasteners shall be cleaned of all ground material, dust, etc. before inserting the expansion sleeves.
- v) All expansion bolts fixed into soffits shall be bonded to the backing with epoxy/ polyester resin of approved make.

- vi) All expansion bolt fixings shall be tightened in accordance with the recommended torque figures by the manufacturer. Where such values are not available the Contractor shall test at least 6 samples to determine the safe torque values. All bolts shall be tightened using torque spanner/ wrenches. All bolts shall be checked 24 hours (minimum) after installation and retightened if necessary.

No walls, terraces shall be cut for making any opening after water proofing has been done without written approval of the Engineer. Cutting of waterproofing when authorized by the Engineer in writing shall be done very carefully so that no other portion of the waterproofing is damaged. On completion of the work at such places, the water proofing membrane shall be made good and ensured that the opening / cutting is made fully water proof as per specifications and details of water proofing approved by the Engineer at no extra cost. No structural member shall be cut or chased without the written permission of the Engineer.

Provision of grooves in plaster, drip courses etc. if directed, at junction of walls-ceilings, columns, walls, frames-plaster and such other generally typical locations shall not be paid extra, including grooves in concrete, masonry, stonework.

A	General
IS: 875 (Part 3)	Code of practice for design loads (other than earthquake) for buildings and structures
IS: 1200	Methods of measurement of building and Civil engineering works
IS: 1322	Bitumen felts for water proofing and damp-proofing
IS: 1893	Criteria for earthquake resistant design of structures
IS: 2185 (Part 1)	Concrete masonry units: Hollow and solid concrete blocks
IS: 2185 (Part 2)	Concrete masonry units: Hollow and solid light weight concrete blocks
IS: 2185 (Part 3)	Concrete masonry units: Autoclaved cellular aerated concrete blocks
IS: 2572	Code of Practice for construction of hollow concrete block masonry
IS: 3414	Code of practice for design and installation of joints in buildings
IS: 8183	Bonded mineral wool
IS:10958	General check list of functions of joints in building
IS:11817	Classification of joints in buildings for accommodation of dimensional deviations during construction
IS:11818	Method of test for laboratory determination of air permeability of joints in buildings
IS:12440	Precast concrete stone masonry blocks

CPWD	Specifications 96 with up-to-date correction slips
BS:476 (Part 7)	Method for classification of the surface spread of flame of products
BS:476 (Part 20)	Method of determination of the fire resistance of elements of construction (general principles)
BS:476 (Part 22)	Methods for determination of the fire resistance of nonload bearing elements of construction
BS:5215	Specification for one-part gun grade polysulphide-based sealants
BS:5606	Guide to accuracy in building
BS:6093	Code of practice for the design of joints and jointing in building construction
BS:8200	Code of practice for the design of non-load bearing external vertical enclosure of building.
ASTM C 332	Specification for light weight aggregate for insulating concrete.
SP 7	National Building Code of India
SP 23 (S&T)	Hand Book on Concrete Mixes

B	Bitumen
IS:702	Industrial Bitumen
IS:3384	Specification for bitumen primer for use in waterproofing and damp-proofing

C	Building Construction Practices
IS: 1946	Code of Practice for use of fixing devices in walls, ceilings, and floors of solid construction.
IS: 3414	Code of Practice for design and installation of joints in buildings.
IS: 6509	Code of Practice for installation of joints in concrete pavements.
IS: 11134	Code of Practice for setting out of buildings.
IS: 11433	Parts I and II. Specifications for one-part Gun grade polysulphide based joint sealant.
IS: 12200	Code of Practice for provision of water stops at transverse contraction joints in masonry and concrete dams

D	Cement
IS: 269	33 grade ordinary Portland cement

IS: 455	Portland Slag Cement
IS: 650	Specification for standard sand for testing cement.
IS: 1489 (Part 1)	Portland pozzolana cement: Flash based
IS: 1489 (Part 2)	Portland pozzolana cement: Calcined clay based
IS: 3535	Method of Sampling Hydraulic Cements
IS: 4031	(Parts 1 to 13) Methods of physical tests for hydraulic cement.
IS: 4032	Method of chemical analysis of hydraulic cement.
IS: 6925	Methods of test for determination of water-soluble chlorides in concrete admixtures.
IS: 8042	White Portland Cement
IS: 8112	Specification for 43 grade ordinary Portland cement.
IS: 12269	Specification for 53 grade ordinary Portland cement.
IS: 12330	Specification for sulphate resistant Portland cement.
IRS: T 40	Indian Railways standard specifications for special grade cement for use in concrete sleepers

E	Concrete
IS:456	Code of practice for plain and reinforced concrete.
IS:457	Code of practice for general construction of plain and reinforced concrete for dams and other massive structures.
IS:460 (Parts I to III)	Specification for Test Sieves
IS:516	Methods of test for strength of concrete.
IS:1199	Methods of sampling & analysis of concrete.
IS:1200	Method of measurement of building and civil engineering
IS:1343	Code of practice for prestressed concrete
IS:1607	Method of Test Sieving
IS:2386	Parts I-VIII. Methods of tests for aggregates for concrete.
IS:2430	Methods of Sampling of Aggregates of Concrete

IS:2438	Specification for roller pan mixer
IS:2514	Specification for concrete vibrating tables
IS:2571	Code of practice for laying in-situ cement concrete flooring
IS:2645	Specifications for integral cement water proofing compounds
IS:2722	Specifications for portable swing batchers for concrete (double bucket type)
IS:2770	Methods of testing bond in reinforced concrete part I pull out test
IS:3025	Methods of sampling and test (physical and chemical) for water & waste water
IS:3370	Code of practice for concrete structures for storage of liquids
IS:3935.	Code of practice for composite construction
IS:4326	Code of practice for earthquake resistant construction of building
IS:6925.	Methods of test for determination of water-soluble chlorides in concrete Admixtures
IS:7242	Specifications for concrete spreaders
IS:7251	Specifications for concrete finishers
IS:7861	Parts I & II. Code of practice for extreme weather concreting.
IS:7969	Safety code for handling and storage of building materials
IS:8989	Safety code for erection of concrete framed structures
IS:8142	Methods of test for determining setting time of concrete by penetration resistance
IS:9103	Specifications for admixtures for concrete
IS:9013	Method of making, curing and determining compressive strengths of accelerated cured concrete test specimens
IS:9284	Method of test for abrasion resistance of concrete
IS:10262	Recommended guidelines for concrete mix design.
MORTH	Specifications for Road and Bridge Works, Ministry of Road Transport and Highways (Roads Wing)
IRS	Concrete Bridge Code
IRC 21-2000	Standard Specifications and Code of Practice for Road Bridges Section III – Cement Concrete (Plain & Reinforced) (First Revision)
IRC:18-2000	Design criteria for Prestressed Concrete Road Bridges (Post – Tensioned Concrete) Ready Mix Concrete

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F	Construction Plant and Machinery
IS:1791	Specification for batch type concrete mixers.
IS:2505	General requirements for concrete vibrators: Immersion type.
IS:2506	General requirements for screed board concrete vibrators.
IS:3366	Specification for pan vibrators.
IS:3558	Code of Practice for use of immersion vibrators for consolidating concrete.
IS:4656	Specifications for form vibrators for concrete.
IS:4925	Specification for concrete batching and mixing plant.
IS:11993	Code of Practice for use of screed board concrete vibrators.

G	Formwork
IS:4990	Specifications for plywood for concrete shuttering work.
IRC:87	Guidelines for the design and erection of false work for road bridges.
IS:806	Code of practice for use of steel tubes in general building construction.
IS:1161	Specification of steel tubes for structural purposes.
IS:1239	Specification for mild steel tubes, tubulars and other wrought steel fittings.

H	Handling and Storage
IS:4082	Recommendation of Stacking and Storage of construction materials
IS:8348	Code of practice for stacking and packing of stone slabs for transportation
IS:8759	Code of practice for maintenance and preservation of stones in building

I	Instruments for Testing Cement and Concrete
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IS:5513	Specification for vicat apparatus.
IS:5514	Specification for apparatus used in Le-Chatelier test.
IS:5515	Specification for compaction factor apparatus.
IS:7320	Specification for concrete slump test apparatus.
IS:7325	Specification for apparatus to determine constituents of fresh concrete.
IS:10080	Specification for vibration machine.
IS:10086	Specification for moulds for use in tests of cement and concrete.
IS:10510	Specification for vee-bee consistometer.

J	Joint Fillers
IS:1838 (Part 1)	Preformed fillers for expansion joint in concrete pavements and structures (non-extruding and resilient type): Bitumen impregnated fibre
BS:1014	Specification for pigments for Portland cement and Portland cement products

K	Reinforcement & Structural Steel
IS:206	Code of Practice for use of Steel Tubes in General Building Construction
IS:210	Grey Iron Castings
IS:280	Mild steel wire for general engineering purposes
IS:432	Part I. Mild steel and medium tensile steel bars. Part II Hard drawn steel wire.
IS:451	Technical Supply conditions for Wood Screws
IS:806	Code of practice for use of steel tubes in general building construction
IS:815	Classification coding of covered electrodes for metal arc welding of structural steels
IS:1239	Specification for mild steel tubes, tubulars and other wrought steel fittings
IS:1363	Black hexagon bolts, nuts and lock nuts and black hexagon screws.
IS:1365	Slotted countersunk screws.
IS:1566	(Part I) Specifications for hard-drawn steel wire fabric for concrete reinforcement.

IS:1786	Specification for high strength deformed steel bars and wires for concrete reinforcement.
IS:2502	Code of Practice for bending and fixing of bars for concrete reinforcement.
IS:2629	Recommended practice for hot-dip galvanising of iron and steel.
IS:2751	Code of Practice for welding of mild steel plain and deformed bars for reinforced concrete construction.
IS:4759	Hot-dip zinc coating on structural steel and other allied products.
IS:5525	Recommendations for detailing of reinforcement in reinforced concrete works
IS:9417	Recommendations for welding cold-worked steel bars for reinforced concrete construction.
IS:14268	Uncoated stress relieved low relaxation steel class 2 for Prestressed concrete
IS:226	Structural steel (Standard Quality)
IS:800	Code of practice for use of structural steel in general building construction.
IS:813	Scheme of symbols for welding.
IS:814	Covered electrodes for metal arc welding of structural steel. (Part I & Part II)
IS:816	Code of practice for use of metal arc welding for general construction in mild steel.
IS:822	Code of practice for inspection of welds.
IS:961	Structural steel (High Tensile)
IS:1024	Code of practice for use of welding in bridges and structures subject to dynamic loading.
IS:1030	Carbon steel casting for General Engineering Purposes
IS:1120	Coach Screws
IS:1367	Technical Supply Conditions for Threaded Fasteners
IS:1161	Steel tubes for structural purposes.
IS:1182	Recommended practice for radiographic examination of fusion welded butt joints in steel plates.
IS:1915	Code of Practice for Steel Bridges
IS:2016	Plain Washers
IS:2062	Structural steel (Fusion welding quality)
IS:3063	Single Coil Rectangular Section Sprint Washers for Nuts, Bolts and Screws
IS:3443	Crane Rail Sections

IS:3757	Specification for high tensile friction grip bolts.
IS:5624	Specification for foundation bolts.
IS:3600	Code of practice for testing of fusion welded (Part I) joints and weld metal in steel.
IS:4923	Hollow steel sections for structural use.
IS:6227	Code of practice for use of metal arc welding in tubular structure.
IS:801	Code of practice for use of cold formed light gauge steel structural members in general building construction.
IS:811	Specifications for cold formed light gauge structural steel sections.
IS:8500	Structural Steel Micro alloyed (Medium and high strength qualities)
IS:8910	General requirements of supply of weldable structural steel
IS:9595	Recommendations for metal arc welding of carbon & carbon-Manganese steel

L	Sand
IS:383	Coarse and fine aggregates from natural sources for concrete.

M	Scaffolding
IS:2750	Specification for steel scaffoldings
IS:3696 (Part 1)	Safety Code of scaffolds and ladders: Scaffolds
IS:3696 (Part 2)	Safety Code of scaffolds and ladders: Ladders
IS:4014 (Part 1)	Code of practice for steel tubular scaffolding: Definition and materials
IS:4014 (Part 2)	Code of practice for steel tubular scaffolding: Safety regulations for scaffolding
IRC:87	Guidelines for the design and erection of falsework for road bridges

N	Bearing
IRC:83Part-II	Standard specifications and code of practice for road bridges Elastomeric Bearings
IRC:83 Part-III	Standard specifications and code of practice for road bridges Pot Bearings

O	PILING
IS :2911 PART-I	Bored Cast in-situ Concrete Piles
IRC:78	Standard specifications and code of practice for road bridges Foundation and Substructure
IS: 2911 Part 3	All Indian Railway Standards Under Reamed Piles

M	Scaffolding
IS:2750	Specification for steel scaffoldings
IS:3696 (Part 1)	Safety Code of scaffolds and ladders: Scaffolds
IS:3696 (Part 2)	Safety Code of scaffolds and ladders: Ladders
IS:4014 (Part 1)	Code of practice for steel tubular scaffolding: Definition and materials
IS:4014 (Part 2)	Code of practice for steel tubular scaffolding: Safety regulations for scaffolding
IRC:87	Guidelines for the design and erection of falsework for road bridges

P	Metal
IS:276	Austenitic manganese steel castings
IS:733	Wrought aluminium and aluminium alloy bars, rods and sections for general engineering purpose.
IS:737	Specifications for wrought aluminium and aluminium alloy sheet and strip for general engineering purpose.
IS:3614 (Part 1)	Specification for fire check doors: Plate metal covered and rolling type
IS:3614 (Part 2)	Specification for metallic and non-metallic fire check doors: Resistance test and performance criteria
IS:7196	Hold Fast
ASME Sect 2 Part A	Ferrous Material Specifications
ASTM B 221	Specification for aluminium-alloy extruded bars, rods, wires, shapes, and tubes
BS:4873	Specification for Aluminium alloy windows
BS:7352	Specification for strength and durability performance of metal hinges for side hanging applications and dimensional requirements for template drilled hinges

BS EN:10143	Specification for continuously hot-dip metal coated steel sheet and strip. Tolerances on dimensions and shape.
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2.1.17. SAMPLING & MOCK-UPS

Major items of work for which samples and mock-ups shall be produced by the Contractor free of cost for approval by the Engineer-in-charge.

PARTICULARS OF ITEM	DETAILS OF SAMPLE
All Marble, Kota stone and granite stone, sand stone and all other stone flooring, copings	3 nos. of (1200 x 600) mm or actual size sample as per design and mock-up of each type showing edge rounding, polishing, flamed textures, etc.
Mirror, Glass	(150 x 150) mm size sample
UPVC doors/windows	Complete assembly including gaskets / accessories / sealants / lock etc.
Hardware	Complete set of each type
Wall claddings stones	3 nos. of samples, (2000 x 2000) mm size of each type of finish including cramps, etc.
Paints	All types in various shades and sizes, as directed (1000 x 1000) mm.
Stone flooring	1000 mm x 1000 mm approx. laid sample
Waterproofing treatment	Specialised agency and waterproofing system to be approved by Engineer-In-charge
False floor	Sample and mock-up of each system
Tactile on floors	Samples and mock-ups as per the requirement of the Engineer In-charge
Aluminium panel cladding	Mock-up Sample of panels 1000 mm x 1000 mm approx. laid sample
False ceiling (All types)	Panel of size (2000 x 2000) mm of each finish

All types of railings	Mock-up 2000 mm long also showing all bends and turning conditions
All types of paving	Samples and mock-ups as per the requirement of the Engineer In-charge.
All types of kerbs	Mock-ups as per the requirement of the Engineer-In-charge
Copings	Mock-ups as per the requirement of the Engineer-In-Charge
Fire check doors	Complete set including frame and accessories
Metal doors	Complete set including frame and accessories
Rolling shutter	Sample of lath
External finish	Mock-up of (2000 x 2000) mm of each type
Compact laminate panels	Sample of panels
GRC Screen	Mock-up Sample of panels 1000 mm x 1000 mm approx.
GRC panel, band, gutter	Mock-up Sample of panels 1000 mm in length
Galvalume metal panels	Mock-up Sample of panels 1000 mm x 1000 mm approx.
Translucent Film	Mock-ups as per the requirement of the Engineer-In-Charge
Structural Glazing work	Mock-up Sample of panels 1000 mm x 1000 mm approx.
Structural steel work	Mock-up of each element
Any other finishing item	Mock-ups as per the requirement of the Engineer In-charge

2.2. TECHNICAL SPECIFICATIONS FOR ELECTRICAL WORKS

2.2.1. GENERAL

To implement toilet electrification work, the contractor's scope of work includes but not limited to: Survey, network design, manufacturing, Working testing, inspection, packing, dispatching, loading, unloading and storage at site, transit/storage and construction insurance, assembly, erection, civil

structural work, complete pre-commissioning checks, testing & commissioning at site, obtaining statutory clearance & certification from State Electrical Inspectorate, Kerala State Electricity Board, Kochi Municipal Corporation etc. and handing over to the Employer after satisfactory commissioning of respective project locations.

2.2.2. Electrical works

2.1.9.13 BRIEF SCOPE OF WORK

Supply, installation, testing and commissioning of Electrical Equipments such as , submain Distribution boards, building electrification, , laying Lighting Distribution Boards, , control panels, junction box, 415 volts 3 phase, 50 Hz, 0.8 pf of approved make complete with Lighting Control Panel complete with supply laying and termination of suitable size of Aluminium Conductor, XLPE and PVC insulated, PVC sheathed, armoured cables of approved make and using heat shrink type cable terminations of approved make for terminations, , control panels and junction box, cable trays as per standards and specifications within public toilets,

The scope of work also includes liasoning KSEBL and obtaining Power supply Connection to toilet building.

All electrical works shall be executed through an experienced electrical supervisor who has executed similar works with KSEBL.

The Contractor is responsible for liasoning with Central/state Government Departments / KSEB/ CEIG or any other authorities concerned on for matters like work entrustment, vendor approvals, drawing approvals, any other matters connected with the work and gets the approvals within the specified time for successful completion of work for all matters including obtaining approved designs & drawings, and commissioning of the Project including all incidental costs incurred thereon. Kochi Smart Mission Limited, however, will provide only all the required administrative supports to the contractor in this regard and also would reimburse to the Contractor all the statutory charges paid to the departments like CEIG on production of official receipts/challan from respective departments thereon. The quoted price should include all expenses proposed to be incurred by the bidder in detailed surveying, liasoning with all Govt Departments/ Electrical Inspectorate and Other Statutory authorities.

Civil foundations as recommended by the manufacturers of feeder pillars, lighting pole and mounting arrangement for Control panel and junction box etc. shall be in the scope of the contractor.

All the civil works such as excavation of earth, laying of Hume pipes/ HDPE pipes/ DWC pipes in concreting, back filling of cable trench, providing man holes as required for cable laying and jointing as per standards.

- (a) Contractor should get Inspected all the works involved in the project, from the CEI Govt. of Kerala, duly paying the necessary requisite fees and submitting the Certificate-Unless and until such clearance are obtained, the commissioning activities will not be considered as completed.
- (b) It is obligatory on the part of contractor that the guaranteed technical particulars of all the equipments ordered on the vendors will be got approved from the owner before effecting their purchase.
- (c) The Contractor shall provide necessary drawings and documents required by statutory authorities and obtain approval before taking up erection.

2.1.9.14 INSPECTION

All the bought-out items/equipment's/ panels will be got inspected at Vendor's premises from the owner before it is transported at the site failing which it will be treated as breach of contract.

2.1.9.15 DRAWINGS

The contractor will furnish three sets of all the drawings required for execution of work after detailed design and engineering on the basis of Single Line Diagram (SLD) for approval to the owner at the earliest but not later than one month after award of contract. The owner/ consultant will approve the drawings. Within 15 days after receipt and these approved drawings will be considered as good for Construction (GFC) for execution at site. Similarly, all the drawings, in respect of equipment's to be purchased from approved Vendors shall be submitted to owner/ consultant for approval and these drawings. Shall also be approved within 15 days after receipt. Any equipment purchased by the contractor without the approved drawing will be treated as a breach of contract.

2.1.9.16 DETAILED SCOPE OF WORK FOR ELECTRICAL WORKS

Supply, installation, testing and commissioning of the Following:

- ▶ Supply, laying and termination of 1.1 KV 3.5 core / 4 core (XLPE insulated armoured cable from KSEB to metering system to submain panels in RCC cable trenches / HDPE cable ducts.
- ▶ Supply, laying and termination of 1.1 KV cable from feeder pillars through RCC cable trench/ HDPE duct and termination of the cable on poles with suitable fuse isolation and junction box to connect service cable to consumers through duct banks/ RCC cable trenches, Cable trays, covering slabs.
- ▶ Supply, laying and termination of suitable size of Aluminium Conductor, XLPE and PVC insulated, PVC sheathed, armoured cables of approved make and using heat shrink type cable, joints, terminations of approved make for terminations.

- ▶ Supply instation, testing and commissioning of submain Distribution boards and smart energy meters etc.
- ▶ Supply of wiring materials and wiring up of lighting point, fan point and exhaust fan point in toilet buildings.
- ▶ Supply of wiring materials and wiring up of power plug and socket points in toilet buildings.
- ▶ Supply and installation and testing and commissioning of LED light fixtures for indoor and out door areas.
- ▶ Provide supply to Lighting distribution board for illumination of lighting circuits.
- ▶ Earthing of submain and distribution boards, lighting poles at each 5th pole, control panels and junction box, cable trays as per standards and specifications within project area.
- ▶ Supply, laying and commissioning of GI/Hume pipes / HDPE pipes and all other materials like cement, steel, sand gravels of suitable size as required shall be in the scope of contractor.
- ▶ Preparation of G.F.C. drawing as per requirement, to match the requirement and approval from the employer representative.
- ▶ Preparation of abstract of quantities of major items, as Cables, Cable Trays to assure at final quantities before procurement.
- ▶ Laying, dressing of cables in cable trays using nylon ties, glanding and termination of cables, Laying of Pipes etc. as required.
- ▶ Providing cable identification SS aluminium tags in cable trays at suitable and termination end of cables
- ▶ Laying of warning tape in buried cable trenches for protection of cable.
- ▶ Testing of Cables before Laying, Jointing, commissioning etc. as required.
- ▶ Inspection of Cables, Joints and Cable Trays at manufacturing place before shipment.
- ▶ Arranging all tools and testing instruments and testing and commissioning of all equipments as per relevant standards.
- ▶ **Labelling of earth pits, lights, ceiling fans, distribution boards etc as per design specifications and relevant standards.**

The contractor's scope of work includes but not limited to: network design, manufacturing, Working testing, inspection, packing, dispatching, loading, unloading and storage at site, transit/storage and construction insurance, assembly, erection, civil structural work, complete pre-commissioning checks, testing & commissioning at site, obtaining statutory clearance & certification from State Electrical Inspectorate, Kerala State Electricity Board, Kochi Municipal Corporation etc. and handing over to the Employer after satisfactory commissioning of complete.

2.1.9.17 Applicable Codes and Regulations

Electrical arrangement shall be based on BS: 7671 - 2001 "Requirements for electrical installations. IEE Wiring Regulations - Sixteenth edition" or other internationally recognized equivalent standard approved by the Employer's representative examples of which are:

(i)	IEA	Indian Electricity Act
(ii)	BS	British Standard
(iii)	EN	Euro Norm Standard
(iv)	ISO	International Standards Organization
(v)	IEC	International Electro-Technical Commission
(vi)	NEC	National Electrical Code
(vii)	NEMA	National Electrical Manufacturers Association
(viii)	NFPA	National Fire Protection Association
(ix)	IS/BIS	Bureau of Indian Standards

2.1.9.18 Local Codes, Regulations and Standards

Unless otherwise stated, the electrical system shall be governed by all applicable local codes, code of practices regulations and standards (all latest) issued by the local agencies such as:

- (i) Indian Electricity Act, 2003 and Indian Electricity Rules, 1956 amended upto date.
- (ii) Public Works Department (Central/State)
- (iii) KSEB
- (iv) National Safety Council
- (v) CEA regulations.

The Contractor shall ensure compliance with the regulations laid down by local authorities i.e., Government, Municipal, Electrical Inspector, and all other statutory agencies including fire safety regulations, fire insurance regulations or other local codes and obtain approvals from relevant authorities at appropriate stages of work as required.

Other International codes and standards shall be considered if the same are, at least equivalent to, Indian Standards or any other international standard which yields a more desirable outcome.

2.2.3. SYSTEM SUPPLY

LV supply at the consumer premises shall be 240/433V \pm 6% as per latest Indian Standard IS: 12360. The distribution transformers shall be at no load LV = 250/433V as per CEA/CBIP recommendation.

The frequency shall be 50Hz \pm 3% as per Indian Electricity Rules and IS: 12360.

11kV supply variation shall be within +6% & -9% as per Indian Electricity Rules.

2.2.4. INSULATION COORDINATION

Standardized levels for the highest system voltages U_m related to the rated voltages are defined in IEC 60071-1. According to these levels the test voltages for the insulation of high voltage equipment are defined. The following levels have been selected out of IEC 60071-1, IEC 60364 & IS-SP39.

Rated Voltage	Un (kVrms)	0.4	11
Highest system voltage	U_m (kVrms)	1	12
Power frequency withstand voltages 50 Hz, 1 min, to earth	U_{pf} (kVrms)	2	28
Lightning impulse with stand voltage 1.2/50 μ s to earth	U_{li} (kVpeak)	8	75

IEC 60815 defines 4 different pollution levels from light to very heavy pollution. To each pollution level the corresponding minimum nominal specific creepage distance is defined. The equipment to be installed in project area will be exposed to salt, fog conditions and to pollution due to exhausts. To consider this situation the pollution level “very heavy” according to IEC will be selected. This pollution level implies a minimum creep age distance of 31.0 mm/kVrms.

2.2.5. SYSTEM NEUTRAL POINT

The choice of the system neutral points has been made to conform to the existing system. The treatment of the neutral point has been selected according to the following table.

For star connected LV windings of transformers the neutral point of the LV systems is generally solidly earthed.

System	Neutral Point
11kV	Solidly earthed
0.4kV	Neutral of transformers Solidly earthed

2.2.6. SHORT CIRCUIT LEVELS

The following short circuit levels shall be adopted for switchgear:

11kV	:	25KA
400V	:	50KA

2.2.7. LOCAL START STOP PUSH BUTTON STATIONS (PB)

Free Standing Floor Mounted Control with pad locking arrangement and IP: 65 degree of protection made out of 14SWG CRCA sheet after seven tank Process and painting with Epoxy Powder coating for remote command to operate the motor pumps from Main LT Panel. The Local Motor Control panel shall be suitable for 48 Volt DC and wired with flexible copper wire size 2.5 sq. mm (Min) and provided with the following the panel duly mounted on U-channels shall be got fabricated from manufacturers with CPRI Test certification only.

- 1 Nos. 10A DP2 Way with OFF local remote selector switch, key lockable.
- 12 Nos Bolted type Terminal Block for inter panel wiring.
- 2 Nos LED type ON / OFF Lamp suitable for 48 V DC.
- 2Nos ON / OFF push button actuator with legend plate.
- 1Nos Emergency Stop push button (red) mushroom head stay put type turn to release with legend.

2.2.8. LIGHTING PANEL

Three phase and neutral 415V, 4 wire Wall mounted or Free-Standing Floor Mounted Lighting Panel

Incomer

- 63 A, 25 KA Triple Pole with neutral isolation MCCB with thermal overcurrent & Earth fault releases - 1 No.
- Load Manager for measuring Voltage, Current, KWH, KW, KVAR, PF, Frequency parameters - 1 Nos.
- 63/5A, CL - 1.0, 5VA Resin Cast Current Transformers - 3 Nos.
- LED Type Indication Lamps R, Y, B for Phase Bus Indication - 1 Set
- 6 A Control MCB for indicating lamps -1 Set

Out going

- 32 Amps TPN MCB for external and internal lighting with indication lamp - 4 Nos

2.2.9. L.T. CABLES

2.2.9.1 Scope

This specification covers the technical requirements of design, manufacture, testing and delivery to site of Power Cables of 1100V grade with FRLS PVC Sheathed, HR PVC insulated Copper conductors for use in toilet buildings, Ernakulam.

2.2.9.2 Codes and standards

1.	IS-1554 Part-I	PVC insulated cable for working voltage up to and including 1100 V
2.	IS-3961 Part-II & V	Recommended current ratings for cables
3.	IS-3975	Mild steel wires and tapes for armouring of cables
4.	IS-4826	Hot dipped galvanized coatings on round steel wires
5.	IS-5831	PVC insulation and sheath of electric cables
6.	IS-6380	Specification for Elastomeric insulation and sheathing of electrical cables.
7.	IS-8130	Conductors for insulated electric cables and flexible chords
8.	IS-10418	Drum for electric cables
9.	IS-10810	Methods of test for cables
10.	IEC-287	Calculation of the continuous current rating of cables (100 % load factor).
11.	IEC 332-1 & 3	Tests of Electric cables under fire conditions
12.	IEC-331	Fire resistance characteristics of electrical cables
13.	IEC-754-1	Tests on gases evolved during combustion of electrical cables.
14.	ASTM-D-2843	Test method of density of smoke from the burning or decomposition of plastics
15.	ASTM-D-2863	Test method for measuring the minimum oxygen Concentration to support candle like combustion of plastics (oxygen Index)
16.	IEEE: 383	Standard for type test of Class-1E Electric cables, field splices and connections for Nuclear power generating stations.
17.	SS-4241475	Swedish standard for cables testing of flame propagation characteristics
18.	IEC-189	Low frequency cables and wires with PVC insulation and PVC sheath.
	Part-I	General test and measuring methods.
19.	NEMA-WC-5	Thermoplastic insulated wires and distribution of electrical energy.

2.3. TECHNICAL SPECIFICATIONS OF FIRE AND SAFETY EQUIPMENTS

2.3.1. Scope

This Specification covers the design, manufacture, testing at manufacturer's Works, supply and delivery of safety equipment like fire extinguishers and insulating mats.

2.3.2. Standard

The equipment covered by this specification shall, unless otherwise specified, conform to the latest edition of the following:

1. IS 2171
2. IS 2878
3. IS 2584
4. IS 8437
5. IS 15652

6. SAFETY EQUIPMENT

Sl. No.	Description	Type
Fire Extinguishers		
1.	6.5kg, Carbon dioxide, as per IS: 2878	Trolley
2.	4.5kg, Carbon dioxide as per IS: 2878	Portable
3.	25kg, Dry powder as per IS: 2171	Trolley
4.	10kg, Dry powder as per IS: 2171	Wall hanging
Insulating Mat		
1.	Class A	
2.	Ambient temperature range	-10°C to 50°C
3.	Tensile strength in N/mm ²	15 Min
4.	% Elongation	250(min)
5.	Tensile strength in N/mm ² after ageing	(-) 25% to (+) 10%
6.	% Elongation after ageing	(-) 25% to (+) 10%

2.3.6.1 Quality Assurance Plan

The Quality assurance plan (QAP) for all supply items as per relevant IS/ applicable codes and standards shall be submitted by the contractor to carry out the tests and inspection at manufacturers work for approval of Engineer in charge for before procurement of the materials.

2.3.3. SMART ENERGY METER

The meter shall be from approved make of Kerala State Electricity Boards (KSEB). All the approvals, testing and installation shall be as per the guidelines of KSEB.

2.3.7.1 Typical SPECIFICATIONS –

- Three Phase, 4 wire (Three phase) direct connection
- Standards : IS 16444, IS 15959(1), IS 15959(2)
- Metrology Accuracy : Class 1
- Rated Voltage : 240 V (-40% to +20%) Single Phase
- Starting Current : 0.2% Ib\
- Frequency : 50 Hz +5%
- Load Contactor : Latching relays
- Display : LCD
- LED indicators : Line, Tamper, Export, kWh
- Communication port/methods : GSM-GPRS/WiFi

2.3.4. ENGINEERING DELIVERABLES

The Bidder shall submit following minimum Engineering Deliverables from award of the Contract. Any other drawing / calculation which is not listed below and may be required for execution of the job shall also be submitted by the bidder.

Main Single Line Diagram indicating bus/breaker rating, cable/overhead conductor size etc.

2.3.8.1 Electrical Drawing

- Levels of different voltage grade, metering and protection with CT / PT cores / ratio / burden / accuracy class.
- Complete BOQ of the project with technical details.
- Single Line Diagram of 415 V AC Distribution board,
- Overall Site Layout Plan

- Insulation coordination.
- Switchgear/Control building layout – Plan.
- layout Plan & Section – outdoor.
- Cable duct layout Plan & Section – Indoor.
- Power cable & Control cable schedules.
- Cable tag marking concept.
- Earth design calculation based on actual site soil investigation.
- Outdoor equipment grounding arrangement and details.
- Outdoor Illumination system design Calculation.
- Drawing of Outdoor Illumination with erection details.
- Cabling, earthing & lightning concept
- Material inspection report
- Pre-commissioning / commissioning reports of all equipments
- As built documentation of the drawing / documents

ANNEXURE-I**SUMMARY OF PARAMETERS FOR ELECTRICAL SYSTEM DESIGN****1.0 SITE CONDITIONS**

1	Altitude	5 Mtrs above MSL
2	Temperature (Design ambient)	45°C
3	General Climate	Hot, highly humid, dusty and Coastal Climate with wide variation in ambient temp.
4	Relative Humidity	95% RH

2.0 POWER SUPPLY AVAILABLE

1.	Voltage	415 V, AC
2.	Frequency	50 HZ
3.	Phases	3
4.	Variation in Voltage	± 10% of rated voltage
5.	Variation in Frequency	± 5% of rated frequency
6.	Combined Variation	10% absolute

3.0 MOTORS

1.	Type	Sq. Cage induction motor
2.	Insulation Class	F
3.	Temperature rise	Limited to Class B only
4.	Space Heater	Required for motors rated 30 KW and above

1.	Method of starting	DOL starter
2.	Degree of Protection of Enclosure	
	a) Outdoor installation	IP 55
	b) Indoor installation	IP 23

4.0 EARTHING

Final earth resistance of installation	Less than 1 ohm during dry season
Fault Current for design	50 KA
Fault Clearing time for design	1 Sec
Earth Electrode	copper bonded earth electrode earth electrode as per IS 3043

Earthing Conductor Sizes	
a) Underground main earth grid	50 x 10 MS strip
b) Above Ground aux. earth grid	50 x 10 GI strip
DB/MLDB/LDB/Control Panel/Lightning	25 x 4 GI Strip
e) Motors	
- Up to and including 3.7 KW	8 SWG GI Wire
f) PB stations / JB's / Small Panels	8 SWG GI Wire
g) Lighting Fixtures / Exhaust Fans	12 SWG GI wire

5.0 CABLING

1.	01 Type	
	a) LT Power	1.1 KV, Cu/Al, PVC, Armoured.
	b) Control Cable	1.1KV, Cu, PVC, Armoured, 1.5 Sq.mm (1 spare core up to 5 core cable and 20% spare cores above 5 core cable)
2.	Laying	
	a) Indoors	On Cable trays
	b) Outdoors (Structure, Paved Area)	On Cable trays
	c) Outdoors (Unpaved Area)	Directly buried cable trench 1000 meter for HT Cables and 600mm depth for LT Cables
3.	Cable Trays	
	a) Type	Pre – Fabricated
	b) Material	Galvanised Iron
	c) Painting	Not Applicable
	d) Standard Width	300 / 450 / 250 mm
	e) Distance between two cable trays	300
4.	Earthing	To be connected to main earth grid at an interval not more than 30 mts

6.0 PF OF INSATTLATION

0.95 lag or better

7.0 LIGHTING

1.	Indoor Lighting	LED Fixtures
2.	Street Lighting	LED Fixtures
3.	Area Lighting	LED Fixtures
4.	5/15 Amp Switch – Socket	As per Design
5.	32 Amp Industrial Socket	One in each building / pump house

Note:

1. In case of any conflict, details given above superseded and details given elsewhere in tender documents.
2. Area around digester shall be classified hazardous as per IS 5571. All electrical equipment and instrument coming within a radius of 15mts shall therefore, be in duly certified flame proof (Ex`d`) enclosures, suitable for Gas Gr IIA & IIB.
3. The details provided above are for guidance only subject to details given in tender documents.

CONTRACTOR'S REQUIREMENT

- ▶ Contractor should get Inspected all the works involved in the project, from the CEI Govt. of Kerala, duly paying the necessary requisite fees and submitting the Certificate-Unless and until such clearance are obtained, the commissioning activities will not be considered as completed.
- ▶ It is obligatory on the part of contractor that the guaranteed technical particulars of all the equipments ordered on the vendors will be got approved from the Employer and KSEB before effecting their purchase. The meter shall be calibrated and tested under the supervision officials of KSEB.
- ▶ The Contractor shall provide necessary drawings and documents required by statutory authorities and obtain approval before taking up erection.

INSPECTION

All the bought-out items/ equipments/ panels will be got inspected at Vendor's premises from the engineer in charge of client before it is transported at the site failing which it will be treated as breach of contract.

DRAWINGS

The contractor will furnish three sets of all the drawings required for execution of work after detailed design and engineering on the basis of SLD for approval to the Employer at the earliest but not later than one month after award

of contract. The Employer/ consultant will approve the drawings within 15 days after receipt and these approved drawings will be considered as GFC for execution at site. Similarly, all the drawings in respect of equipments to be purchased from approved Vendors shall be submitted to Employer/ consultant for approval and these drawings. It shall also be approved within 15 days after receipt. Any equipment purchased by the contractor without the approved drawing will be treated as a breach of contract.

STATUTORY APPROVAL

Obtaining Approvals & Consents from relevant authorities like Chief Electrical Inspectorate, State Electricity Board, PTCC, all statutory agencies etc like PWD, NHA etc. However, any statutory fees paid by the contractor shall be reimbursed against sub-mission of documentary proof.

SAFETY

Work is to be done on substations in operation; therefore, the following factors are of paramount importance:

- ▶ Minimization of outage time
- ▶ Adaptation to operational constraints. All the work shall be conducted in adhere to all instructions and safety rules approved by the CSML Engineer –in- Charge.

SPARES

Recommended spares: The Tenderer shall furnish in his offer a list of recommended spares with unit rates for each set of equipment that may be necessary for satisfactory operation and maintenance of major equipments for a period of 5 years.

The purchaser reserves right of selection of items and quantities of these spares to be ordered. The cost of such spares shall not be considered for tender evaluation.

TOOLS

The Tenderer shall submit a list of all the special tools, equipment and instruments required for erection, testing, commissioning of all electrical equipments. The purchaser shall decide the quantity of tools to be ordered. Prices of these tools shall not be considered for tender evaluation. However, the list of necessary tools/equipment which will be supplied free of cost with each equipment may be furnished separately.

LIST OF PREFERRED MANUFACTURERS

Table 26-1 List of Preferred Equipment Manufacturers

S.No.	Description	Make
2.	LT Switch Board	Schneider / ABB/L&T/C&S/ Any equivalent
7.	L.T. & Control Cables	CCI / Universal / RPG / KEI / Finolex /poly cab/ TRACO Cables
8.	Lighting Cables	CCI / Universal / RPG / KEI / Finolex /poly cab/ TRACO CABLES.
9.	Lighting Fixtures	Phillips / Bajaj / Crompton / Wipro
10.	L.T. termination kits	Raychem / Denson/TE
12.	Smart Energy Meters	ABB / Schneider / L&T / Secure Meters/Maven
13.	Cable Glands	HMI / Gripwel / Comet/ raychem
14.	PVC terminals & terminal blocks	ELMEX / ESSEN / Phoenix
16.	Modular type switches	North West / MK / MDS / Schneider / Legrand
17.	Indicating meters	Siemens/ Schneider/ABB/AE
18.	Pushing button & indicating light	L&T / BCH / Siemens / C&S
19.	Selector & Control Switches	Siemens/Schneider/L&T
21.	MCCB	Siemens / ABB / Schneider/L&T
22.	Switch Sockets & Modular type receptacles	BCH / MDS / Crompton /Schneider /Crabtree / Legrand/ GM/MK
23.	MCB	Siemens / ABB / Schneider/L&T
25.	MCB distribution board	Siemens / ALSTOM / Schneider/ Legrand/L&T
26.	Contactors	L&T / Siemens / ALSTOM / Schneider
27.	Portable Fire Extinguishers	Minimax / Mather Platt / Ceasefire
29.	Underground HDPE Ducts	Duraline, Bajaj, Reliance/any equivalent
30.	APFC Panel	Epcos, Siemens, ABB, Schneider, Legrand
32.		
33.	Copper Bonded Earthing	Exel Earthing, SOBO System, ISG Global.
34.	Ceiling Fan, Exhaust Fan	Crompton / Bajaj /Orient / Khaitan / Usha

2.3.8.2 Engineering Deliverables

The Bidder shall submit following minimum Engineering Deliverables from award of the Contract. Any other drawing / calculation which is not listed below and may be required for execution of the job shall also be submitted by the bidder.

Main Single Line Diagram indicating bus/breaker rating, cable/overhead conductor size, fault current, fault MVA etc

2.3.5. QUALITY MONITORING AND ASSURANCES

2.3.9.1 General:

All materials, components and equipment covered under the technical specification for this Project shall be procured, manufactured, tested, erected and commissioned as per a comprehensive Quality Assurance Programme. It shall be the primary responsibility of the Tenderer to draw up and implement such a programme, which shall be duly, approved by the Engineer - In - Charge/Authorised Inspection Agency.

The detailed Quality Assurance Plan (QAP) for manufacturing and testing of equipment shall be prepared by the Tenderer and submitted for approval by the Engineer - In - Charge/Authorised Inspection Agency.

2.3.9.2 Inspection and Testing

The material shall be inspected by the Engineer - In - Charge/Authorised Inspection Agency at manufacturer's works prior to dispatch. The material will be inspected as per the tests pre-identified in the approved QAP to ensure conformity of the same with relevant approved drawings, data sheets, technical specification, National / International Standard.

- ▶ The Tenderer shall furnish all relevant documents and test Certificates as required by the Inspection Agency during inspection.
- ▶ The Inspection Agency shall have the right to demand for re-testing of any material / re-calibration of the instrument and testing machine & the charges for the above will be borne by the Tenderer.
- ▶ Performance tests of any particular equipment which cannot be conducted / demonstrated either partially or wholly at the manufacturer's works, shall be conducted after erection at site in presence of Engineer - In - Charge/Authorised Inspection Agency. In such cases, prior approval of the Engineer - In - Charge shall be obtained.
- ▶ No equipment shall be dispatched before inspection and issue of Inspection Certificate and dispatch clearance from the Engineer - In - Charge/Authorized Inspection Agency.
- ▶ The issue of Inspection Certificate / Waiver Certificate for any material or part thereof does not absolve the Tendered from his contractual obligations towards subsequent satisfactory performance of the equipment at site. Should any equipment be found defective, in whole or part thereof after receipt at site or during erection / commissioning and testing shall be made good by the Tenderer at free of cost.

2.3.9.3 CABLE Installation

Contractor's scope of work includes unloading, laying, fixing, jointing, bending and terminating of cables. Contractor shall also supply all the necessary hardware for jointing and terminating of cables. Cables shall be laid directly, buried in earth, on cable trays and support in conduits and ducts or bare on walls, ceiling etc. as directed by employer's representative.

All cable work and the allied apparatus shall be designed and arranged to reduce the risk of fire and any floor of walling suitable bushes shall be supplied. If required by the employer, the bushes shall be sealed using fire resisting materials to prevent fire spreading.

Standing cable installation tools shall be utilized for cable pulling. Maximum pull tension shall not exceed manufactures recommended value. Cable grips, reels of pulleys used shall be properly lubricated. The lubricant shall not injure the overall covering and shall not set up undesirable conditions of electrostatic stress. Cable pulling shall permit performance of collateral work without obstruction.

Sharp bending and linking of cables shall be avoided. The bending radius for various types of cables shall be more than those.

Power and control cables shall be laid in separate cables trays. The order of laying of various cable in trenches and overhead trays shall be as specified below:

Cables of highest system voltage at the topmost tier with second highest voltage on the second tier from top, third highest on the third tier from top etc. with control instrumentation and other service cables in bottom most cable tier.

Where groups of HV and LV and control cables are to be laid along the same route, suitable barriers to segregate them physically shall be employed.

Where cables cross roads and water, oil, gas or sewage pipes the cables shall be laid in reinforced spun concrete pipes of space for future if more than one cable is to be laid through pipe. For road crossing the pipe for the cable shall be buried at not less than one metre depth.

Some extra length shall be kept in each cable run at a suitable point to enable one or two straight through joints to be made at a later date, if any fault occurs.

To facilitate visual tracing, cables in trays shall be laid only in single layers where design permits, cables shall be laid in proper sequence so as to avoid unnecessary crossing of other cables upon entering or leaving a run of tray. Cable splice shall to be permitted.

Cable jointing shall be accordance with relevant Indian Standard Codes of Practice and Manufacturer's special instructions. Materials and tools required for cable jointing work shall be supplied by contractor. Cables shall be firmly clamped on either side of a straight through joint at not more than 300 mm away from the joints. Identification tags shall be provided at each joint and at all cable terminations. Single core cable joints shall be marked so that phase identify at each joint can be determined easily. The joints shall be located at most suitable places. When two or more cables are laid together, joints shall be arranged to be staggered by about three meters. Before jointing, insulation resistance of both sections of cables to be jointed shall be checked.

Contractor shall install and connect the power, control and heater supply cables, for meters. Contractor shall be responsible for correct phasing of the motor power connections and shall interchange connections at the motor terminal box if necessary, after each motor is test run.

Metal sheath and armour of the cable shall be bonded to the earthing system of the station.

Cable clamps shall be minimum 3 mm thick and 25 mm wide galvanised MS flat spaced at every 1.0 m interval.

2.3.9.4 Cable Termination

- Cable termination shall include the following:
- Making necessary holes in bottom/top plates for fixing cable gland/box.
- Fixing cable gland/box, connecting armour clamp to cable armour.
- Dressing cable, pouring, compound etc. wherever necessary to make termination complete.
- Putting cable lugs, crimping them on to cores of cables, taping bare conductors up to lugs, wherever necessary.
- Termination to equipment terminals.
- Supply and fixing of cable and core identification ferrules.
- Wherever MS plates are not provided for fixing cable tray supports, Contractor shall install approved concrete fasteners and fixing cable tray supports.

2.3.9.5 Lightning protection for Building

The Building shall be protected from lightning strikes by providing adequate numbers of earth electrodes as per IS 3043. The lightning conductor finial shall be made of Copper, 25mm diameter tube, 1.5mtr length with 3 copper prongs and a base plate with holes for fixing. Necessary bi-metal shall be used for dissimilar materials. The down conductors for grounding shall be fixed using suitable clamps/clips, tapes, bolts, nuts, washers etc complete.

2.3.6. CONSTRUCTION, ERECTION, TESTING AND COMMISSIONING

2.3.10.1 General

The Tenderer shall keep a competent Technical Person experienced in similar works as Project-Manager and shall remain as overall in charge of Tenderer's work-site and also remain answerable to the Employer for all activities of the Tenderer at site. Before his placement at site, the Tenderer shall submit his resume to the Employer for his approval.

The Project-Manager shall supervise the work of all technical and specialized staff including all section in-charge who is associated with work at site and or at some outside place of fabrication for associated items; etc. He shall work in complete harmony and co-operation with Employer's engineers and manufacturer's engineers working at site. All statutory rules and labour laws prevailing in the area must be observed by the Tenderer. All safety measures against occurrence of accidents must be taken effectively. Project Manager shall not be withdrawn without written permission of the Employer. If any of the Tenderer's personnel is found unsuitable for the job, the Tenderer shall remove him forthwith and a suitable replacement shall be posted at site within a reasonable time without any suffering to work. No compensation for withdrawal of unsuitable or unqualified

person(s) from site or for posting suitable persons(s) to site at any stage of the project shall be allowed by the Engineer - In - Charge.

- ▶ The Tenderer shall execute the works in a professional manner so as to achieve the target schedule without any sacrifice on quality and maintaining highest standards of safety and cleanliness.
- ▶ The Tenderer shall co-operate with the Employer and any other Contractors'/Agencies working at site and arrange to perform his work in a manner so as to minimize interference with other Contractors'/Agencies works. The Engineer - In - Charge shall be notified promptly of any defect in other Contractor's /Agencies works that could affect the Tenderer's work. If rescheduling of Tenderer's work is requested by the Engineer in the interest of overall site activities, the Tenderer shall comply the same with. In all cases of controversy, the decision of the Engineer - In - Charge shall be final and binding on the Tenderer without any commercial implication.
- ▶ The Engineer - In - Charge may hold meetings of all the Tenderers /Agencies working at Site at a time and a place to be decided by the Engineer - In - Charge. The Tenderer shall attend such meetings if called upon to do so, take note of the decisions of the Engineer - In - Charge and shall strictly adhere to those decisions in performing his Work.
- ▶ The Tenderer shall be responsible for performance of his Work in accordance with the specified construction schedule. If at any time the tenderer is falling behind the schedule, he shall take necessary action to make good such delays by or otherwise accelerate the progress of the work to comply with the schedule and shall communicate such action in writing to the Engineer - In - Charge, satisfying that his action will compensate for the delay. The Tenderer shall not be allowed any extra compensation for such action.
- ▶ The works under execution shall be open to inspection and supervision by the Engineer - In - Charge at all times. The Tenderer shall give reasonable notice to the Engineer - In - Charge before covering up or otherwise placing beyond the reach of inspection any work in order that same may be verified, if so desired by the Engineer - In - Charge.
- ▶ The Tenderer shall comply with all the rules and regulations of the local authorities, all statutory laws including Minimum Wages, Workmen Compensation etc. All registration and statutory inspection fees, if any, in respect of the work executed by the Tenderer shall be to Tenderer's account.
- ▶ All the works such as cleaning, checking, levelling, aligning, assembling, temporary erection, opening, dismantling, surface and edge preparation, fabrication, machining, chipping, scraping, fitting-up, bolting / welding, etc., as may be applicable in such erection and are necessary to complete the work satisfactorily, are to be treated as incidental and the same shall be carried out by the Tenderer as part of the work.
- ▶ Equipment and material, which are wrongly installed, shall be removed and reinstalled to comply with the design requirement at the Tenderer's expense, to the satisfaction of the Engineer - In - Charge.
- ▶ Throughout the period of construction of the Works the Tenderer shall maintain the whole area of his operations in a clean, tidy and safe condition and shall arrange his materials in an orderly manner, all the satisfaction of the Engineer.

- ▶ All rubbish, wooden planks, cable's scrap, empty cable drums etc. shall be systematically cleared from the working areas and, if not removed directly from the Site, shall be deposited at general collecting points provided by the Tenderer and agreed with the Engineer - In - Charge, pending removal from the Site. Where practicable, screening shall be provided to prevent the ingress of dust and dirt to any part of the Works. The Tenderer shall clearly state, in the appropriate schedule, what provision is being made for disposal of waste materials both on and off-site.
- ▶ The Tenderer shall not cause pollution of the Site land drainage system or any water course by waste products from any source whatsoever. Whenever any pollution is attributable to any act or omission on the part of the Tenderer, the Tenderer shall clear the pollution as soon as possible and make early arrangements to remedy the cause.
- ▶ The Tenderer shall make himself familiar with all statutory requirements relating to the discharge of effluent from the Plant and shall take all steps to ensure that these are not contravened by the disposal of effluent from the site. No dangerous or noxious waste products, chemicals or materials shall be disposed of, on or off the Site without proper treatment to make the quality comply with environmental regulation.
- ▶ The Tenderer shall take all necessary measures to ensure the safe collection and disposal of waste oils pertaining to those Works or plant for which he has responsibility and to ensure the prohibition of any discharge of waste oils into surface waters, ground waters or drainage systems of any kind and any deposit and/or discharge of waste oils on to the ground or floors of buildings and any uncontrolled discharge of residues resulting from the processing of waste oils or the cleaning of oil contaminated surfaces with solvents.
- ▶ In the event that the Tenderer fails to comply with the above, the Employer reserves the right to carry out such work on his behalf and to recharge accordingly.
- ▶ Damage to Public or Existing Site Roads
- ▶ The Tenderer shall carry out all repairs to damage to roads, drains, footways, paved areas, boundary walls and fences etc. and clean all fouled roads and paving etc., whether public or existing at site, caused by or in any way attributable to the handling/transport of plant or materials by the Tenderer or any Sub-contractor and indemnify the Employer against loss damage or claims by the Local Authority or others for damage to or fouling of roads, paving etc., by reason of unusual traffic or other causes.
- ▶ Cleanliness of Public or Existing Site Roads. The Tenderer shall at all times ensure that the public roads, giving access to site, are kept clean of any materials deposited by traffic from the Tenderer or his subcontractors. The tenderer shall also ensure dust suppression of site roads.
- ▶ The tenderer shall be responsible for the Watch and ward to ensure security and safety of materials under the Tenderer's custody.

2.3.10.2 ERECTION, TESTING & COMMISSIONING

2.3.10.2.1 General

The tenderer shall furnish all labour, supervision, consumable materials, tools and tackle and services necessary for receiving, unloading and storing, transportation pre-assembly at site, if required, complete erection, testing and commissioning of all items included to complete the plant unit as specified in the specification.

Omission of any specific reference to any method, parts, accessories or materials required for proper and efficient execution of the work shall not, in any way relieve the Tenderer from his responsibilities from providing such facilities and performing the complete erection, testing and commissioning at no extra cost to the Employer & without any time over-run.

2.3.10.2.2 Equipment, Material, & Services to be provided by the Tenderer

- ▶ Receiving of materials.
- ▶ Transportation / shifting of unloaded material to storage area.
- ▶ Proper stacking and storing of materials under Tenderer's custody.
- ▶ Checking of all materials with shipment list/consignment note, reporting for missing or damaged items, repairing damages and cleaning before erection, claiming from insurance agencies etc. Preservation of plant & equipment at storage area/ site.
- ▶ Issue of materials from stores and maintaining detail account of the same as required.
- ▶ Transportation / shifting of material from stores to erection site.
- ▶ Final adjustment of foundation levels by chipping and dressing, checking location, elevation etc. of anchor bolts and grouting of anchor bolts and base-plates.
- ▶ Pre-assembly at site after proper checking / overhauling as required.
- ▶ Erection and subsequent cleaning/flushing as required, re-commissioning check to ensure correctness of erection.
- ▶ Testing and commissioning services as required.

2.3.10.2.3 Man / Material supply

The Tenderer shall furnish all labour (supervisory, skilled, unskilled and administrative), all consumable materials, transport vehicles, mobile cranes, other lifting devices, hydraulic jacks, all erection tools, tackles and equipment, precision levels including micro levels, dial and other gauges, surface plates, straight edges, special tools like hydraulic crimping tools, blowers, cable rollers, jack all other necessary implements such as shuttering materials in sufficient numbers as may be required for timely and efficient execution of the contract. The materials supplied shall be of the best quality, the specification and quality of which have to be as per agreement and or otherwise added by the Engineer - In - Charge.

2.3.10.2.4 Supervision during Erection

The Tenderer shall be required to provide, at proper time, the necessary supervisory engineers, supervisors and other supervisory personnel duly qualified and in sufficient number for transportation, erection, pre-commissioning and post commissioning check-up, start-up, trial operation, testing and commissioning of yard / plants and equipment.

2.3.10.2.5 Sequence of Erection work

All packing cases and packages shall be opened in presence of the Engineer - In - Charge or his authorized representative. Timber packing cases shall be carefully opened to avoid damage to materials or timber. Nails and packing strips should be pulled out with suitable appliances and kept separately in a container and not thrown away at random. All timber of packing cases shall have to be sorted out and stored properly at a suitable place as directed by the Engineer - In - Charge. From time to time packing materials, timber, nails and strips shall be delivered back to the Engineer - In - Charge or otherwise disposed of as directed by the Engineer - In - Charge. The timber reclaimed from the packing cases or any other material shall not be used by Tenderer for rendering facility in the erection work or any other job without prior permission of the Engineer - In - Charge. All timber and packing materials shall remain the property of the Engineer - In - Charge.

Each material after stripping from boxes or received loose, shall be carefully inspected, checked with shipping list and identified with erection drawing if necessary. The Tenderer shall be completely responsible to make all necessary arrangements, application and follow procedure to process claim on underwriters, obtain replacement/repair/rectify and modify as required of all such damaged/defective/lost equipment and material at no extra cost to the Engineer - In - Charge in order to execute the work in satisfaction to the Engineer - In - Charge within the stipulated contract time.

Once the materials are inspected, the same shall be preserved properly and adequately protected from theft and deterioration or damage due to rain, storm, dust, and water, tampering by causal visitors or workers. The Tenderer shall prepare and maintain stores, ledgers and bin cards for all materials in his custody.

Carrying out all repairs to damages that might have occurred during transit and in subsequent storage or handling and modifications and rectification work and replacement of all lost parts, are under the Tenderer's Scope. All modifications and rectification work and replacement shall be carried out in the presence of Engineer - In - Charge.

2.3.10.2.6 Erection

- Erection work shall be carried out in the manner and sequence as may be directed by respective equipment manufacturer's supervisory engineers and the Engineer - In - Charge. The work shall be carried out as per applicable specifications, codes of practice including drawings and instructions of Engineer - In - Charge where applicable.

- ▶ As erection proceeds each assembled part before being boxed up with a view to erecting it finally shall be inspected and approved by the concerned supervisor. Should any defect be found out during such inspection, the Tenderer shall make it good as per directives from Engineer - In - Charge.
- ▶ The equipment shall be placed on respective foundation or support, levelled and aligned with precision measuring instruments, checked for proper clearance between moving and stationary parts wherever applicable and grouted on the foundation.
- ▶ All fabrication and engineering work incidents to erection like scaffoldings, structural forming for pre-assembly, transport and erection etc. shall have to be done by the Tenderer at his own cost. The structural steel required for such work shall be arranged by the tenderer. Also, any fabrication work like cutting, grinding, welding, fitting up etc. which in the opinion of the Employer are incidental to the erection at site shall have to be done by the tenderer. Any defect in the fabrication shall have to be rectified by the Tenderer at his cost without any commercial/contractual implication.
- ▶ Particular attention shall be given towards removal of buckles and other forms of distortion.
- ▶ Holes in plate work to assist in erection should be avoided. Lugs required for erection shall be removed and projections of weld shall be chipped and ground flush.
- ▶ All equipment shall be safe guarded from wind or other external causes by providing suitable steel cables/guys until completion of erection.
- ▶ Welding sequence shall be adopted in such a way so as to minimize distortion due to weld shrinkage and shall be got approved from the Employer prior to commencement of work.
- ▶ Welding shall not be carried out on wet surfaces and shall be protected from high winds/rains water.
- ▶ All materials such as electrodes, gaskets, bolts, nuts, etc. shall be of reputed make and conforming to relevant Indian Standards. Prior approval of Engineer - In - Charge shall have to be obtained before commencement of work. Manufacturer's test certificate shall have to be provided when called for.

2.3.10.2.7 Equipment Installation & Workmanship

The equipment installation and workmanship shall be as follows:

ASSEMBLY OF EQUIPMENT

- ▶ Units, which due to weight, size or other consideration arrive in a disassembled state, shall be assembled at site.
- ▶ Protection of equipment from damage, dust and exposure to corrosive factors shall be a prime consideration throughout the period of installation, commissioning and final handling over to Engineer - In - Charge.

- ▶ Prior to installing equipment, related work of other trades shall be inspected to ensure that anchor bolts, inserts, sleeves, openings, foundations etc. are provided at the proper time and in the correct locations and at the correct level.

LUBRICATION

- ▶ The Tenderer shall be responsible for the lubrication requirements of all equipment from the initial run to final lubrication before handing over to Engineer - In - Charge. All lubrications shall be supplied by the tenderer for the equipment supplied by them.
- ▶ Equipment shall be lubricated in accordance with manufacturer's recommendation.
- ▶ Bearings for driving and driven equipment shall be checked and lubricated in accordance with the manufacturer's instructions.
- ▶ All packing, glands and flange joints shall be checked and tightened as necessary during trial runs and commissioning. Should any packing or gasket or gland require renewal or replacement during the period, such renewals shall be made by the Tenderer from the materials to be supplied by him.

SAFETY REGULATIONS

- ▶ Only scaffolds which meet the requirements of any governing laws shall be used in the projects.
- ▶ All burning and welding equipment shall conform to, and be used in accordance with, regulations governing such equipment. No burning or welding shall be done at any place on the site until location where such work is to be done is approved. Welding near/at/in hazardous areas (like gas/oil etc.) shall be done only after having all the fire protection/fighting equipment at hand.
- ▶ Adequate fire protection shall be available before work shall proceed.
- ▶ All warning signs shall be observed.
- ▶ Use of explosives shall comply with all regulations.
- ▶ Tenderer shall require his employees/staff/ workers to wear hard hats of ISI mark at all times at the site of work.
- ▶ Goggles shall be worn whenever there is a possibility of flying particles or splashing corrosive fluid and during the gas cutting and welding.
- ▶ Safety belts shall be used by men working in high places (above 3mtrs high).
- ▶ Any loose materials like cotton/jute/oiled clothes etc. shall not be thrown hither and thither but dispose to safe places to avoid any accident/fire etc.

- ▶ Tenderer shall be solely responsible for the dissemination of all safety regulations including those written here, those promulgated by Employer and those dictated by good practice, and shall ensure that all his employees and those of his subcontractors and conversant with same.

INSPECTION

- ▶ All works to be carried out by the Tenderer shall be subjected to inspection by the Engineer - In - Charge as well as statutory authorities. The Tenderer shall provide necessary facilities, instruments, personnel etc. for carrying out the inspection as above shall comply with the instructions given.
- ▶ After completion of erection and/or installation and before start-up, each item and equipment and all its appurtenances shall be thoroughly cleaned and then, inspected in the presence of Engineer - In - Charge for correctness, soundness and completeness of installation and acceptability for start-up.
- ▶ A checklist in triplicate shall be furnished for the approval of Engineer in-charge wherein all items to be checked and necessary instructions shall be listed. Inspection and checking shall strictly follow this checklist. On conclusion of the Joint Inspection and checking (2) copies of the inspection report shall have to be handed over to the Engineer - In - Charge. The report shall have to be jointly signed by the Tenderer's supervisor and the Engineer - In - Charge to ensure that all inspection and checking have been properly carried out. However, such endorsement by Engineer - In - Charge shall not relieve the tenderer from the responsibility in ensuring proper erection/installation.

PRE-COMMISSIONING TEST

- ▶ After verification of correct installation, Plant/ equipment material shall be subject to a program of pre-commissioning tests. All equipment including tools, tackles, instruments, test kits etc. and required manpower shall be made available by the tenderer. Pre-commissioning tests shall include operational and functional tests, measurement of parameters such as IR values/ Earthing resistance etc, relay/ meter calibration, high voltage tests etc. the list of pre-commissioning tests shall be prepared by tenderer and got approved by Engineer - In - Charge.
- ▶ The tenderer shall prepare test records for each equipment and after conclusion of tests, it shall be his responsibility to prepare required copies of test records and get them counter signed by the Engineer - In - Charge.
- ▶ Any defects brought to light during these tests shall be recorded in the test records and Tenderer shall rectify the same.

START- UP (PRE- COMMISSIONING)

- ▶ On completion of erection of the equipment material and before the start-up, equipment shall be inspected by the Engineer - In - Charge and the Tenderer for correctness and completeness of installation and acceptability of start-up, tending to initial pre-commissioning tests at site. The list of pre-commissioning tests to be performed shall be as mutually agreed and included in the Tender's quality assurance programme.

- ▶ The Tenderer's Engineers for commissioning and start-up specifically identified shall carryout all the pre-commissioning tests at site. On completion of inspection, checking and after the pre-commissioning tests are satisfactorily over, the complete equipment shall be placed on initial operation during which period the complete equipment shall be operated integral with sub-systems and supporting equipment on no load, on successful completion of which the Employer will issue Preliminary Acceptance Certificate.

COMMISSIONING

- ▶ The plant/ Electrical equipment material as a whole shall be charged up after rectification of all defects noticed during the site inspection/ Pre-commissioning tests and after tenderer has obtained approval from statutory bodies for the installation, If required, the system may be charged up in parts and for short duration of time to establish the correctness/ healthiness of the equipment material. These shall be deemed as trial runs of the equipment.
- ▶ The complete installation shall be deemed to have been commissioned successfully if the entire installation operates without any defect for a continuous period of 72 hours over any period of 6 (Six) days. Any defects brought to light during the test run of 72 hours shall be rectified by the tenderer.
- ▶ The tenderer shall maintain records of the measurements, minor repairs carried out the trial run of the Plant/ continuous test run of the plant and get the same certified by Employer. Required copies of these tests-records shall be submitted by the tenderer.
- ▶ After successful commissioning including of defects, submission of test reports/ records, submission of O&M manuals etc., the plant system/ work will be taken over by the Engineer - In - Charge and will operated by the Engineer - In - Charge expect otherwise mentioned in the project B.O.Q. and or in other conditions.
- ▶ Final Acceptance Certificate will be issued by the Engineer - In - Charge on successful commissioning and after the tenderer has completed all his obligations.

2.3.11.1 Post-Contract Stage Document Submission and Approval Procedure

The Tenderer shall furnish a comprehensive and detailed schedule of drawings and design documents, which shall be submitted by him after award of contract indicating submission dates against each document. The list shall be subject to the approval of the Employer / Consultant.

The documents shall be divided into two categories:

- ▶ For approval
- ▶ For information/reference only

In preparing this schedule, the Tenderer shall allow four (4) weeks from date of receipt for review and comments by the Employer/Consultant for each submission of a document.

This schedule of drawing and design document submission shall require approval by the Employer/Consultant before award of Contract.

Minimum three sets of drawings / documents are to be submitted unless specified otherwise.

The successful Tenderer shall supply the following drawings/ documents in 03 (three) sets at the time of delivery of major equipment along with soft copies of all the approved drawings/ reference drawings and documents in a CD.

- ▶ All final GA drawings / Shop drawings and complete assembly and sub-assembly drawings of the equipment supplied.
- ▶ Drawings of all equipment received from sub-suppliers.
- ▶ Operation and maintenance manuals.
- ▶ Detailed manufacturing drawings of all fast wearing and spare parts along with complete specifications, sketches and manufacturers catalogue.
- ▶ Test reports and inspection reports (at the time of inspection).
- ▶ Detailed erection schedule and manuals, assembly erection drawings, erection sequence, special precautions to be followed during assembly/erection.
- ▶ Instruction manuals for testing and commissioning.
- ▶ Safety manuals and requirement of special tools and tackles for subsequent inspection/maintenance.
- ▶ Unless specified otherwise, the following categories of documents shall require approval of the Employer:-
- ▶ Layout showing plan, elevation and other views.
- ▶ System scheme/configuration drawings,
- ▶ Design basis
- ▶ Make for major bought-out items
- ▶ Equipment data sheets and general arrangement drawings
- ▶ Single line diagrams
- ▶ Typical control schemes
- ▶ Protection schemes

Unless specified otherwise, the following categories of documents/ drawings would be treated for information / reference only. The Tender shall, however, incorporate all additional information and clarifications in these documents/drawings as and when desired by the Employer / Consultant.

- ▶ Equipment foundation drawings and table of design loads / forces considered for civil design.

- ▶ Equipment cross-section drawings, product literature etc. which are of proprietary nature.
- ▶ Panel wiring diagrams
- ▶ Instructions / Operation manuals
- ▶ Service manuals and trouble-shooting guide Cable schedule and interconnection chart.
- ▶ feeder wise control scheme showing all external interfaces.

2.3.11.2 Operating Manuals and Maintenance Instructions

- ▶ The Tenderer shall submit to the Employer, instruction manuals for all equipment / system / material covered under the contract at least thirty (30) days before the first dispatch of the equipment.

The operating manuals and maintenance instructions shall be in sufficient detail to enable the Employer to operate, maintain, dismantle, re-assemble, adjust or replace all equipment and components during the life time of the plant. The manuals shall be specifically prepared for the contracted plant. Only a collection of manufacturer's standard leaflets shall not be acceptable as the manuals.

- ▶ The operating manuals and maintenance instructions manual shall be submitted in the form of one (1) reproducible original and two (2) copies.
- ▶ The information provided shall include:
 - ▶ A complete inventory of all items of plant, with identification details; procedure for ordering spares.
 - ▶ Service manuals for equipment giving full descriptions, drawings and specifications of the main items and auxiliary items.
 - ▶ A schedule of recommendations of routine maintenance of all electrical equipment, recommended inspection point, information on detection, cause and rectification of troubles and faults
 - ▶ Manufacturer's literature.
- ▶ The instruction manuals shall be subject to the approval of Employer.
- ▶ If after the commissioning and the initial operation of the plant, the instruction manuals require modifications/additions, the same shall be incorporated by the Tenderer and the updated final version of the manuals shall be submitted

2.3.11.3 "As- Built" Document

The Tenderer shall provide and keep up to date "As built drawings" of all works including civil and structural works constructed and all equipment and accessories and miscellaneous metal works erected or installed. These drawings shall show all changes and revisions from the original drawings and specifications, including the exact "As-built" locations, sizes and kinds of equipment and accessories, miscellaneous metal works, embedded piping and electrical systems and other concealed items of work. These drawings shall be kept in

Tender's field office but shall be made available at all times for review of the Engineer. At the end of every work, all entries, changes or revisions made in the drawings by the Tenderer shall be checked and approved by the Engineer.

One soft copy of all Drawings in CD's and Reproducible prints with requisite copies of all "As-built" drawings shall be progressively handed over to the Employer after taking over of the plant by the Employer.

2.3.11.4 Project Handbook

The Tenderer shall submit to the Employer, a project handbook which shall contain all approved design basis and design calculations, the design and performance data of various plant, equipment and systems covering the complete project including single line diagrams, etc. prior to handing over the plant.

The project handbook shall be submitted in three (3) copies in original and Compact Disks (CDs)

3. Employer's requirements

3.1. CONTRACTOR'S SUPERINTENDENCE

The Contractor shall submit a Staff Organisation Plan in accordance with the GCC. This plan shall be updated and resubmitted whenever there are changes to the staff. The plan shall show the management structure and state clearly the duties, responsibilities and authority of each staff member.

The site agent and his associates/supervisors shall have experience and qualification appropriate to the type and magnitude of the Works. Full details shall be submitted of the qualifications and experience of all proposed staff to the Engineer for his approval.

3.2. CHECKING OF THE CONTRACTOR'S TEMPORARY WORKS DESIGN

The Contractor shall, prior to commencing the construction of the Temporary Works, submit a certificate to the Engineer signed by him certifying that the Temporary Works have been properly and safely designed and checked and that the Contractor has checked the effect of the Temporary Works on the Permanent Works and has found this to be satisfactory.

3.3. THE SITE

Works Areas are those listed in scope of works. Or additional sites as instructed by site in charge

3.4. USE OF THE SITE

The Site or Contractor's Equipment shall not be used by the Contractor for any purpose other than for carrying out the Works in the scope of this contract, except that, with the consent in writing of the Engineer, the Site or Contractor's Equipment such as batching and mixing plants for concrete may be used for the work in connection with other contracts under the Employer.

ACCESS TO THE SITE

The Contractor shall make its own arrangements, subject to the consent of the Engineer, for any further access required to the Site.

In addition, the Contractor shall ensure that access to every portion of the Site is continually available to the Employer and Engineer.

3.5. ACCESS TO OUTSIDE THE SITE

The Contractor shall be responsible for ensuring that any access or egress through the Site boundaries are controlled such that no disturbance to residents or damage to public or private property occur as a result of the use of such access or egress by its employees and sub-contractors.

3.6. SURVEY OF THE SITE

A survey shall be carried out of the Site to establish its precise boundaries and the existing ground levels within it. Survey sufficient to provide a full record of the state of the Site before commencing the work with particular attention paid to those areas where reinstatement will be carried out later on. The survey shall be carried out before the site clearance wherever possible. The survey shall be carried out by the Contractor and agreed with the Engineer.

3.7. BARRICADES AND SIGNBOARDS

The Contractor shall erect barricades as per site requirements to cover the work sit completely from public with gates. It should be sufficient to prevent entry by unauthorised persons to his Works Areas and necessary identity cards /permits should be issued to workers and staff by the contractor. The Contractor shall submit proposal for barricades of the complete perimeter of all works areas to the Engineer. Painting of the barricades shall be carried out to the design and colours as directed by the Engineer and the Contractor shall carry out re-painting of the entire barricades on an annual basis. No work shall be commenced in any Works Area until the Engineer has been satisfied that the barricades installed by the Contractor are sufficient to prevent, within reason, unauthorised entry. The cost of this entire barricade is included in quoted price.

Project signboards shall be erected not more than four (4) weeks, or such other period as the Engineer has given his consent, after the date of commencement of the Works. The types, sizes and locations of project signboards shall be agreed with the Engineer before manufacture and erection. Other advertising signs shall not be erected on the Site.

The consent of the Engineer shall be obtained before hoardings, fences, gates or signs are removed. Hoardings, fences, gates and signs which are to be left in positions after the completion of the Works shall be repaired and repainted as instructed by the Engineer.

Hoardings, barricades, gates and signs shall be maintained in clean and good order by the Contractor until the completion of the Works, whether such hoardings, fences, gates and signs have been installed by the Contractor or by others and transferred to the Contractor during the period of the Works. All the fencing, hoardings, gates and signs etc. shall be mopped minimum one in a week and washed monthly.

All hoardings, barricades, gates and signs installed by the Contractor shall be removed by the Contractor upon the completion of the Works, unless otherwise directed by the Engineer.

Hoarding/ barricades can be reused after removing from one place to other locations / sites provided they are in good condition and approved by Engineer.

Damage/worn-out barricades /hoarding shall be replaced by contractor within 24 hours. Engineer 's decision regarding need for replacement shall be final and binding and if no action is taken by contractor,

the Engineer may get it repaired through other agency and the cost of any repairs will be deducted by the Engineer from any payment due to the Contractor.

3.8. CLEARANCE OF THE SITE

All Temporary Works which are not to remain on the Site after the completion of the Works shall be removed prior to completion of the Works or at other times instructed by the Engineer. The Site shall be cleared and reinstated to the lines and levels and to the same condition as existed before the Works started except as otherwise stated in the Contract.

3.9. SAFETY, HEALTH AND ENVIRONMENTAL REQUIREMENTS

The Contractor shall comply with in the conditions stipulated in the Conditions of contracts on Safety, Health & Environment (SHE).

3.10. OTHER SAFETY MEASURES

Site Safety, Health & Environment Plan

The Contractor shall, within 30 days of the date of Notice to Proceed, prepare and submit to the Engineer for review his proposed safety, Health and Environment plan which shall contain as a minimum those items set out in Conditions of Contract on Safety, Health & Environment Plan.

Fire Regulations and Safety

The Contractor shall provide and maintain all necessary temporary fire protection and firefighting facilities on the Site during the construction of the Works, and shall comply with all requirements of the Kerala Fire Services Department. These facilities may include, without limitation, sprinkler systems and fire hose reels in temporary site buildings, raw water storage tanks and portable fire extinguishers suitable for the conditions on the Site and potential hazards.

The Contractor shall submit details of these facilities to the Engineer for review prior to commencement of work on the Site.

If, in the Engineer's opinion, the use of naked lights may cause a fire hazard, the Contractor shall take such additional precautions and provide such additional firefighting equipment (including breathing apparatus) as the Engineer considers necessary. The term "naked light" shall be deemed to include electric arcs and oxyacetylene or other flames used in welding or cutting metals.

Oxyacetylene burning equipment will not be permitted in any confined space. Burning equipment of the oxypropane type shall be used.

3.11. Hazard and Risk Assessments

The Contractor shall, prior to the commencement of any operation carry out a detailed hazard and risk assessment. The results of such assessments shall be recorded and the records kept for inspection by the Engineer.

The Contractor shall produce detailed method statements for all medium and high risk operations and shall submit them to the Engineer for his consent prior to commencement of any task to which they relate.

The Contractor shall produce and implement a Permit to Work system for all high risk operations. The Permit to Work system shall be submitted to the Engineer for consent before application.

3.12. Explosives

Explosives shall not be used without prior written consent of the Engineer. Before consent to blasting is granted, the Contractor shall prepare a Specification as to the size of charge, the method of firing and any other restrictions that may be imposed from time to time.

Where the Engineer has consented to the use of explosives, the Contractor shall be responsible for obtaining the requisite licences and permits for complying with all statutory requirements for blasting.

The storage, transportation and use of explosives shall at all times be governed by the Explosives Acts and such other statutory regulations which may be applicable and as imposed by the Statutory Authorities.

3.13. Standby Equipment

The Contractor shall provide adequate stand-by equipment to ensure the safety of personnel, the Works and the public. These measures shall include as a minimum the following:-

stand-by pumping and generating equipment for the control of water;

stand-by equipment and spares for illumination of the Works; and

Stand-by generating equipment and equipment for the lighting for the works.

3.14. CARE OF THE WORKS

Unless otherwise permitted by the Engineer all work shall be carried out in dry conditions.

The Works, including materials for use in the Works, shall be protected from damage due to water. Water on the Site and water entering the Site shall be promptly removed by temporary drainage or pumping systems or by other methods capable of keeping the Works free of water. Silt and debris shall be removed by traps before the water is discharged and shall be disposed of at a location or locations to which the Engineer has given his consent.

The discharge points of the temporary systems shall be as per the consent of the Engineer. The Contractor shall make all arrangements with and obtain the necessary approval from the relevant authorities for discharging water to drains, watercourses etc. The relevant work shall not be commenced until the approved arrangements for disposal of the water have been implemented.

The methods used for keeping the Works free of water shall be such that settlement of, or damage to, new and existing structures do not occur.

Measures shall be taken to prevent flotation of new and existing structures.

3.15. PROTECTION OF THE WORKS FROM WEATHER

Work shall not be carried out in weather conditions that may adversely affect the Works unless proper protection is provided to the satisfaction of the Engineer.

Permanent Works, including materials for such Works, shall be protected from exposures of weather conditions that may adversely affect such Permanent Works or materials.

During construction of the Works storm restraint systems shall be provided where appropriate. These systems shall ensure the security of the partially completed and ongoing stages of construction and in all weather conditions. Such storm restraint systems shall be installed as soon as practicable and shall be compatible with the right of way, or other access around or through- out the Site.

The Contractor shall at all-time programme and order progress of the work and make all protective arrangements such that the Works can be made safe in the event of storms.

3.16. TREES

The felling of trees in the Kerala is governed by the Social Forestry Act. The Contractor is not permitted to cut any trees without the permission of the Employer. The Employer will assess the number of trees existing within the right-of-way and will arrange permission from Forest Department cutting back or removal of trees which are deemed to be affected by the right of way (i.e. within the limits of permanent works) construction works. The trees requiring to be felled will be removed from ground level up by the Contractor prior to commencement of the works. The Contractor will not be permitted to cut or remove any further trees. If for the purposes of the works additional trees are required to be cut/trimmed or removed, the Contractor must notify the Engineer of further tree felling requirements. Subject to compliance with the aforementioned act, arrangements for permission from Forest Department for tree felling may be made by the Employer. The payment of tree cutting, removal, transportation required in this item shall be paid as per relevant head of BOQ.

3.17. REMOVAL OF GRAVES AND OTHER OBSTRUCTIONS

If any graves and other obstructions are required to be removed in order to execute the Works and such removal has not already been arranged for, the Contractor shall draw the Engineer's attention to them in good time to allow all necessary arrangements and authorisations for such removal, and it shall not itself remove them unless the Engineer has given consent.

PROTECTION OF THE ADJACENT STRUCTURES AND WORKS

The Contractor shall take all necessary precautions to protect the structures or works being carried out by others adjacent to and, for the time being, within the Site from the effects of vibrations, undermining and any other earth movements or the diversion of water flow arising from its work.

- **USE OF ROADS AND FOOTPATHS**

Public roads and footpaths on the Site in which the work is not being carried out shall be maintained in a clean and passable condition.

Measures shall be taken to prevent the excavated materials, silt or debris from entering gullies on roads and footpaths; entry of water to the gullies shall not be obstructed.

Surfaced roads on the Site and leading to the Site shall not be used by tracked vehicles unless protection against damage is provided.

Contractor's Equipment and other vehicles leaving the Site shall be loaded in such a manner that the excavated material, mud or debris will not be deposited on roads. All such loads shall be covered or protected to prevent dust being emitted. The wheels of all vehicles shall be washed when necessary before leaving the Site to avoid the deposition of mud and debris on the roads.

- **REINSTATEMENT OF PUBLIC ROADS AND FOOTPATHS**

Temporary diversions, pedestrian access and lighting, signing, guarding and traffic control equipment shall be removed immediately when they are no longer required. Roads, footpaths and other items affected by temporary traffic arrangements and control shall be reinstated to the same condition as existed before the work started or as permitted by the Engineer immediately after the relevant work is complete or at other times permitted by the Engineer.

The Contractor shall submit his design for the reinstatement to the relevant authorities and obtain their prior approval to carrying out the work. Reinstatement works shall include:

Parking bays

Footpath and kerbs

Road Signage

Street Lighting

Landscaping

Traffic Lights and Control Cable

Road painting

3.18. DRAWINGS

The List of Drawings will be uploaded along with this bid document.

Serial Number	Drawing name	Drawing number
1	TOILET COMPLEX AT NEHRU PARK	CSML/M7/SWS/NP-PT/AR-001
2	TOILET COMPLEX AT MATTANCHERY BUS STOP	CSML/M7/SWS/MBS-PT/AR-001
3	TOILET COMPLEX AT FORT KOCHI BEACH AREA	CSML/M7/SWS/FKB-PT/AR-001
4	TOILET COMPLEX AT FORT KOCHI HOSPITAL	CSML/M7/SWS/FKH-PT/AR-001
5	TOILET COMPLEX RENOVATION AT MATHER BAZAR	CSML/M7/SWS/EBW-PT/AR-001
6	PLUMBING DRAWING NEHRU PARK	CSML/M7/SWS/NP-PT/PD-001
7	PLUMBING DRAWING MATTANCHERRY BUS STOP	CSML/M7/SWS/MBS-PT/PD-001
8	PLUMBING DRAWINGS FORT KOCHI BEACH	CSML/M7/SWS/FKB-PT/PD-001
9	PLUMBING DRAWINGS FORT KOCHI HOSPITAL	CSML/M7/SWS/FKH-PT/PD-001
10	TYPICAL ELECTRICAL LAYOUT	CSML/M7/SWS/MBS-PT/TEL-001
11	TYPICAL RAIN WATER HARVESTING DETAILS	CSML_M01_RWH_TYP_DWG001

General Conditions of Contract (GCC)

4. General Conditions of Contract (GCC)

4.1. General Conditions

4.1.1. DEFINITION AND INTERPRETATION

In the contract, unless the context otherwise requires:

- 1) "Acceptance of Tender" means the letter or memorandum communicating to the Contractor the acceptance of his tender.
- 2) "Consignee" means where the equipment is required by the acceptance of the tender to be dispatched by rail, road, air or streamer, the person specified in the Acceptance of tender to whom they are to be delivered at the destination.
- 3) "Contract" means and includes Tender Invitation, Instructions to Tenderers, Tender, Acceptance of Tender, General Conditions of Contract, Special Conditions of Contract, schedule of Requirements, Technical Specification and Annexures particulars and the other conditions specified in the acceptance of tender, and amendments.
- 4) The "Contractor"/Bidder/Tenderer" means the person, firm or company with whom the order of the supply is placed/participated/intend to participate in the tender.
- 5) "Drawing" means the drawing or drawings specified in or annexed to the specification.
- 6) The "Inspecting Officer" means the person/team of CSML specified in due course of time for the purpose of inspection of equipment and includes his/their authorized representatives.
- 7) "Particulars" include:-
- 8)
 - a) Specifications
 - b) Drawings
 - c) "Proprietary mark" or "brand" means the mark and brand of the product which is owned by an industrial firm;

- d) Any other details governing the construction, manufacture or supply of stores as may be prescribed by the contract.
- 9) "Inspection Test" means such test or tests as are prescribed by the specifications to be made by the Purchaser / Employer or his nominee during installation, and commissioning.
 - a. "Purchase Officer" means the officer signing the acceptance of tender and includes any officer who has authority to execute the relevant contract on behalf of the Purchaser / Employer;
 - b. The "Purchaser / Employer" means Cochin Smart Mission Limited (CSML).
 - c. "Signed" includes stamped, except in the case of acceptance of tender or any amendment thereof;
 - d. "Site" mean the Locations as specified in the technical specifications at which equipment is required to be delivered /installed by the Contractor under the contract or any other place approved by the Purchaser / Employer for the purpose in Kochi
 - e. "Equipment" means the goods in the contract, which the Contractor has agreed to supply under the contract;
 - f. "Test" means such test as is prescribed by the particulars or considered necessary by the CSML whether performed or made by the Inspecting Officer or any agency acting under the direction of the Inspecting Officer.
 - g. "Work" means all the work specified or set forth and required in and by the said specifications, drawings and "technical Specifications / schedule of Requirements", hereto annexed or to be implied there from or incidental thereto, or to be hereafter specified or required in such explanatory instructions and drawings (being in conformity with the said original specifications, drawings and technical Specifications / "Schedule of Requirements").
 - h. The delivery of the equipment shall be deemed to take place in accordance with the terms of the contract, after approval by the Inspecting Officer /team from CSML /its representatives the consignee
 - i. "Writing" or "Written" includes matter either in whole or in part, in manuscript typewritten, or printed as the case may be.
 - j. Terms and expression not herein defined shall have the meanings assigned to them in the

Indian Sale of Goods Act, 1930 or the Indian contract Act, or the General Clauses act, 1897 as the case may be.

- k. "Facilities" means the Equipment to be supplied and installed as well as all the Installation Services to be carried out by the Contractor under the Contract.
- l. "Purchaser / Employer" means the person named as such in the Tender Document and includes the legal successors or permitted assigns of the Purchaser / Employer.

4.1.2. CONTRACT DOCUMENTS:

Subject to Article Order of Precedence of the Contract Agreement all documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract document shall be read as a whole.

4.1.3. SEVEREABILITY:

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

4.1.4. CONTRACTOR'S RESPONSIBILITIES

- a. The Contractor/Bidder shall execute, deliver, supply, commission, and carry out defect liability period (DLP) with due care and diligence in accordance with the Contract.
- b. The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Facilities provided by the Purchaser / Employer; The Contractor acknowledges that any failure, to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Facilities.
- c. The Contractor shall comply with all laws in force in India. The laws will include all local, state, national or other laws that affect the performance of the Contract and bind upon the Contractor.

The Contractor shall indemnify and hold harmless the Purchaser / Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel.

4.1.5. CONFIDENTIAL INFORMATION

2.1 The Purchaser / Employer and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party, any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract.

2.2 The Contractor shall not use such documents, data and other information received from the Purchaser / Employer for any purpose other than the design, procurement of Plant and Equipment, construction or such other work and services as are required for the performance of the Contract.

2. CONTRACT

2.1 This contract is for the supply, install, commissioning of the work, specifications and drawings, and in the quantities set forth in the contract on the date or dates specified therein.

2.2 The whole contract is to be executed in the most approved, substantial and workmanship manner, to the entire satisfaction of the Purchaser / Employer or his nominee, who, both personally and may his deputies, shall have full power, at every stage of progress, to inspect the work / equipment at such times as he may deem fit and to reject any of the equipment which he may disapprove.

3. PERFORMANCE BANK GUARANTEE

2.1 The successful bidder shall furnish a Performance Bank Guarantee (PBG) valid upto 60 days

beyond the completion of Defect liability period from a Scheduled Commercial Bank, payable at a designated bank branch located in Kochi within 28 days from the receipt of LOA/ purchase order of the tender for an amount equivalent to 10% of the value of the LOA.

2.2 Failure to submit PBG within 28 days from the LOA / purchase order will attract LD of 0.5% per week of the total LOA subject to maximum of 10% of the LOA value, after which the contract will be deemed to be cancelled.

2.3 The Purchaser / Employer shall be entitled on his part to forfeit the amount of the Performance Bank Guarantee in whole or in part in the event of any default, failure or neglect on the part of the Contract in the fulfillment or performance in all respects of the contract under reference or any other contract with the Purchaser / Employer shall also be entitled to deduct from the amount of the Performance Bank Guarantee any loss or damage which the Purchaser / Employer may suffer.

4. TAXES AND DUTIES

1.1 The Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside India.

1.2 In the event of exemption or reduction of Custom Duties, Excise Duties, Sales Tax, Goods & Service Tax or any other Cess/Levy being granted by the Government in respect of the works, the benefit of the same shall be passed on to the Purchaser / Employer .

5. DELIVERY

The Contractor shall be required by the Purchaser / Employer to deliver the work / equipment at Kochi site locations as per Technical Specifications, the quantities of the work / equipment detailed therein shall be delivered not later than the dates specified in the delivery schedule. The delivery will not be deemed to be complete until and unless the work / equipment are inspected and accepted by the Inspecting Officer/team of CSML or its representatives

2.1 Notification of delivery: Notification of delivery and dispatch in regard to each and every

installment shall be made to the Purchaser / Employer immediately on dispatch and delivery. The tracking number of transport mode along with necessary details for tracking of the dispatched equipment"s needs to be communicated to the Purchaser / Employer on every dispatch.

2.2 Time for delivery: The time is the essence of the contract and date specified in the contract or as extended for the delivery of the Equipment shall be deemed to be the essence of the contract and delivery must be completed not later than the dates so specified or extended by Purchaser / Employer.

2.3 Progress of Deliveries: The contractor shall allow reasonable facilities and free access to his works and records to the inspecting officer; progress officer or such other officer as may be nominated by the Purchaser / Employer for the purpose of ascertaining the progress of the deliveries under the contract.

2.4 Extension of Time: for Delivery The Purchaser / Employer may extend the timeline for delivery of work / equipment (at one or more locations) at his own discretion due to the reasons which may be beyond the control of Purchaser / Employer. The price quoted shall remain same even in case of extended delivery time line.

6. FAILURE AND TERMINATION

If the contractor fails to deliver the work / equipment or any installment thereof within the period fixed for such delivery in the contract or as extended or at any time repudiates the contract before the expiry of such period, the Purchaser / Employer may without prejudice to his other rights:- Recover from the Contractor as a penalty a sum equivalent to 0.5 % value of total LOA / purchase order (contract value) per week subject to maximum of 10%, after which contract will be deemed as cancelled & PBG will be encashed by the Purchaser / Employer.

7. CONSEQUENCES OF REJECTION

If on inspection of the work / equipment at site, are found to be not matching the requirement of Purchaser / Employer as mentioned in the tender document and are being rejected by the Inspecting Officer/team of CSML or its representatives, the Contractor would be required to make

satisfactory supplies of brand new and unused equipment meeting the requirement as mentioned in the tender document within the stipulated period of delivery.

2.1 Removal of rejected stores

- i) On rejection of any work / equipment submitted for inspection at a place other than the premises of the Contractor, such stores shall be removed by the Contractor at his own cost subject as herein after stipulated, within 10 days of the date of intimation of such rejection.
- ii) All rejected equipment shall in any event and circumstances remain and always are at the risk of the Contractor immediately on such rejection. If such equipment are not removed by the Contractor within the periods aforementioned, the Inspecting Officer/CSML representatives or its authorized personnel may remove the rejected equipment. The Purchaser / Employer shall, in addition, be entitled to recover from the Contractor the handling and storage charges on the rejected equipment after the expiry of the time-limit mentioned above.

8. PACKING AND MARKING

- 2.1 Packing:** The Contractor shall pack at his own cost the equipment sufficiently and properly for transit by rail/road, air and/or sea so as to ensure their being free from loss or damage on arrival at their destination locations as specified in the purchase order. He shall decide the packing for the stores by taking into account the fact that the stores will have to undergo arduous transportation before reaching the destination and will have to be stored and handled in tropical climatic conditions (Including Monsoons) before being put to actual use. Unless otherwise provided in the contract, all containers (including packing cases, boxes, tins, drums and wrappings) in which the stores are supplied by the Contractor shall be considered as non-returnable and their cost as having been included in the contract price. Each packages shall contain a packing note specifying the name and address of the Contractor, the number and date of the acceptance of tender and the Designation of the Purchase Officer issuing the supply orders, the description of the equipment and the quantity contained therein.

2.2 Marking: The marking of all goods supplied shall comply with the requirement of the Indian Acts relating to merchandise marks or any amendment thereof and the rules made there under. The following marking of the material is required: - The following particulars should be stenciled with indelible paint on all the materials/packages:

- a. Contract No.
- b. Purchaser / Employer Name & logo.

In addition to the marking as specified above, distinguish color marks should be given so as to distinguish the ultimate Consignees in India

9. CONSIGNEE'S RIGHT OF REJECTION

Notwithstanding any approval which the Inspecting Officer may have given in respect of the stores or any materials or other particulars or the work or workmanship involved in the performance of the contract (whether with or without any test carried out by the Contractor or the Inspecting Officer or under the direction of the Inspecting Officer) and notwithstanding delivery of the stores where so provided to the interim consignee, it shall be lawful for the consignee, on behalf of the Purchaser / Employer, to reject the stores or any part, portion of consignment thereof within 45 days after actual delivery thereof to him at the place or destination specified in the contract if such stores or part, portion of consignment thereof is not in all respects in conformity with the terms and conditions of the contract whether on account of any loss, deterioration or damage before dispatch or delivery or during transit or otherwise howsoever.

10. RESPONSIBILITY FOR COMPLETENESS

- 2.1** Any fittings or accessories which may not be specifically mentioned in the specifications but which are useful or necessary are to be provided by the Contractor without extra charge, and the equipment must meet the operational requirement at the place of delivery.
- 2.2** All the charges incurred towards man-powers, materials, transportation, making the equipment operational etc. at the place of delivery shall be borne by the successful bidder.

11. INDEMNITY

- 2.1** The prices stated are to include all rights (if any) of patent, registered design or trade mark and

the Bidder shall at all times indemnify the Purchaser / Employer against all claims which may be made in respect of the equipment for infringement of any right protected by patent, registration of designs or trade mark; provided always that in the event of any claim in respect of alleged breach of a patent, registered designs or trade mark being made against Purchaser / Employer, the Purchaser / Employer shall notify the bidder of the same and the bidder shall, at his own expense, either settle any such dispute or conduct any litigation that may arise there from.

- 2.2** The bidder shall return all such property and shall be responsible for the full value thereof to be accessed by the Purchaser / Employer whose decision shall be final and binding on the bidder. The bidder shall be liable for loss or damage to such property from whatever cause happening while such property is in the possession of or under the control of the bidder, his servants, workmen or agents.

12. CORRUPT PRACTICES

17.1 The Bidder shall not offer or give or agree to give to any person in the employment of the Purchaser / Employer or working under the orders of the Purchaser / Employer any gift or consideration of any kind as an inducement or reward of doing or forbearing to do or having done or forborne to do any act in relation to the obtaining or execution of the contract or any other contract with the Purchaser / Employer or Government for showing any favor or for bearing to show disfavor to any person in relation to the contract or to any other contract with the Purchaser / Employer or Government. Any breach of the aforesaid condition by the Contractor, or any one employed by him or acting on his behalf, under Chapter IX of the Indian Penal code, 1860 or the Prevention of Corruption Act, 1947 or any other act enacted for the prevention of corruption by public servants shall entitle the Purchaser / Employer to cancel the contract and all or any other contracts with the Bidder and to recover from the bidder the amount of any loss arising from such cancellation in accordance with the provision of clause 10.

13. INSOLVENCY AND BREACH OF CONTRACT

18.1 The Purchaser / Employer may at any time, issue notice in writing summarily terminate the contract without compensation to the Contractor in any of the following events, that is to say:

- a. If the Contractor being an individual or a firm:-. Any partner thereof, shall at any time, be adjudged insolvent or shall have a receiving order or order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or enter into any assignment or composition with his creditors or suspend payment or if the firm be dissolved under the Partnership Act, or
- b. If the Contractor being a company is wound up voluntarily or by the order of a Court or a Receiver, Liquidator, or Manager on behalf of the debenture holders is appointed, or circumstances shall have arisen which entitle the Court or Debenture holders to appoint a Receiver, Liquidator or Manager, or
- c. If the contractor commits any breach of the contract not herein specifically provided for.
- d. Provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the Purchaser / Employer and provided also the Contractor shall be liable to pay to the Purchaser / Employer any extra expenditure he is thereby put to and the Contractor shall, under no circumstances, be entitled to any gain on re purchase.

14. LAWS GOVERNING THE CONTRACT

- 2.1 This contract shall be governed by the Laws of India for the time being in force.
- 2.2 Irrespective of the place of delivery and the place of payment under the contract, the contract shall be deemed to have been made at the place in India from where the acceptance of tender has been issued.

4.2. Project Implementation Schedule, Deliverables and Payment Terms

4.2.1. Deliverables & Payment Schedule

Payment shall be based on actual works executed at site. The contractor should submit the interim payment certificate (running bills) to engineer in charge with all supporting documents (detailed measurement sheets, quality certificates, Request for inspection duly signed by engineer in charge etc).

T = Signing of Contract

Sl. No.	Particulars	Milestones			Total
		Milestone-1 (a)	Milestone-2 (b)	Milestone-3 (c)	
1	Period (in months)	2.67	2.67	2.67	8
2	Financial progress to be achieved Compared to % of Accepted Contract amount	20% (Cumulative)	70% (Cumulative)	100% (Cumulative)	100%

4.2.2. Payment Terms

This being an Admeasurement contract, the selected contractor will raise monthly invoices, against the work done in the preceding month and will be paid accordingly after deductions, if any, as per the contract condition.

Penalty:

General:

If the contractor fails to comply with the following, penalty shall be levied as mentioned against each of the components

(i) Non submission of monthly report shall invite penalty of INR 10,000 for each such occurrence. The monthly report shall cover all relevant details defined in the contract.

(ii) In case any Child labour is employed at site in violation with the laws of the state and India, the employer will levy an additional penalty of Rs 25,000 per incidence and if such instance occurs more than once the contract may be terminated, to be decided at the sole discretion of the Employer

Conditions to be fulfilled for receipt of payment upon supply of work / equipment / materials to site after third party inspection & acceptance:

- a) The work / materials are in accordance with the specification;
- b) Such equipment / materials have been delivered to site, and are properly stored and Protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks;
- c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;
- d) The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
- e) Ownership of such materials shall be deemed to vest with the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and

The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

The payment of other items will be made as per BOQ as and when they are completed.

The bidder shall submit the Interim payment certificates (Running bills) on a monthly basis along with all the necessary supporting documents during execution period.

Payment should be followed strictly as per terms and conditions of Tender Documents and Tax as applicable will be deducted.

A retention amounting to 5 % (Five percent) of the gross amount of each running bill will be deducted at the time of certifying interim payment, for the due execution and completion of the work including operation & maintenance under Contract. This retention amount is liable to be forfeited, partly or wholly, if the Contractor fails to carry out the assignment or to keep up the desired rate of progress as per Contract.

The retention amount will be released on the successful completion of the work, defect liability period including operation and maintenance as certified by the competent authority. The contractor to submit final bills along with 'as built drawings' otherwise, final bills will not be entertained and final bills will be considered as incomplete and returned. The Employer shall pay the amount certified in the Final Payment Certificate within 60 days from the date of issue of the Final Payment Certificate.

If the Contractor or his workmen or servants knowingly or unknowingly break, damage, deface, injure or destroy any part of the fixed or part of unfixed development in which they may be working, or any building, road, fence, enclosure or grass land or cultivated ground contiguous to the premises on which the work or any part thereof is being executed, or if any damage shall be done to the work while it is in progress, from any cause whatever, or if any damage of any kind is done to the plant material

incorporated in the work, or if any imperfections become apparent in it within Twelve months (12 months) of the Completion of work, by the Site-In- Charge or other competent authority, the Contractor shall make good the same at his own expense, or in default, the Site-In-Charge or other competent authority may cause the same to be made good by other workmen, and deduct the expenses (of which the certificate of the Site-In-Charge or other competent authority shall be final) from any sums that may be due or may thereafter become due to the Contractor, or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof.

4.2.3. Retention Money

- i) A retention amounting to 5 % (Five percent) of the gross amount of each bill will be deducted at the time of certifying interim payment, for the due execution and completion of the work including operation & maintenance under Contract. This retention amount is liable to be forfeited, partly or wholly, if the Contractor fails to carry out the assignment or to keep up the desired rate of progress as per Contract.

The retention amount will be released on the successful completion of the work, defect liability period including operation and maintenance, if any as certified by the competent authority.

4.3. Confidential Information

- a) AUTHORITY and the Successful Bidder shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract.
- b) The Successful Bidder shall not use the documents, data, and other information received from AUTHORITY for any purpose other than the services required for the performance of the Contract.

4.4. Change in Laws and Regulations

Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Successful Bidder has thereby been affected in the performance of any of its obligations under the Contract.

4.5. Force Majeure

The Successful Bidder shall not be liable for termination for default if and to the extent that it's delays in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

In the event of any unforeseen event during the currency of the Contract, such as earthquake, war, fires, floods, or acts of God, as a result of which, either party (Purchaser / Employer/contractor) is prevented, or hindered in performing any of its obligations under the contract, then it shall within a week from the commencement thereof, notify the same in writing to the other party with reasonable evidence thereof. If the force majeure condition(s) mentioned above be in force for a period of 90 days or more at any time, the either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days' notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other, save and except those which had occurred under any other clause of this contract prior to such termination.

- a) For purposes of this Clause, Force Majeure means an event or situation beyond the control of the Successful Bidder that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Successful Bidder. Such events may include, but not be limited to, acts of AUTHORITY in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- b) If a Force Majeure situation arises, the Successful Bidder shall promptly notify AUTHORITY in writing of such condition and the cause thereof. Unless otherwise directed by AUTHORITY in writing, the Successful Bidder shall continue to perform its obligations under the Contract as far as it is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

4.6. Settlement of Disputes

1. Performance of the contract is governed by the terms and conditions of the contract, in case disputes arise between the parties regarding any matter under the contract, either Party of the contract may send a written Notice of Dispute to the other party. The Party receiving the Notice of Dispute will consider the Notice and respond to it in writing within 30 days after receipt. If that party fails to respond within 30 days, or the dispute cannot be amicably settled within 60 days following the response of that party, clause GCC 3.6 (2) shall become applicable.

2. Arbitration:

In the case of dispute arising, upon or in relation to, or in connection with the contract between AUTHORITY and the Successful Bidder, which has not been settled amicably, any party can refer the dispute for Arbitration under (Indian) Arbitration and Conciliation Act, 1996.

- 2.1 In case of any disputes arising between the Purchaser / Employer and the bidder, the matter will be referred to the Arbitrator solely appointed by MD, CSML. All the decisions made by the Arbitrator shall be final and binding to both the parties.*
- 2.2 Arbitration proceedings shall be held in Kochi, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English*
- 2.3 Cost of Arbitration:** The cost of arbitration shall be borne by the respective parties. The cost shall, inter alia, include the fees of the Arbitrator(s) as per rates fixed by the Employer from time to time.
- 2.4 Jurisdiction of Courts:** Where recourse to a Court is to be made in respect of any matter, the Employer and the Contractor agree to the sole jurisdiction of courts in Kochi.
- 2.5 Suspension of Work On Account Of Arbitration:** There should be no impact on the ongoing supply, installation, testing, commissioning, maintenance, operational requirement of equipment along with training to the staff of the purchased in case the matter is referred to Arbitration.

4.7. Extensions of Time

1. If at any time during performance of the Contract, the Successful Bidder should encounter conditions impeding timely delivery of the Services, the Successful Bidder shall promptly notify AUTHORITY in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Successful Bidder notice, AUTHORITY shall evaluate the situation and may at its discretion extend the Successful Bidder time for performance in writing.
2. Delay by the Successful Bidder in the performance of its Delivery and Completion obligations shall render the Bidder liable for disqualification for any further bids in AUTHORITY, unless an extension of time is agreed mutually.

4.8. Termination

1. AUTHORITY may, without prejudice to any other remedy for breach of Contract, terminate this Contract in case of the occurrence of any of the events specified in paragraphs (1) through (11) of this GCC Clause. In such an occurrence, AUTHORITY shall give a not less than 30 days' written notice of termination to the Successful Bidder.
2. If the Successful Bidder does not remedy a failure in the performance of its obligations under the Contract, within thirty (30) days after being notified or within any further period as AUTHORITY may have subsequently approved in writing.
3. If the Successful Bidder becomes insolvent or goes into liquidation, or receivership whether compulsory or voluntary.
4. If, in the judgment of AUTHORITY, the Bidder has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
5. If, as the result of Force Majeure, the Successful Bidder is unable to perform a material portion of the Services for a period of not less than 60 days.
6. If the Successful Bidder submits to the AUTHORITY a false statement which has a material effect on the rights, obligations or interests of AUTHORITY.
7. If the Successful Bidder places itself in a position of conflict of interest or fails to disclose promptly

any conflict of interest to AUTHORITY.

8. If the Successful Bidder fails to provide the quality services as envisaged under this Contract, AUTHORITY may make judgment regarding the poor quality of services, the reasons for which shall be recorded in writing. AUTHORITY may decide to give one chance to the Successful Bidder to improve the quality of the services.
9. If the Successful Bidder fails to comply with any final decision reached as a result of arbitration proceedings.
10. If AUTHORITY, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
11. In the event AUTHORITY terminates the Contract in whole or in part, pursuant to GCC Clause 3.8, AUTHORITY may procure, upon such terms and in such manner as it deems appropriate, services similar to those undelivered or not performed, and the Successful Bidder shall be liable to AUTHORITY for any additional costs for such similar services. However, the Successful Bidder shall continue performance of the Contract to the extent not terminated.

4.9. Payment upon Termination

Upon termination of this Contract pursuant to GCC Clauses 3.8, the AUTHORITY shall make the following payments to the Successful Bidder:

- a) If the Contract is terminated pursuant to GCC Clause 3.8 (10), remuneration for Services satisfactorily performed prior to the effective date of termination.
- b) If the agreement is terminated pursuant of GCC Clause 3.8 (1), (2), (3), (4), (5), (6), (7), (8) and (9). The Successful Bidder shall not be entitled to receive any agreed payments upon termination of the contract. However, the AUTHORITY may consider making a payment for the part satisfactorily performed on the basis of Quantum Merit as assessed by it, if such part is of economic utility to the AUTHORITY. Applicable under such circumstances, upon termination, the AUTHORITY may also impose liquidated damages. The Successful Bidder will be required to pay any such liquidated damages to AUTHORITY within 30 days of termination date.

4.10. Assignment

If Successful Bidder fails to render services in stipulated timeframe and as per schedule, AUTHORITY, at its discretion and without any prior notice to Successful Bidder, may discontinue or minimize scope of work or procure/board any other similar agency to render similar services to complete project in stipulated timeframe.

4.11. Other Conditions

- a) The Successful Bidder should comply with all applicable laws and rules of Government of India / Government of Kerala/ULB.
- b) Support Executive/Supervisor deployed by the Successful Bidder shall not have right to demand for any type of permanent employment with AUTHORITY or its allied Offices.
- c) Managing Director, CSML reserves the right to withdraw / relax any of the terms and condition mentioned in the RFP, so as to overcome the problem encountered at a later stage for the smooth and timely execution of the project.

Risk Purchase

In case the Successful Bidder fails to deliver the project due to inadvertence, error, collusion, incompetency, termination, misconstruction or illicit withdrawal, the MANAGING DIRECTOR, CSML reserves the right to procure the same or similar services from the alternate sources at risk, cost and responsibility of the Successful Bidder.

4.12. Limitation of Liability:

Limitation of Contractor's Liability towards the Authority:

- a. Neither Party shall be liable to the other Party for any indirect or consequential loss or damage (including loss of revenue and profits) arising out of or relating to the Contract.
- b. Except in case of gross negligence or willful misconduct on the part of bidder or on the part of any person or company acting on behalf of bidder in carrying out the Services,

Bidder, with respect to damage caused by Bidder to CSML / KMC /Authority's property, shall not be

liable to Authority / CSML / KMC :

- i) for any indirect or consequential loss or damage; and
- ii) For any direct loss or damage that exceeds the total payments payable under the Contract to bidder hereunder,

This limitation of liability shall not affect Bidders liability, if any, for damage to Third Parties caused by BIDDER or any person or company acting on behalf of BIDDER in carrying out the Services or any obligation of the Licensee to indemnify the Authority with respect to intellectual property rights infringement claims.

4.13. Right to Vary Quantity

- a) At the time of award of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased. It shall be without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.
- b) If AUTHORITY does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.
- c) Repeat orders for extra items or additional quantities may be placed, if it is provided in the bidding document, on the rates and conditions given in the contract if the original order was given after inviting open competitive bids. Delivery or completion period may also be proportionally increased.

4.14. Extra items or Additional items

Any item of work that does not find a place in the schedule of quantities, in the original Tender or in the accepted Tender or Contract as has been directed by the Owner / Consultant to execute, is deemed as an extra item of work. All such works that are necessary to be carried out under the direction of the Owner / Consultant by the Contractor. No such variation will violate the Contract.

Extra items of work thus carried out by the Contractor will be paid at the rates worked out by Owner / Consultant in the following manner. Employer reserves the right to alter the Scope of

Work and consequently the Contract Price shall be suitably adjusted for such changes by applying the approved rates. All change orders shall be issued by the Engineer-in-Charge.

If the contractor finds, after examining the specifications and plans that extras are involved, he should give notice to the Engineer-in charge to this effect and shall proceed with the execution of the extra item only after receiving instructions in writing from Engineer-in charge and Agreement Authority.

Extra items may be classified as new, additional, substituted or altered items, depending, on their relation or otherwise to the original item or items of work.

In the case of extra items whether additional, altered or substituted, for which similar items exists in the contract, the rates shall be derived from the original item by appropriate adjustment of cost of affected components. The percentage excess or deduction of the contract rate of the original item with reference to the departmental estimated rate shall be applied in deriving the rates for such items. The Engineer's interpretation as to what is a similar class of work shall be final and binding on the Contractor.

In the case of extra items whether additional, altered or substituted and for which similar items do not exist in the contract and rates exists in the prevailing departmental data rate, the rates shall be arrived at on the basis of the departmental data rate(DSR2016 with Kochi cost index 46.08).

In the case of extra items whether additional, altered or substituted, for which the rates cannot be derived from similar items in the contract, and only partly from the departmental schedule of rates the rates for such part or parts of items which are not covered in the schedule of rates shall be determined by the Engineer-in charge on the basis of the prevailing market rates(if available in the LMR published by the Department the same shall be taken) giving due consideration to the analysis of the rate furnished by the contractor with supporting documents, including contractor's profit, overheads and other allowed charges if any. This shall be added on to the departmental rate (including contractor's profit, overheads and allowed other allowed charges if any) current at the time of ordering or executing the extra item, whichever is earlier for the other part the item for which rates can be derived from the schedule of rates, after applying the tender deduction

except on cost of departmental material and market rate items. Tender excess, if any, will not be applied.

In all the above cases, the approved rates for extra, additional, altered or substituted items shall not exceed the rate which is arrived on the basis of the prevailing local market rates of the Department (published as per Government guidelines) at the time of ordering or executing the extra item whichever is earlier.

Wherever the term "Departmental data rate" appears, it shall mean the rate derived from the prevailing Departmental schedule of rate (PWD or LSGD through Price software) and data and shall include conveyance charges and contractor's profit.

Wherever, the term "tender excess or tender deduction" appears, it shall mean the overall percentage variation of estimated PAC and agreed PAC of the original contract.

4.15. Defect Liability

a) Defect Liability Period

It is the period, as specified in the NIT, after certified total completion or after a suspension (short or prolonged) or termination of the Works by the Engineer-in-Charge or the Contractor and handing over of the Works (including Sections or parts handed over earlier) to the Engineer-in-Charge, during which the Contractor is responsible for remedying/ repairing, restoring to the original condition any apparent, virtual or observed defects, deficiencies in the Works, or its performance. The Contractor shall have to repair & restore the defect/deficiency after a notice issued by the Engineer-in-Charge, who will be free to get it remedied at the risk and cost of the Contractor besides other action being taken as per the Contract, if the Contractor does not get it remedied within the period specified in such notice. The attendances to normal wear and tear due to use by the Procuring Entity/ occupier, in respect of sections or parts taken over for the convenience of the Procuring Entity, shall not be treated as defect.

b) Completion of Outstanding Work and Remedying Defects.

In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fairer and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- i) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer-in-charge, and
- ii) Execute all work required to remedy Defects or damage, as may be notified by (or on behalf of) the Procuring Entity on or before the expiry date of the Defects Notification Period for the Works. If a Defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Procuring Entity. The Contractor is required to repair, rectify, the defects, restore the damages at his own cost within the period indicated in the notice by the Procuring Entity. If the Contractor fails to do so, action as per Sub-Clause 13.3 shall be taken.

c) Cost of Remedying Defects

All work referred to above [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- i) Any design for which the Contractor is responsible,
- ii) Plant, Materials or workmanship not being in accordance with the Contract, or
- iii) Failure by the Contractor to comply with any other obligation.

The cost to be debited shall be arrived at as under:

- i) Cost of remedial work (including taxes) as paid to other agency or debited to the contractor if the remedial action is taken up by the department/ organisation, plus
- ii) A compensation of 15%, less
- iii) Credit the cost of materials, hire charges of Contractor's plant and machinery if used in the remedial work.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity and Sub-Clause 9 [Deviations, Variations and Adjustments] shall apply.

d) Extension of Defects Notification Period

The Procuring Entity shall be entitled subject [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of work (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a Defect, deficiency or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/ or erection of Plant and/ or Materials was suspended the Contractor's obligations under this Sub-Clause shall not apply to any Defects or damage occurring more than two years after the Defects Notification Period for the Plant and/ or Materials would otherwise have expired.

Contractor liable for Damages done and for Imperfections

e) If the Contractor or his personnel shall break, deface, injure or destroy any part of a building or any structure in which they may be working, or any building, road, fence, enclosure, water pipe, power/ telecom cables, drains, electric or telephone post or wires, trees, etc. or cultivated ground contiguous to the Site where the Works or any part of it is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults or imperfection appear in the work within Defect Liability Period after a certificate final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid arising out of Defect or improper Materials, procedures or workmanship the Contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by employing other workman/ agency and deduct the expense from any sums that may be due or at any time thereafter may become due to the Contractor, or from his Performance Security or the proceeds of sale thereof or a sufficient portion thereof.

f) Failure to remedy the defect

If the Contractor fails to remedy any Defect, deficiency or damage within a reasonable time, a date may be fixed by (or on behalf of) the Procuring Entity, on or by which the Defect, deficiency or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to remedy the Defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor [Cost of Remedying Defects], the Procuring Entity may (at his option):

- I. Carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall pay to the Procuring Entity the costs reasonably incurred by the Procuring Entity in remedying the Defect or damage;
- II. Require the Engineer-in-charge to agree or determine a reasonable reduction in the Contract Price or
- III. If the Defect or damage deprives the Procuring Entity of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Procuring Entity shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing Costs and the Cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

g) Removal of Defective Work

If the Defect or damage cannot be remedied expeditiously on the Site and the Procuring Entity gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are Defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement Cost of these items, or to provide other appropriate security.

h) Further Tests

If the work of remedying of any Defect or damage may affect the performance of the Works, the Engineer-in-charge may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 Days after the Defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 1.8 (c) [Cost of Remedying Defects], for the cost of the remedial work.

i) Contractor /Third Party Quality Inspection Agency to Search for the Cause of the Defect.

The Contractor or third-party quality inspection agency shall, if required by the Engineer-in-charge, search for the cause of any Defect, under the direction of the Engineer-in-charge. Unless the Defect is to be remedied at the cost of the Contractor under Sub-Clause 1.8 (c) [Cost of Remedying Defects], the cost of the search shall be agreed or determined by the Engineer-in-charge and shall be included in the Contract Price or of the third-party quality inspection agency.

4.16. Warranty & Maintenance

- a) Successful Bidder shall also provide complete maintenance support for all supplied hardware and other components as outlined in this RFP for a period of 60 months from the date of Go-Live.
- b) During the warranty period, the bidder shall warrant that the goods supplied under the contract are new, unused, of the most recent version/models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The bidder further warrants that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.
- c) AUTHORITY or designated representatives of the bidder shall promptly notify Successful Bidder in writing of any claims arising under this warranty. Upon receipt of such notice, the Successful Bidder shall, within the warranty period and with all reasonable speed, repair or replace the defective systems, without costs to AUTHORITY and within time specified and acceptable to AUTHORITY.
- d) If the Successful Bidder, having been notified, fails to remedy the defect(s) within the period specified in the contract, AUTHORITY may proceed to take such reasonable remedial action as may be necessary, at the Successful Bidder's risk and expense and without prejudice to any other rights, which AUTHORITY may have against the bidder under the contract.

The Successful Bidder hereby warrants AUTHORITY that:

- i. The supplied fittings & fixture meets all the requirements as outlined in the RFP and further amendments if any and provides the functionality and performance, as per the terms and conditions specified in the contract.
- ii. The proposed H/w & S/w shall achieve parameters delineated in the technical specification/requirement.
- iii. iii) The Successful bidder shall be responsible for warranty & maintenance services from licensors of products included in the systems.

The Successful bidder shall ensure the maintenance of the acceptance criterion/standards in respect of the systems during the warranty and maintenance period.

4.17. Virtual completion of works:

The Contractor shall complete the Works by the intended date of completion. In case Extension of Time has been granted, the extended date of completion shall be considered. The Works shall be considered as Virtually Complete only upon satisfactory correction of all defects notified by the Engineer, and only after the Work has been completed in every respect in conformity with the Contract Documents and after all the systems and services have been tested and commissioned, and after the Site has been cleared and the Work cleaned in accordance with contract and when the Agreement Authority on a report by the Engineer-in-Charge have certified in writing that the Work is Virtually Complete. The virtual completion certificate shall be issued by the Engineer-in charge within 15 days of final measurement. The Defects Liability Period shall commence from the date of Virtual Completion in the virtual completion certificate issued by the Agreement Authority.

Should, before Virtual Completion, the Employer / Engineer-in- Charge decide to occupy any portion of the Work or use any part of any equipment, the same shall not constitute an acceptance of any part of the Work or of any equipment, unless so stated in writing by the Engineer-in-Charge.

Prior to the issue of the Virtual Completion Certificate, the Contractor shall submit and hand-over to the Engineer-in-Charge the keys to all locks, all operation and maintenance manuals for systems and services, material reconciliation statements, warranties, as built drawings, any spares called for in the Contract, and everything else necessary for the proper use and maintenance of the Work complete with all systems and services.

It is clarified that all materials whether Employer supplied or not shall be procured by the contractor at his own cost for carrying out correction work. No charges shall be paid on this account.

4.18. Guarantees:

The Contractor understands and agrees that the Engineer-in- Charge is expressly relying and will continue to rely on the skill and judgment of the Contractor in executing the Work and remedying any defects in the Work. The Contract represents and warrants that :-

- a) The Contractor shall perform the Work in a timely manner, in strict accordance with the Contract Documents, and consistent with generally accepted professional, construction and construction-supervision practices and standards provided by an experienced and competent professional contractor and construction supervisor rendered under the same or similar circumstances.

- b) The Contractor is and will be responsible to the Engineer-in- Charge for the acts and omissions of his Sub-Contractors and their respective employees, agents and invitees and all the persons performing any of the Work on behalf of the Contractor.
- c) Besides the guarantees required and specified elsewhere in the Contract Documents, the Contractor shall in general guarantee all work executed by the Contractor and his Sub-Contractors for Defects Liability Period from the date of issue of the Virtual Completion Certificate. Those parts of the Work or equipment or installations, for which extended guarantee periods are stipulated elsewhere in the Contract Documents, shall be guaranteed for such periods that are so stipulated. The duration of the Defects Liability Period, unless specified otherwise, shall be the extent of length of such guarantee periods.

The Contractor represents, warrants and guarantees to Engineer, inter alias that:

- a) The execution of the Work shall be approved and capable of use, operation, performance and maintenance for accomplishing the purpose for which it has been built and acquired.
- b) The Work shall comply with the Specifications, Drawings, and other Contract Documents and that quality standards as per the PWD Quality Control Manual shall be maintained.
- c) The Work shall, for Defect Liability Period from the date of issue of the Virtual Completion Certificate, be free from all defects and the Work shall be of structural soundness, durability, ease of maintenance, weather tightness etc.
- d) The materials, workmanship, fabrication and construction shall be of the specified and agreed quality and all materials shall be new.
- e) The Work performed for the Engineer-in-Charge shall be free from all liens, charges, and claims of whatsoever nature from any party other than the Engineer-in-Charge.

Where, during such guarantee periods as mentioned above, any material or equipment or workmanship or generally any item of work fails to comply or perform in conformity with the requirements stipulated in the Contract Documents or in accordance with the criteria and provisions of the guarantee, the Contractor shall be responsible for and shall bear and pay all costs and expenses for replacing and/or rectifying and making good such materials, equipment, workmanship, and items of work and, in addition, the Contractor shall be also responsible for and shall bear and pay all costs and expenses in connection with any damages and/or losses suffered as a consequence of such failure.

All guarantees required under the Contract shall be in the format approved by the Engineer-in-Charge and submitted to the Engineer-in- Charge by the Contractor when requesting certification of the final bill.

Annexures

5. Annexures

Annexure 1 - Guidelines for Pre-Qualification Proposal (part of Technical proposal)

Annexure 1.1 - Check-list for the Pre-Qualification Proposal

S No.	List of Documents	File Name	Submitted (Y / N)	Description
1.	Proof of Tender Fee and EMD submitted			
2.	Bid Covering Letter As per format provided at Annexure 1.2			Reference No: Date of Letter:
3.	Bidders' Particulars As per format provided at Annexure 1.3			Name of Bidder(s):
4.	Power of Attorney in favour of Authorized signatory As per format provided at Annexure 6			Date of PoA: Name of Authorize Person:
5.	Copy of valid registration certificate as Class – 'B' contractor with any Govt department			Registration No Validity
6.	Copy of Certificate of Incorporation / Registration under Companies Act, 1956/2013 or			Registration Number: Date of Incorporation:

S No.	List of Documents	File Name	Submitted (Y / N)	Description
	corresponding Act in abroad			
7.	Copy of Certificate from the Statutory Auditor for the last 3 (Three) financial years 2015-16, 2016-17 & 2017-18 certifying the average annual turnover			Year-wise details of turnover
8.	Declaration for not blacklisted by Central/State Government/ PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices as on date of submission of the proposal. As per format provided at Annexure 4			Reference No: Date of Letter:

Annexure 1.2 - Pre-Qualification Cover Letter

(To be submitted on the letterhead of the bidder)

Date:

To

Managing Director,
Mission Limited (CSML)
Revenue Tower, Park Avenue,
Kochi - 682 011, India.

Cochin Smart
10th Floor,

Subject: Bid for Implementation of Integrated Traffic Management System (ITMS) in Kochi

RFP Reference No: XX

Dear Sir,

With reference to your “**RFP for CONSTRUCTION OF PUBLIC TOILET FACILITIES IN KOCHI**”, we hereby submit our Prequalification Proposal, Technical Proposal, and Financial Proposal, for the same.

We hereby declare that:

- a. We hereby acknowledge and unconditionally accept that the Authority can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of bidder for providing services.
- b. We have submitted EMD of INR [] in the form of [.....] and Tender fee of INR [] online through e-Tendering Portal (www.etenders.kerala.gov.in),
- c. We hereby declare that all information and details furnished by us in the Bid are true and correct, and all documents accompanying such application are true copies of their respective originals.
- d. We agree to abide by our offer for a period of 180 days from the date of opening of pre-qualification bid prescribed by **Authority** and that we shall remain bound by a communication of acceptance within that time.

- e. We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.
- f. In the event of acceptance of our bid, we do hereby undertake:
 - i. To supply the products and commence services as stipulated in the RFP document
 - ii. To undertake the project services for entire contract period from the date of signing of the contract as mentioned in the RFP document.
 - iii. We affirm that the prices quoted are inclusive of design, development, delivery, installation, commissioning, training, providing facility management and handholding support, and inclusive of all out of pocket expenses, taxes, levies discounts etc.
- g. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.
- h. We understand that the **Authority** may cancel the bidding process at any time and that **Authority** is not bound to accept any bid that it may receive without incurring any liability towards the bidder.
- i. We fully understand and agree to comply that on verification, if any of the information provided in our bid is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so

In case of any clarifications please contact _____ email at _____

Thanking you,
Yours sincerely,
(Signature of the Lead bidder)
Printed Name
Designation

Seal

Date:
Place:
Business Address:

Annexure 1.3 - Format to share Bidder's and Bidding Firms Particulars

The Table below provides the format in which general information about the bidder must be furnished.

S No	Information	Details
1.	Name of Bidding firm:	
2.	Address and contact details of Bidding firm:	
3.	Firm Registration Number and Year of Registration	
4.	Web Site Address	
5.	Status of Company (Public Ltd., Pvt. Ltd., etc.)	
6.	Company's GSTIN	
7.	Company's Permanent Account Number (PAN)	
8.	Company's Revenue for the last 3 years (Year wise)	
9.	Name, Designation and Address of the contact person to whom all references shall be made regarding this RFP:	
10.	Telephone number of contact person:	
11.	Mobile number of contact person:	
12.	Fax number of contact person:	
13.	E-mail address of contact person:	

Please submit the relevant proofs for all the details mentioned above along with your Bid response

Authorized Signatory

Name

Seal

Annexure 1.4. - Format to Project Citation

S No	Item	Details	Attachment Ref. Number
1	Name of the Project		
2	Date of Work Order		
3	Client Details		
4	Scope of Work		
5	Contract Value		
6	Completion Date		

Note: The Bidder is required to use above formats for all the projects referenced by the bidder for the Pre-Qualification criteria and technical bid evaluation.

Annexure 1.5 - Consortium Agreement

DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBERS OF THE CONSORTIUM

[On Non-judicial stamp paper of Rs 200 duly attested by notary public]

This Memorandum of Understanding (MoU) entered into this day of [Date] [Month] 2018 at [Place] among----- (hereinafter referred to as " ") and having office at [Address], India, as Party of the First Part and ----- (hereinafter referred to as " ") and having office at [Address], as Party of the Second Part and ----- (hereinafter referred to as " ") and having office at [Address], as Party of the Third Part.

The parties are individually referred to as Party and collectively as Parties.

WHEREAS CSML, has issued a Request for Proposal dated [Date] (RFP) from the Applicants interested in RFP for **“Construction of Public Toilet Facilities in Kochi”**:

AND WHEREAS the Parties have had discussions for formation of a Consortium for bidding for the said Project and have reached an understanding on the following points with respect to the Parties' rights and obligations towards each other and their working relationship.

AS MUTUAL UNDERSTANDING OF THE PARTIES, IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:

- i. The purpose of this Agreement is to define the principles of collaboration among the Parties to:
 - a. Submit a response jointly to Bid for the **“RFP “Construction of Public Toilet Facilities in Kochi”** under Smart City Mission as a Consortium.
 - b. Sign Contract in case of award.
 - c. Provide and perform the supplies and services which would be ordered by the Authority pursuant to the Contract.
- ii. This Agreement shall not be construed as establishing or giving effect to any legal entity such as, but not limited to, a company, a partnership, etc. It shall relate solely towards the Authority for **“RFP for “Construction of Public Toilet Facilities in Kochi”** under Smart City Mission for and related execution works to be performed pursuant to the Contract and shall not extend to any other activities.
- iii. The Parties shall be jointly and severally responsible and bound towards the Authority for the performance of the works in accordance with the terms and conditions of the RFP document, and Contract.
- iv. ----- (Name of Party) shall act as Lead Member of the Consortium. As such, it shall act as the coordinator of the Party's combined activities and shall carry out the following functions:
 - a. To ensure the technical, commercial and administrative co-ordination of the work package
 - b. To lead the contract negotiations of the work package with the Authority.

- c. The Lead Member is authorized to receive instructions and incur liabilities for and on behalf of all Parties.
 - d. In case of an award, act as channel of communication between the Authority and the Parties to execute the Contract
- v. Each member of the Joint Venture agrees to place at the disposal of the Joint Venture, the benefit of all its experience, technical knowledge and skill, and shall in all respects bear its share of responsibility and burden of completing the contract. The parties herein shall be responsible for physical and financial distribution of work as under.

Party A or Lead Partner: Financial responsibility: -----(Minimum 51%)

Profit / loss sharing ratio: -----

Party B : Financial responsibility: -----

Profit / loss sharing ratio: -----

Party C : Financial responsibility: -----

Profit / loss sharing ratio: -----
- vi. All rights, interests, liabilities, obligations, risks, costs, expenses and pecuniary obligations and all net profits or net losses arising out of the Contract shall be shared or borne by the Parties in the above Proportions.
- vii. The members in the proportion as mention in clause-v shall contribute sufficient Initial fixed capital for timely execution of the project including commissioning & operating period as per the contract.
- viii. That the Parties shall carry out all responsibilities as Developer in terms of the Project Agreement.
- ix. That the broad roles and the responsibilities of each Party at each stage of the Bidding shall be as below:

Party A:

Party B:

Party C:
- x. That the broad roles and the responsibilities of each Party at each stage of the project execution shall be as below:

Party A:

Party B:

Party C:
- xi. That the Parties affirm that they shall implement the Project in good faith and shall take all necessary steps to see the Project through expeditiously.

- xii. That this MoU shall be governed in accordance with the laws of India and courts in Kerala shall have exclusive jurisdiction to adjudicate disputes arising from the terms herein.

In witness whereof the Parties affirm that the information provided is accurate and true and have caused this MoU duly executed on the date and year above mentioned.

(Party of the first part)

(Party of the second part)

(Party of the third part)

Witness:

i.

ii.

Annexure 2. – Guidelines for Technical Proposal

Annexure 2.1 - Check-list for the documents to be included in the Technical Proposal

S No.	List of Documents	Name of File Name	Submitted (Y / N)	Description
1.	Technical Bid Covering Letter			Reference No: Date of Letter:
2.	Copy of Work order to support that the Sole Bidder or Lead Member or any member of its consortium should have successfully completed civil construction projects as per requirements indicated in Clause 1.4.4 and 1.4.5			Customer Name: Work Order Number: Date of Work Order: Project Value: Completion Date:

Annexure 2.2. - Technical Bid Cover Letter

(To be submitted on the Letterhead of the responding firm)

Date: dd/mm/yyyy

To

**Managing Director
Smart Mission Limited (CSML)
10th Floor, Revenue Tower, Park Avenue,
Kochi - 682 011, India.**

Cochin

Sub : RFP for CONSTRUCTION OF PUBLIC TOILET FACILITIES IN KOCHI"

RFP Reference No: XX

Dear Sir,

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the **RFP for Construction of Public Toilet Facilities in Kochi"**

We attach hereto the technical response as required by the RFP, which constitutes our proposal. We undertake, if our proposal is accepted, to adhere to the implementation plan (Project schedule) for providing Professional Services in **"RFP for Construction of Public Toilet Facilities in Kochi"**, put forward in RFP or such adjusted plan as may subsequently be mutually agreed between us and CSML or its appointed representatives.

If our proposal is accepted, we will obtain a Performance Bank Guarantee issued by a nationalized or scheduled commercial bank in India, for a sum of equivalent to 10% of the contract value for the due performance of the contract.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of 180 days from the date of submission of Bid and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this tender response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and CSML.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to CSML is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead CSML as to any material fact.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Date:

(Signature)

(Name)

(In the capacity of)

[Seal / Stamp of bidder]

Witness Signature:

Witness Name:

Witness Address:

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I _____, the Company Secretary of _____, certify that _____ who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:

Signature:

(Company Seal) (Name)

Annexure 2.3 - Project Implementation Approach

The Bidder is required to submit the proposed technical solution in detail. Following should be captured in the explanation:

- a) The Overall approach to the Project
- b) Project Monitoring and Communication Plan– Bidder's approach to project monitoring and communications among stakeholders.
- c) Implementation plan– Bidder's approach to implement the project
- d) Quality Control plan - Bidder's approach to ensure quality of work and deliverables
- e) Escalation matrix during contract period

Note:

- a. All the pages (documentary proofs and other documents that may be attached) should contain page numbers and would have to be uniquely serially numbered.

Inadequate information shall lead to disqualification of the bid.

Annexure 2.4. - Format for OEM Authorization

(This form has to be provided by the OEMs of the products proposed)

Date :

To,

Managing Director
Mission Limited (CSML)
10th Floor, Revenue Tower, Park Avenue,
Kochi - 682 011, India.

Cochin Smart

RFP Ref: <-->

Dear Sir,

We _____, (name and address of the manufacturer) who are established and reputed manufacturers of _____ having factories at _____ (addresses of manufacturing / development locations) do hereby authorize us _____ (name and address of the bidder) to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment / software manufactured / developed by us.

We herewith certify that the above mentioned equipment / software products are not end of the life and we hereby undertake to support these equipment / software for the duration of minimum five years from the date of Submission of the Bid.

Yours faithfully,

(Name)

(Name of Producers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it.

Annexure 3 – Guidelines for Financial Proposal

Annexure 3.1 - Financial Proposal Cover Letter

(To be submitted on the Letterhead of the Bidder)

Date: dd/mm/yyyy To

Managing Director
Cochin Smart Mission Limited (CSML)
10th Floor, Revenue Tower, Park Avenue,
Kochi - 682 011, India.

Sub: RFP for CONSTRUCTION OF PUBLIC TOILET FACILITIES IN KOCHI RFP Ref: No: XX

Dear Sir,

1. We, the undersigned bidder, Having read & examined in detail, the Bidding Document, the receipt of which is hereby duly acknowledged, I/ we, the undersigned, offer to supply/ work as mentioned in the Scope of the work, Bill of Material, Technical Specifications, Service Level Standards & in conformity with the said bidding document for the same.
2. I / We undertake that the prices are in conformity with the specifications prescribed. The quote/ price are inclusive of all cost likely to be incurred for executing this work. The prices are inclusive of all type of govt. taxes/duties as mentioned in the financial bid (BoQ).
3. I / We undertake, if our bid is accepted, to deliver the goods & services in accordance with the delivery schedule specified in the RFP.
4. I/We undertake to successfully operationalize the entire solution as per scope of work mentioned in the RFP document.
- I/ We have examined and have no reservations to the Bidding Documents, including any corrigendum/addendums issued by CSML;
6. I/We understand that any additional hardware and software required to make the entire solution

operational shall have to be provided by us.

7. I/ We hereby declare that in case the contract is awarded to us, we shall submit the contract performance bank guarantee as prescribed in the RFP.
8. I / We agree to abide by this bid for a period of 180 days from the date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiry of that period.
9. Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.
10. I/ We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.
11. We understand that CSML shall take into account all Taxes including GST, Duties & Levies for the purpose of evaluation & selection of L-1 bidder
12. We understand that you are not bound to accept the lowest or any bid you may receive. We agree to all the terms & conditions as mentioned in the RFP document and submit that we have not submitted any deviations in this regard.

In witness thereof, I/we submit this Bid under and in accordance with the terms of the RFP document.

Date: Place:

Yours
faithfully,

(Signature of the Authorized
signatory) (Name and designation of the of the
Authorized signatory)

Name and seal of Bidder/Lead Member

Annexure 3.2 - Financial Proposal Format & Instructions

To be submitted on e-Tendering Portal only (i.e. www.etenders.kerala.gov.in)

Bill of Quantities (BOQ)is uploaded separately as Microsoft excel file.

Instructions:

- a) Bill of Quantities (BOQ) can be downloaded free of cost from the e- Government Procurement (e-GP) Website www.etenders.kerala.gov.in. All bid documents are to be submitted online only and in the designated manner on the e-GP website. Tenders/ bids shall be accepted only through online mode on the e-GP website and no manual submission of the same shall be entertained except for the documents specifically indicated ie Technical proposal and Prequalification documents along with EMD.
- b) The Bidder shall submit their bid online only through the e-GP web site of Kerala (www.etenders.kerala.gov.in) as per the procedure laid down for e-submission as detailed in the web site. For e tenders, the bidders shall download the tender documents including the Bill of Quantity (BOQ) file from the e tendering portal [http://www. etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). The Bidder shall fill up the documents. and submit the same online using their Digital Signature Certificate. On successful submission of bids, a system receipt can be generated downloaded by the bidder for future reference. Copies of all certificates and documents shall be uploaded while submitting the tender online. Submission of Price proposal in hard copy would result in disqualification and rejection of bid
- c) CSML does not guarantee the quantity for the particular line items given above. The actual quantity for the given items may be more or less. The payment shall be made based on unit cost quoted for the particular item on actual work/item is undertaken / supplied.
- d) All items provided should be under Insurance. The Insurance should be for entire duration of the Project for 5 Years and comprehensive covering damages for Theft, Fire, Natural Calamities, Riots and Terrorists activities etc.

- e) Bidder should provide all prices as per the prescribed format under this Annexure 3.2.
- f) All the prices are to be entered in Indian Rupees ONLY
- g) CSML reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
- h) CSML shall take into account all Taxes, Duties & Levies for the purpose of evaluation
- i) The Bidder needs to account for all Out of Pocket expenses, no additional payment shall be made by CSML whatsoever.
- j) Bidder should refer the RFP document for details on the technical requirements of the system and the benchmark specifications for the items mentioned in the financial formats.
- k) Any component/fixtures/ancillary/adjunct to the specified item shall be deemed to have been included in the unit rates quoted above.

Annexure 4 - Format for Declaration by the bidder for not being Blacklisted / Debarred

(To be submitted on the Letterhead of the Bidder)

Date: dd/mm/yyyy

To

Managing Director

Cochin Smart Mission Limited (CSML)

10th Floor, Revenue Tower, Park Avenue, Kochi - 682 011, India.

Subject: Declaration for not being debarred / black-listed by Central / any State Government department in India as on the date of submission of the bid

RFP Reference No: XX

Dear Sir,

I, authorized representative of _____, hereby solemnly confirm that the Company _____ is not debarred / black-listed by any Central/State Government/ PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices or for any other reason as on last date of submission of the Bid. In the event of any deviation from the factual information/ declaration, CSML reserves the right to reject the Bid or terminate the Contract without any compensation to the Company.

Thanking you,

Yours faithfully,

Signature of Authorized Signatory (with official seal)

Date :

Name :

Designation :

Address :

Telephone & Fax :

E-mail address :

Annexure 5 - Format of sending pre-bid queries

RFP Reference No: XX

Bidder's Request For Clarification						
Name and complete official address of Organization submitting query / request for clarification			Telephone, Fax and E-mail of the organization Tel: Fax: Email:			
Sr. No.	Clause No.	Page No.	Content of RFP Requiring Clarification	Change required	Requested/	Clarification
1						
2						

Signature:

Name of the Authorized signatory:

Company seal:

Date and Stamped

Note: Bidder(s) are requested to send the queries in PDF with Sign and Company Seal and also in MS Excel for making consolidation process easy.

Annexure 6 - Power of Attorney

[To be executed on non-judicial stamp paper of (Rs 200) the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

Know by all men by these presents, We _____ (Name of the Bidder and address of their registered office) do hereby constitute, appoint and authorize Mr. / Ms _____ (name and residential address of Power of attorney holder) who is presently employed with us and holding the position of _____ as our Attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Proposal for the **“RFP for Construction of Public Toilet Facilities in Kochi”**, including signing and submission of all documents and providing information / responses to the CSML, representing us in all matters before CSML, and generally dealing with the CSML in all matters in connection with our Proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us.

For _____

Name:

Designation:

Date:

Time:

Seal:

Business Address:

Accepted,

_____ (Signature)

(Name, Title and Address of the Attorney)

Note:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

- The Power of Attorney shall be provided on Rs.100/- stamp paper.
- The Power of Attorney should be supported by a duly authorized resolution of the Board of Directors of the Bidder authorizing the person who is issuing this power of attorney on behalf of the Bidder.

Lead Member has to submit the Power of Attorney in favour of Authorized signatory in below given format in case of Consortium.

POWER OF ATTORNEY FOR LEAD MEMBER BY CONSORTIUM MEMBER

[To be executed on non-judicial stamp paper of (Rs 200) the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

CSML has invited Bids from interested companies for **"RFP for Construction of Public Toilet Facilities in Kochi"** ("Project").

Whereas, _____, and _____ (collectively the "Consortium") being members of the Consortium are interested in offering for the services in accordance with the terms and conditions of the Request for Proposal document (RFP) and other connected documents in respect of the Project, and;

Whereas, it is necessary under the RFP document for the members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's Bid for the Project.

Whereas, we have decided that M/sshall be Lead Member of this Consortium.

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS

We, _____ having our registered office at....., (hereinafter referred to as the "Member") do hereby designate, nominate, constitute, appoint and authorize _____ having its registered office at _____, being one of the members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the "Attorney"). We hereby irrevocably authorise the Attorney (with power to sub-delegate) to conduct all business for and on behalf the Consortium and any one of us during the Bid process and, in the event the Consortium is awarded the Contract, during the execution of the project, and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the selection of the Consortium, including but not limited to signing and submission of all Applications, Proposals and other Documents and writings, participate in pre-proposal and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of Bid of the Consortium and generally to represent the Consortium in all its dealings with the CSML and/or any other Government Agency or any person, in all matters in

connection with or relating to or arising out of the Consortium's Bid for the above Project and/or upon award thereof till the Contract Agreement is entered into with the CSML.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/Consortium.

IN WITNESS WHEREOF WE THE MEMBER ABOVE NAMED HAVE

EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF

.....20

For

(Name & Title)

Witnesses:

1.

2.

(To be executed by the Member of the Consortium)

Note:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder :

Annexure 7 – Format for Bank Guarantee for Earnest Money Deposit (If applicable)

To

Managing Director
Cochin Smart Mission Limited (CSML)
10th Floor, Revenue Tower, Park Avenue, Kochi - 682 011, India.

Dear Sir,

BANK GUARANTEE for Earnest Money Deposit – For <Project Name>

Whereas <<Name of the bidder>> (hereinafter called as 'bidder') has submitted the bid for Submission of RFP <<RFP Number>> dated <<Date>> for **RFP for Construction of Public Toilet Facilities in Kochi** (hereinafter called "the Bid") to CSML, Kochi.

Know all Men by these presents that we <<... >> having our office at <<Address>> (hereinafter called "the Bank") are bound unto the << Authority >> (hereinafter called "the Authority") in the sum of Rs. <<Amount in figures>> (Rupees <<Amount in words>> only) for which payment well and truly to be made to the said Authority, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this <<Date>>.

The conditions of this obligation are:

1. If the Bidder having its bid withdrawn during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Authority during the period of validity of bid
 - (a) Withdraws his participation from the bid during the period of validity of bid document; or
 - (b) Fails or refuses to participate in the subsequent Tender process after having been short listed;

We undertake to pay to the Authority up to the above amount upon receipt of its first written demand, without the Authority having to substantiate its demand, provided that in its demand the Authority will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to <<insert date>> and including <<extra time over and above mandated in the RFP>> from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN:

I. Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures>> (Rupees

<<Amount in words>> only)

II. This Bank Guarantee shall be valid up to <<insert date>>)

III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date>>) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:

Annexure 8 – Format for Irrevocable Unconditional Performance Bank Guarantee

(Performance Bank Guarantee- Unconditional)

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: Managing Director,
Cochin Smart Mission Limited (CSML),
10th Floor, Revenue Tower, Park Avenue,
Kochi 682011.

Date:/....., 2018

PERFORMANCE GUARANTEE No.: _____

We have been informed that _____ *[name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. _____ *[reference number of the contract]* dated _____ with you, for the execution of **"RFP for Construction of Public Toilet Facilities in Kochi"** *[name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the 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]*),¹ 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 no later than twenty-eight days from the date of issuance of the Taking-Over Certificate, calculated based on a copy of such Certificate which shall be provided to us, or on the ____ day of, 2...², whichever occurs first. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signature(s)]

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

-
- 1 *The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Employer*
- 2 *Insert the date twenty-eight days after the expected completion date. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

LETTER OF ACCEPTANCE

[letterhead paper of the Employer]

Date:/....., 2019

To: _____

[name and address of the Contractor]

This is to notify you that your Bid dated [date] for execution of the tender work of “**RFP for Construction of Public Toilet Facilities in Kochi**” [name of the Contract and identification number, as given in the Contract Data] for the Accepted Contract Amount of the equivalent of [amount in numbers and words] [name of currency], as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our Agency.

You are requested to furnish the Performance Security amounting toand additional performance security (towards unbalanced rates) amounting towithin 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Annex to the Special Conditions - Contract Forms, of the Bidding Document

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Format of Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____, between The Managing Director, _____ of Cochin Smart Mission Limited (CSML), 10th Floor, Revenue Tower, Park Avenue, Kochi 682011 (hereinafter “the Employer”), of the one part, and _____ of _____ (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as Bid for “**RFP for Construction of Public Toilet Facilities in Kochi**” under Smart City Mission should be executed by the Contractor, and the Employer has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein amounting to _____,

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 Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
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.
 - (i) The Letter of Acceptance
 - (ii) The Letter of Bid
 - (iii) The addenda Nos _____ (if any)
 - (iv) The Special Conditions / Contract data /Particular Conditions
 - (v) The General Conditions;
 - (vi) The Specification (Works requirements / Employer’s requirements)
 - (vii) 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 and complete 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 Government of India on the day, month and year indicated above.

Signed by

(for the Employer)

for and on behalf of the Employer

in the presence of

Signed by

(for the Contractor)

for and on behalf the Contractor

in the presence of

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date