



**COCHIN PORT AUTHORITY
COCHIN-682009, KERALA, INDIA**

Tele: 91-0484-2666414, 2666871

Telefax: 91-0484-2666414

E-mail:ce@cochinport.gov.in

**TENDER DOCUMENT FOR RENOVATION OF COCHIN PORT OFFICER'S
SILVER JUBILEE BUILDING**

TECHNICAL BID (e-Tendering Mode)

Website:www.tenderwizard.com/CPT

**CHIEF ENGINEER'S OFFICE
COCHIN PORT AUTHORITY
COCHIN-682009**

TENDER No.T6/T-2112/2026-C

Rs.885/- (Rs.750.00 + 18% GST)

COCHIN PORT AUTHORITY

**TENDER FOR “RENOVATION OF COCHIN PORT OFFICER’S SILVER
JUBILEE BUILDING”.**

(Tender No.T6/T-2112/2026-C)

CONTENTS

Sl No:	Items	Page Nos.
1	Tender Notice	3-12
2	Tender for Works	13-14
3	Contract Data	15-18
4	Instructions to Bidders	19-23
5	General Description and Special Conditions of Contract	24-31
6	Detailed specifications for materials to be used on works	32-44
7	Detailed Specifications for items of Works	45-59
8	Annexure-I- Undertaking regarding EPF and ESI registration.	60
9	Annexure-II- Proforma of undertaking that no changes have been made in the tender document downloaded.	61
10	Annexure-III- Proforma of Power- of-Attorney/ letter of authority.	62
11	Annexure-IV- Format for furnishing bank information for e-payment.	63
12	Annexure-V- Proforma of Bank Guarantee for Performance Guarantee/ Security Deposit.	64-66
13	Annexure-VI- Site Visit Confirmation Undertaking	67
14	General Conditions of Contract-2016. (Attached Separately)	

SIGNATURE OF TENDERER

COCHIN PORT AUTHORITY



Chief Engineer's Office
Cochin Port Authority
W/Island , Cochin – 682009, KERALA
Tele: 91-0484-2666414/0484-258-2400
website: www.cochinport.gov.in

Tender No. T6/T-2112/2026-C

Date :16/09/2026

NOTICE INVITING TENDER

Electronic Tenders (**e-tenders**) on percentage basis are invited by Cochin Port Authority from reputed contractors in Single Stage Two Cover bidding procedure [Technical Bid and Financial Bid], meeting the Minimum Eligibility Criteria specified below for the work of **“RENOVATION OF COCHIN PORT OFFICER’S SILVER JUBILEE BUILDING”**.

1. Minimum Eligibility Criteria:

a) Experience

The tenderers should have experience of having successfully completed during the last 7 (seven) years ending **31st August, 2026**, at least either:

- i. Three Similar Works each costing not less than **Rs.3.90 lakhs**
(OR)
- ii. Two Similar Works each costing not less than **Rs.4.88 lakhs**
(OR)
- iii. One Similar Work costing not less than **Rs.7.80 lakhs**

b) Financial Turnover

Average Financial Turnover of the tenderer over the last three financial years ending 31st March 2025[2022- '23, 2023- '24 &2024- '25] shall not be less than **Rs.2.93 lakhs**.

Explanatory Notes to a) & b):

- i. Similar work(s) means **“Civil Construction/ Repair/ Retrofitting Works of structures”**. The experience certificate of works executed in private sectors/ organisations shall be considered for qualification, only on submission of TDS certificate (**Form No.26AS**) along with work order and completion certificate.
- ii. The experience certificate of works executed in Public Sector / Govt Organisations on submission should accompany with TDS certificate (**Form No.26AS**) along with work order and completion certificate.
- iii. Copy of completion certificates of each work issued by the employer/ owner/ responsible officer of the employer/owner under whom he has executed such contract shall be attached. The certificate shall contain details of work involved specifying the nature of work, the completion cost of the work, date of commencement & date of completion of the work.

- iv. The works reckoned for the above purpose are those executed by the tenderers as prime Contractor or proportionately as member of joint venture or Sub Contractor. The Sub-Contractor shall be an authorized and approved Sub-Contractor by the Employer of the work(s) against which the tenderer has claimed his experience. The tenderer shall attach attested copy(s) of approval issued by the Employer(s) authorizing as a Sub-Contractor; in proof of the claim of the tenderer as a sub-Contractor. The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.
- v. Following enhancement factors will be used for the costs of works executed for bringing the financial figures to a common base value in respect of the works completed in the past years.

Table 1

Year before	Multiplying factor
One year	1.07
Two years	1.14
Three years	1.21
Four years	1.28
Five years	1.35
Six years	1.42

- vi. **Financial Turnover:**
In proof of Financial Turnover Audited Annual Accounts Statements (Balance Sheet & Profit & Loss Account Statement) & Turnover Certificate signed by the Chartered Accountant or IT returns duly acknowledged by the Income Tax department along with Computation Statement signed by the Chartered Accountant, for the last three years ending on **31st March 2025** shall be produced by the tenderer.

2. Other Eligibility Considerations

- I. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
 - i) made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
 - ii) record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, disqualifications/ black listing/ debarring by Govt. departments etc.
- II. **The bidders having EPF/ ESI registration certificates only shall be considered for qualification in the tender, if applicable, as per EPF /ESI Acts. In case, the Tenderer does not have the required number of employees which makes such registration mandatory, an Undertaking as per Annexure I to the effect shall be furnished. The contractor/ approved Sub-contractor if any , shall comply with all the provisions of The Code on Wages (2019), The Code on Social Security (2020), The Industrial Relations Code (2020), and The Occupational Safety, Health and Working Conditions (OSH) code (2020) etc. Amended from time to time and**

rules framed there under and other laws affecting the contract labour that may be brought into force from time to time.

3. Pertinent information to the tender is given in the following Tables:

i) Schedule of different activities till submission of the bid are detailed as under:

Table 2

Sl. No.	Particulars	Date and Time
1	Tender e- publication date	16-09-2026
2	Download period of Bid Documents	16-09-2026 to 22-09-2026
3	Date of Pre-Bid meeting	Not Applicable
4	Last date for seeking clarification	18-09-2026
5	Last date and time of submission of Bid	22-09-2026 up to 14.30 hrs
6	Date and time of opening the Bid	22-09-2026 after 15.00hrs

ii) Bid information :

Table 3

i)	Estimated Amount put to Tender	Rs.9,74,790.00/- (Rs.9,74,781.03)
ii)	Earnest Money Deposit	Rs.19,500.00 furnished through Demand Draft, Banker's Cheque or bank guarantee (including e-bank guarantee) issued/ confirmed by any of the Scheduled Banks (as defined in section 2(e) of the RBI Act 1934) drawn in favour of Financial Adviser & Chief Accounts Officer, CoPA from any Nationalised Bank/ Scheduled Bank in India or through RTGS / NEFT mode/ Insurance Surety Bond from the Insurance Company duly approved by Insurance Regulatory and Development Authority of India.
iii)	Cost of Bid document	Rs.885/- (Rs.750.00+18% GST) (Non refundable) furnished either through Demand Draft/ Banker's Cheque drawn in favour of the Financial Adviser & Chief Accounts Officer, CoPA from any Commercial Bank in India, or through RTGS/NEFT mode. being the cost of single copy of the tender document

iv)	Validity period of Tender	120 days from the Last Date of Submission of Bid.
v)	Time for Completion	3 Months from the date of commencement

4. This work essentially comprises of the following:

CIVIL WORKS

- (i) Dismantling of Tiles, Concrete, various sanitary, Carpentry and Masonry items.
 - (ii) Dismantling of Aluminium/ Gypsum Partitions, doors, windows, fixed glazing , False Ceiling.
 - (iii) Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc.
 - (iv) Demolishing brickwork.
 - (v) Brick work with common burnt clay machine moulded perforated bricks.
 - (vi) Repairs and new plastering works.
 - (vii) Providing, laying and grouting joints of tile work.
 - (viii) Structural steel works & finishing with epoxy paint.
 - (ix) Providing, fixing, supplying, laying & jointing various plumbing & Sanitary items made of PVC, CPVC, CI, C.P Brass, PTMT etc.,
 - (x) Providing ,fixing panelled or paneled and glazed shutters for doors , windows or clerestory windows etc.,
 - (xi) Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames.
 - (xii) Providing and fixing to existing door frames Glass Fibre Reinforced Plastic (FRP) panelled door shutter.
 - (xiii) Painting and Associated works.
 - (xiv) Providing and fixing tiled false ceiling of specified materials.
 - (xv) Cleaning and disposing of all dismantled materials and debris from the site after completion of work.
5. Tender documents can be downloaded from the e-Tendering portal www.tenderwizard.com/CPT on the dates specified in Table 2 given above by making online requisition. Bid document will also be available in Cochin Port website (www.cochinport.gov.in) as well as Govt. tender website, www.eprocure.gov.in, which can be downloaded for submission. The cost of bid document (Non refundable) furnished either through Demand Draft/ Banker's Cheque drawn in favour of the Financial Adviser & Chief Accounts Officer, CoPA from any Commercial Bank in India, or through RTGS/NEFT mode. being the cost of single copy of the tender document and EMD shall be furnished in the form of Demand Draft/ Banker's Cheque or bank guarantee

(including e-bank guarantee) issued/ confirmed by any of the Scheduled Banks (as defined in section 2(e) of the RBI Act 1934) drawn in favour of FA & CAO, CoPA or through RTGS/NEFT mode. The bidder shall submit the Originals of (i) DD / Bankers Cheque towards the cost of tender document and EMD and (ii) Power of Attorney (Proforma attached as Annexure III) in favour of signatory(s) to the tender if applicable, with letter of submission in a sealed cover to the **CHIEF ENGINEER, Cochin Port Authority, W/Island, Cochin-682009, Kerala**, on due date of Submission of bid within the prescribed time limit, **Non submission of original financial document towards cost of tender document and EMD will make the tender liable for rejection, and such tenders would not be evaluated further.**

NOTE: MSE Bidders need to submit only softcopy of their latest UDYAM certificate for the purpose of above.

6. The bidders need to obtain the one time User ID & password for log-in to in e-**Tendering** system from the service provider **KEONICS** by paying registration amount of **Rs.1124/-** by online Payment using Credit/Debit Card/Net banking or DD in favour of óKSEDCL, Bangaloreô.
7. The intending bidder must have valid Class-II or III digital signature certificate to submit the bid. For further details and to obtain the digital signature, please contact e-Tender Help Desk No.080-40482000 / 9746118529 / 9605557738.
8. Tenders shall be submitted **“online”** strictly in accordance with the Instructions to Tenderers and Terms & Conditions given in the tender document.
9. The bidder is responsible to download Addenda/ Amendments/ Errata/ Replies to the queries of the bidders etc., if any, issued by the Employer, from the website before submission of the bid. **Any shortfall in uploading the said Addenda/ Amendments/ Errata/ Replies to the queries of Tenderer etc. duly signed along with the downloaded documents while uploading the Tender will render the Tender incomplete and such incomplete Tender Documents may be rejected by the employer and would not be evaluated.**
10. All Bids are to be submitted **online only** on the website **www.tenderwizard.com/ cpt**. No Bids shall be accepted off-line (Hard copy).
11. **EARNEST MONEY TO BE DEPOSITED**
 - 11.1 Each tender should be accompanied by an Earnest Money amounting to **Rs.19,500.00**.
 - 11.2 The Earnest Money can be deposited through Demand Draft/ Banker's Cheque or bank guarantee (including e-bank guarantee) issued/ confirmed by any of the Scheduled Banks (as defined in section 2(e) of the RBI Act 1934), drawn in favour of Financial Adviser & Chief Accounts Officer, COCHIN PORT AUTHORITY or online payment through RTGS/NEFT/ Insurance Surety Bond from the Insurance Company duly approved by Insurance Regulatory and Development Authority of India. The original DD/ Banker's Cheque shall be submitted to the CHIEF ENGINEER, Cochin Port Authority, Cochin-09, **on or before the due date of submission of the bid within the prescribed time limit**. Scanned copy of the DD/ Banker's Cheque shall be attached with the tender submitted óonlineô. If online payment is made, the evidence thereof shall be attached with the tender submitted óonlineô. If hard copy of the original

DD/Bankers Cheque is not received within the stipulated period, or if the evidence of making online payment towards EMD/ MSE Certificate is not attached with the tender submitted online, then such bids will not be further evaluated and shall be rejected summarily. The Earnest Money deposited will not carry any interest.

11.3 Bank details of Cochin Port Authority are given below.

Name of bank	:	State Bank of India
Name of Branch	:	Cochin Port Trust Branch
IFSC Code	:	SBIN0006367
Account No	:	41401802288
Account Holders Name	:	Cochin Port Authority

11.4 EMD of L1 & L2 bidder shall be refunded to the respective bidders on submission and acceptance of Performance Security and entering into agreement by the L1 Bidder. EMD of other bidders will be refunded immediately after finalization of the bid.

12 Cochin Port Authority will not be held responsible for any technical snag or net work failure during online bidding. It is the bidder's responsibility to comply with the system requirements i.e. hardware, software and internet connectivity at bidder's premises, to access the e-Tender portal. Under any circumstances, Cochin Port Authority shall not be liable to the bidders for any direct/indirect loss or damages incurred by them arising out of incorrect use of the e-Tender system or internet connectivity.

13. **Securities:**

13.1 Security Deposit (SD) shall be 10% of the Contract value or value of the work done whichever is higher and it shall consist of the following:

a) **Performance Security** 5% of contract value payable on award of the work.

b) **Retention Money:** @ 5% of the gross amount of each bill.

The total amount thus deposited towards SD will be retained as security for the due and proper fulfillment of the Contract and will not carry any interest. Such deposit shall be forfeited on failure to perform or non-fulfillment by the Contractor of the terms and conditions of the Contract.

13.2 **Performance Security:** The Performance Security retained till end of Defect Liability period (1 year from the date of completion of work) shall be 5% of Contract Value or Cost of Work Done, whichever is higher. So, initially 5% of the Contract value shall be furnished as Performance Security.

13.3 The Security Deposit/ Performance Security @ 5% of the value of the contract awarded (Rounded off to the nearest Rs.1000/-), shall be furnished by the **Contractor** to the Employer, not later than **14 days** from the date of receipt of letter of acceptance or such extension of that period as may be permitted by the official of Cochin Port writing, and shall be furnished in one of the following forms:

i) Banker's Cheque / Demand Draft of a Scheduled Bank/ online payment through RTGS/NEFT. If online payment is made, the evidence thereof shall be submitted to the office.

- ii) An irrevocable Bank Guarantee(BG) (including e-bank guarantee issued/ confirmed from any of the scheduled banks in India) enforceable and encashable at Cochin, drawn from any Scheduled Bank operating in India as per the prescribed proforma attached as Annexure V.
 - iii) Insurance Surety Bond from the Insurance Company duly approved by Insurance Regulatory and Development Authority of India.
- 13.4 **The BG furnished towards the Performance Security shall be valid until a date 60 days from the day of expiry of the Defect Liability Period stipulated as per the terms of the Contract.**
- 13.5 If Performance Security is not furnished within the period as specified above or such extension of that period as may be permitted by the official of Cochin Port Authority in writing, Cochin Port Authority at its discretion may cancel the Letter of Acceptance without paying any compensation to such bidder, and in addition to forfeiture of EMD.
If an MSE registered contractor failed to comply with the conditions 13.5 an amount equal to 2% of the Estimated amount shall be recovered from any amount due to the contractor. In addition, such bidder shall not be eligible to participate in the tenders invited by COCHIN PORT AUTHORITY for a period of **Two Years from the date of such cancellation of Letter of Acceptance.**
- 13.6 **Retention Money:** Retention Money @ 5% shall be retained from each payment due to the Contractor.
- 13.7 Retention Money shall be deducted at 5% of the gross amount of the bill from the first Running Account bill onwards till the recovered sum along with Performance Security amounts to 10% of the Contract value or the value of the work done whichever is higher at all times. **Retention Money shall be refunded to the Contractor within 14 days from the date of payment of final bill.**
- 13.8 If the Cost of Work done exceeds the Contract Value, the total amount retained as Security Deposit considering the Performance Security initially submitted together with the Retention Money recovered from the running account bills, shall amount to 10% of the Cost of Work done.
- 13.9 In cases where cost of Work done exceeds the Contract Value while releasing the Retention Money after payment of Final Bill, only 5% cost of Work Done is released, instead of the entire Retention Money recovered from the bills. The balance amount shall be retained; to make up for the shortage in the Performance Security, upto the completion of Defects Liability Period.
- 14. In the event of the tenderer, after the issue of the communication of acceptance of offer by Cochin Port Authority, failing /refusing to execute the agreement as hereinafter provided, the tenderer shall be deemed to have abandoned the Contract and such an act shall amount to and be construed as the Contractor's calculated and willful breach of the Contract, the cost and consequence of which shall be to the sole account of the tenderer and upon such an event, Cochin Port Authority shall have full right to claim damages therefore either together with or in addition to the forfeiture of Earnest Money Deposit.

If an MSE registered contractor failed to comply with the conditions 14 an amount equal to 2% of the Estimated amount shall be recovered from any amount due to the contractor. In addition, such bidder shall not be eligible to participate in the tenders invited by Cochin Port Authority for a period of **Two Years from the date of such cancellation of Letter of Acceptance.**

15. Signing of Agreement:

15.1 The successful tenderer will be required to execute within **21 days** from the date of receipt of Letter of Acceptance and after submission of Performance Security, an agreement at his expense on proper value Kerala State Stamp Paper in the prescribed departmental form, consisting of:

- a) The Tender Notice, all the documents including additional conditions/specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto, and
- b) General Conditions of Contract-2016 (GCC), for the due and proper fulfillment of the Contract.

If Agreement is not executed within the period as specified above or such extension of that period as may be permitted by the official of Cochin Port Authority in writing, Cochin Port Authority at its discretion may cancel the Letter of Acceptance without paying any compensation to such bidder, in addition to forfeiture of Performance Security.

15.2 The Contractor shall make 10 copies of the Agreement and submit to CoPA within 7 days following the date of signing of Agreement.

16. Till signing of agreement the tender together with the acceptance letter shall constitute a binding Contract between the Contractor and Cochin Port.

17. Failure to comply with conditions 3ii(iv), 13 and 15 above will entail forfeiture of the Earnest Money. **If an MSME registered contractor failed to comply with the conditions 13.5 an amount equal to 2% of the Estimated amount shall be recovered from any amount due to the contractor.**

18. **Micro & Small Enterprises (MSE's) Bidders who are registered with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Village Industries Board (KVIB) or Coir Board or National Small Industries Corporation (NSIC) or directorate of Handicrafts and Handlooms or Udyog Aadhaar Memorandum or any other body specified by Ministry of MSME for similar nature of Works shall be eligible for issue of Bid Document free of cost and exemption from payment for issue of tender document & payment of EMD. They are required to submit documentary proof of such registration along with the offer, as detailed in Instructions to Bidders, for claiming the available exemptions and a scanned copy of Exemption Certificate duly notarized shall be uploaded in the e-Tender Portal. If the Registration Certificate does not pertain to the Category of 'Similar Works' mentioned above, the Tender will be rejected.**

19. The undersigned reserves the right to reject/cancel/postpone any one or all tenders at any stage of the tender, which shall be binding on all bidders. It is not mandatory for Cochin Port to accept the bid of the Lowest Bidder, and Cochin

Port at its discretion may accept the bid of any bidder, without mentioning any reason.

20. CoPA will determine whether the Tender is substantially responsive to the requirements of the Tender documents. For the purpose of this clause a substantially responsive Tender is one which inter alia conforms to all the terms, general conditions and specifications of the Tender documents and technically suitable. The Tenderer shall carefully submit all the documents as required under the Tender failing which the offer is liable to be treated as non-responsive. A Tender which, in relation to the cost estimates of CoPA, is seriously unbalanced may be rejected as non-responsive. The Tender which does not satisfy the pre-qualification criteria shall summarily be rejected and shall not be considered for further evaluation Tenders which do not fulfill all or any of the above conditions or which contain any other condition of any sort including conditional rebates or are incomplete in any respect is liable for rejection. Such tenders shall be entered in the tender opening register but their rates shall neither be read out nor entered in the register. Only remark mentioning the reason of rejection in brief shall be appended against such entry.
21. The Tenderer shall quote realistic rates in respect of the services to be provided. The rates shall be firm and no other increase or decrease in prices will be allowed during the currency of the contract. Canvassing in connection with tender is strictly prohibited and tenders submitted by the Contractors who resort to canvassing will be liable to rejection.
22. **Taxes and Duties:**
 - 21.1 TDS as per Income Tax Law & GST law shall also be deducted at prevailing rates.
 - 21.2 Deductions towards statutory taxes as per the rules, prevailing in force at the time of payment of bills shall be made while releasing the bill amount.
 - 21.3 GST for the work will be paid extra by the Port. The GST applicable as per law can be billed on the Port Authority, which will be paid to the Contractor by the Board along with the bills, for which the Contractor holds valid GST Registration number and the GST is being collected. The following are also to be considered while claiming payment towards GST:
 - i. Invoice in specific format should be provided by the Contractor for every payment.
 - ii. GST Registration Number of Cochin Port Authority and the Contractor is to be clearly mentioned with all the bills.
 - iii. Invoice should be attached along with the running bills.
 - iv. The Contractor shall comply all the GST regulations, viz.; timely uploading of invoices and issue of debit/ credit notes.
 - 21.4 Any stipulation by a tenderer that taxes and duties deductible from these bills should be borne by the Port Authority will result in the summary rejection of his /their tender.
23. Cess as per Building and other Construction Workers Welfare Cess Act (Act 28 of 1996) at the rate of one percent or at the rates prevailing in force at the time of payment of bills, of the cost of construction should be borne by the Contractor and the same will be deducted from Contractor's bills while making

- payment or when crediting amount to Contractor's account.
24. The Tender Document shall form part of the Contract.

Sd/-

**SUPERINTENDING ENGINEER-I
COCHIN PORT AUTHORITY
FOR AND ON BEHALF OF THE BOARD OF MAJOR PORT
AUTHORITY FOR COCHIN PORT**

2. TENDER FOR WORKS

To

**The Board of
Major Port Authority
for Cochin Port
Through
The Chief Engineer
Cochin Port Authority, Cochin-9**

I/We hereby tender for the execution of the work specified in the underwritten memorandum within the time specified in such memorandum at the rates specified in the schedule attached hereto and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in clause 16 of the General Conditions of Contract and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as applicable.

M E M O R A N D U M

- | | | | |
|----|---|---|--|
| a) | General description of work | : | RENOVATION OF COCHIN PORT OFFICER'S SILVER JUBILEE BUILDING |
| b) | Estimated cost Put to Tender | : | Rs.9,74,790.00/-
(Rs.9,74,781.03) |
| c) | Earnest Money | : | Rs19,500.00 |
| d) | Security Deposit | : | 10% of the value of the Contract awarded or value of the work done whichever is higher. (Performance Security @ 5% of contract value payable on award of the work and Retention Money 5% of the gross amount of each bill) |
| e) | Percentage, if any, to be deducted from the bills | : | The Retention Money will be recovered from the first running bill onwards at the rate of 5% of the gross amount of each bill. |
| f) | Time allowed for commencement of work from the date of receipt of Letter of Acceptance/work order | : | 7 days |
| g) | Time allowed for the work from the date of commencement of work | : | 3 Months |
| i) | Schedule, specifications, conditions, drawings etc. | : | As per 'Contents' sheet attached. |

Should this tender be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the tender and conditions of Contract annexed hereto and in default to execute an agreement with CoPA in the prescribed form within prescribed period, or submission of Performance Security within the prescribed period, agree to forfeit the Earnest Money deposited by me/us, in addition to any other remedy available with Cochin Port against me/us. The sum of Rs..... which will be deposited with Financial Adviser and Chief Accounts Officer of the Port Authority as Performance Security (a) the full value of which is to be absolutely forfeited to CoPA without prejudice to any other rights or remedies of CoPA should I/We fail to commence the work specified in the Contract Data or should I/We make any delay in progress of the work or if the contract is terminated on my/our default. ; or (b) the full value of which shall be retained by the Board on account of the security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Contract Data and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 40.3 of the General Conditions of Contract.

Dated the day of 2026

Signature of the Tenderer

Address :

Witness :

Address :

Occupation :

ACCEPTANCE

The above tender is hereby accepted by me for and on behalf of the Board.

Dated the day of 2026.

Dated

**CHIEF ENGINEER
COCHIN PORT AUTHORITY**

3. CONTRACT DATA

Items marked “N/A” do not apply in this Contract.

Sl. No.	Description	Reference Clause No. in GCC												
1	<i>The following documents are also part of the Contract</i>													
	The Schedule of other Contractors	(8.2)												
	The Schedule of Key personnel ñ As per Tender	(9)												
	<table><tr><td>Qualification of Staff</td><td>No.</td><td>Min. Experience (Years)</td><td>Rate of recovery in case of non-compliance</td></tr><tr><td>Graduate Engineer or Diploma Engineer</td><td>1</td><td>2</td><td>Rs.15,000/- p.m</td></tr><tr><td></td><td>1</td><td>5</td><td></td></tr></table>	Qualification of Staff	No.	Min. Experience (Years)	Rate of recovery in case of non-compliance	Graduate Engineer or Diploma Engineer	1	2	Rs.15,000/- p.m		1	5		
Qualification of Staff	No.	Min. Experience (Years)	Rate of recovery in case of non-compliance											
Graduate Engineer or Diploma Engineer	1	2	Rs.15,000/- p.m											
	1	5												
2	The Employer is:	(1)												
	The Board of Major Port Authority for Cochin Port, COCHIN PORT AUTHORITY, Cochin -9.													
	Name of Authorized Representative:													
	Name : Dr.M.Angamuthu I.A.S, Chairperson, Cochin Port Authority, Cochin -09.													
3	The Engineer is													
	Name : Col Jassar S M Chief Engineer , Cochin Port Authority, Cochin-9.													
	Name of Nominee/Engineer-in-Charge: Name: Sri. Sudhir J Sawant, Superintending Engineer-I													
4	Name of Contract- RENOVATION OF COCHIN PORT OFFICER’S SILVER JUBILEE BUILDING Tender No. T6/T-2112/2026-C	(1)												
5	10 copies of Contract Agreement shall be furnished by the Contractor	(7.1)												
6	Tender document and other data are available at Cochin Port web site, Government of India CPP Portal and e ñ tendering portal. www.cochinport.gov.in www.eprocure.gov.in www.tenderwizard.com/CPT	(7.2)												

Sl. No.	Description	Reference Clause No. in GCC
7	The Intended completion date for the whole of the Work is 3 Months with the following milestones:	(17,28)
8	Milestone dates:	
	Physical works to be completed	
	Period from the date of receipt of LoA to commence and proceed with the work	
	3 Months	7 days
9	The following shall form part of the Contract Document: (1) Agreement (2) Letter of Acceptance (3) Bill of quantities (4) Contractor's Bid (5) Correspondence exchanged after the opening of the Bid and before the issue of Letter of Acceptance by which the Condition of Contract are amended, varied or modified in any way by mutual consent (to be enumerated). (6) Contract Data (7) General Conditions of Contract (8) General Description and Special Conditions of Contract (9) Technical Specifications (10) Drawings if any and (11) Any other documents listed in the Contract Data as forming part of the Contract.	(2.3)
10	The Contractor shall submit a Program for the Works within 3 days of date of the Letter of Acceptance.	(27)
11	The site possession date The site will be handed over within 7 days after issue of LoA, and failure to take over the same within such period shall be attributable to contractor alone. Note: In case complete handover of site is not possible, Engineer-in-Charge at his discretion, can handover the site in Phase-wise manner as deemed sufficient conforming to the completion timeline.	(21)
12	The start date shall be 7 days from the date of receipt of the Letter of Acceptance (LoA) by the Contractor.	(1)
13	The site is located in W/Island.	
14	The Defects Liability Period: One year from the date of completion of the work.	(36)
15	The minimum insurance cover for physical property,	(13)

Sl. No.	Description			Reference Clause No. in GCC
	injury and death is Rs.10 lakhs (Rupees Ten lakhs) per occurrence with the number of occurrences unlimited. After each occurrence, Contractor will pay additional premium necessary to make insurance valid always.			
16	The following events shall also be Compensation Events: NIL			(44)
17	The period between Programme updates shall be 7 days.			(27)
18	The amount to be withheld for late submission of an updated programme shall be ----- NA			(27)
19	The language of the Contract documents is English.			(3)
20	The law, which applies to the Contract, is the law of Union of India.			(3)
21	The currency of the Contract is Indian Rupees.			(46)
22	The proportion of payments retained (Retention Money) shall be 5% from each bill subject to a maximum of 5% of the contract price.			(48)
23	The maximum amount of Liquidated Damages for the whole of the works is 10% of the Contract Price.			(49)
24	The amounts of the Advance Payments: NA			[51]
	Nature of Advance	Amount (Rs)	Conditions to be fulfilled	
	1.Secured Advance for non-perishable Materials brought to site	75% of Invoice value or Market value whichever is Lower.	The non perishable materials, in accordance with Tender b) Such materials have been delivered to site and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer or his nominee. 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	

Sl. No.	Description			Reference Clause No. in GCC
			form approved by the Engineer or his nominee and such records shall be available for inspection by the Engineer or his nominee.	
25	Repayment of advance payment for mobilization: NA			(51)
26	Repayment of advance payment for Construction and equipment: NA			(51)
27	Repayment of Secured Advance: NA			(51)
28	The date by which óas-builtô drawings are required is within 90 days of issue of certificate of completion of whole or section of the work, as the case may be: NA			(58)
29	The amount to be withheld for failing to supply óas builtô drawings and/or operating and maintenance manuals by the date required is ----- NA			(58)
30	Schedule of Rates Applicable: CPWD DSR 2023 + 35% Cost Index x 0.8246 for correction factor of DSR rate & deducting GST.			
31	Base Rate for materials to be considered for price variation NA			(47)
32	Permissible wastage on theoretical quantities of (a) Cement : (+) 2% (b) Steel Reinforcement and structural steel sections for each diameter, section and category : (+) 5.99 % (c) Bitumen/Bitumen emulsion : (+) 2.5%			(47)

Signature of Bidder

4. INSTRUCTIONS TO BIDDERS

- 4.1 Electronic Tenders (e-tenders) on percentage basis under 'Two Cover system' are invited for **"RENOVATION OF COCHIN PORT OFFICER'S SILVER JUBILEE BUILDING"**.
- 4.2 The tenderer shall submit the tender Cover-A (Hard Copy of EMD & Cost of Tender form **on the due date of submission of the tender within the prescribed time limit**. All the Technical Bid documents & Price Bid shall be submitted **"online"**.
- 4.3 The Tender Document will be available as three separate files in the e-tendering Portal:
- Technical Bid Documents (as per Sl. No 1 to 7 of the Contents sheet)
 - Price Bid: Schedule of quantities of Work- Schedule-A and
 - General Conditions of Contract-2016
- 4.4 The tenderer shall upload the documents indicated in 4.3 (i) & (iii) above and also the Schedule of Quantities (Percentage) [as per Cl.4.3(ii), duly filled in, **"online"**.
- 4.5 SUBMISSION OF TENDERS**
- 4.5.1 The Cover A containing hard copy of EMD & Cost of Tender form as mentioned in Table 3 of Tender Notice shall be submitted **on the due date of submission of the tender within the prescribed time limit**.
- 4.5.2 Technical Bid (Online mode)**
- 4.5.2.1 Technical Bid shall contain all technical and commercial details except Schedule of Quantities. It shall consist scanned/ soft copies of the following documents.
- A covering letter from the tenderer enlisting the enclosures/ attachments.
 - Original Tender Document (Technical Bid) including all Addendum/Corrigenda if any except Schedule of Quantities.
 - Copy of the documents in proof of fulfilment of the Minimum Qualification Criteria
 - Copy of PAN Card, ESI/EPF & GST Registration documents.
 - Copy of Authorisation documents of Signatory of the bid in case of Registered Partnership firm / Limited company
 - Partnership deed or Memorandum and Article of Association of the company and registration certificate of the company as the case may be.
 - Bank information for e-payment system (Annexure IV)
 - Power of Attorney (Annexure III)
 - Any other relevant document.
- 4.5.2.2 Scanned copies of all documents as per Clause 4.5.2, EMD and Cost of Tender Form shall be submitted as 'Technical Bid'.
- 4.5.2.3 Departmental Tender Document (except Schedule of Quantities), along with scanned copies of Cost of Tender form, EMD and other documents as per Clause 4.5.2 shall be submitted **'online'** before **14.30 hrs** of opening date of the Tender. **In no case shall filled in Price Bid - Schedule of Quantities be submitted in hard copy, as it shall result in rejection of the tender.**

4.5.2.4 No changes shall be made in the tender documents. An undertaking that no changes have been made in the Tender document downloaded has to be furnished in **Annexure-II**.

4.5.2.5 Bidder or his authorised person has to visit the site at their own expense and after obtaining permission from EE(M), Also Undertaking as per **Annexure-VII** to the effect that site visit has been conducted prior to quoting shall be submitted along with Technical Bid.

4.5.3 Price Bid:

4.5.3.1 Price Bid shall contain only the óSchedule of Quantitiesô, which shall be **submitted only in e-tendering mode**.

4.5.3.2 **Tenderer should ensure that his tendered percentage as per ‘Price Bid’ is not mentioned anywhere in any other documents, directly or indirectly. If any such mention is made, the tender will become invalid and shall become liable for rejection.**

4.6 Minimum Eligibility Criteria: The bidders eligible for participating in the tender may be Individual, Proprietorship, Registered Partnership firms, L.L.P, Company or JV. The proof thereof shall be submitted.

a) Experience

The tenderers should have experience of having successfully completed during the last 7 (seven) years ending **31st August, 2026**, at least either:

i. Three Similar Works each costing not less than **Rs.3.90 lakhs**
(OR)

ii. Two Similar Works each costing not less than **Rs.4.88 lakhs**
(OR)

iii. One Similar Work costing not less than **Rs.7.80 lakhs**

b) Financial Turnover

Average Financial Turnover of the tenderer over the last three financial years ending 31st March 2025/[2022-‘23, 2023-‘24 &2024-‘25] shall not be less than **Rs.2.93 lakhs**.

Explanatory Notes to a) & b):

i. Similar work(s) means “**Civil Construction/ Repair/ Retrofitting Works of structures**”. The experience certificate of works executed in private sectors/ organisations shall be considered for qualification, only on submission of TDS certificate (**Form No.26AS**) along with work order and completion certificate.

ii. The experience certificate of works executed in Public Sector / Govt Organisations on submission should accompany with TDS certificate (**Form No.26AS**) along with work order and completion certificate.

iii. **Copy of completion certificates of each work** issued by the employer/owner/ responsible officer of the employer/owner under whom he has executed such contract shall be attached. The certificate shall contain details of work involved specifying the nature of work, the completion cost of the work, date of commencement & date of completion of the work.

iv. The works reckoned for the above purpose are those executed by the tenderers as prime Contractor or proportionately as member of joint

venture or Sub Contractor. The Sub-Contractor shall be an authorized and approved Sub-Contractor by the Employer of the work(s) against which the tenderer has claimed his experience. The tenderer shall attach attested copy(s) of approval issued by the Employer(s) authorizing as a Sub-Contractor; in proof of the claim of the tenderer as a sub-Contractor. The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.

- v. Following enhancement factors will be used for the costs of works executed for bringing the financial figures to a common base value in respect of the works completed in the past years

Table 1

Year before	Multiplying factor
One year	1.07
Two years	1.14
Three years	1.21
Four years	1.28
Five years	1.35
Six years	1.42

vi. **Financial Turnover:**

In proof of Financial Turnover Audited Annual Accounts Statements (Balance Sheet & Profit & Loss Account Statement) & Turnover Certificate signed by the Chartered Accountant or IT returns duly acknowledged by the Income Tax department along with Computation Statement signed by the Chartered Accountant, for the last three years ending on 31st March 2025 shall be produced by the tenderer.

C). Other Eligibility Considerations

- I. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
 - i. made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
 - ii. record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, disqualifications/ black listing/ debarring by Govt. departments etc.
- II. **The bidders having EPF/ ESI registration certificates only shall be considered for qualification in the tender, if applicable, as per EPF /ESI Acts. In case, the Tenderer does not have the required number of employees which makes such registration mandatory, an Undertaking as per Annexure I to the effect shall be furnished. The contractor/ approved Sub-contractor if any , shall comply with all the provisions of The Code on Wages (2019), The Code on Social Security (2020), The Industrial Relations Code (2020), and The Occupational Safety, Health and Working Conditions (OSH) code (2020) etc. Amended from time to time and**

rules framed there under and other laws affecting the contract labour that may be brought into force from time to time.

4.7. OPENING AND EVALUATION OF TENDERS

- 4.7.1 Technical Bids of the tenders received shall be opened at 15.00 hrs. on **22/09/2026**, the last date fixed for receiving the bid, in the Superintending Engineer-I's chamber in the presence of the tenderers or their representatives as may be present.
- 4.7.2 After opening the Technical Bid documents, it shall be thoroughly checked for completeness with respect to the details stipulated to be submitted as Technical Bid by the tenderer. The Price Bid of those tenderers satisfying the tender requirements shall only be opened. The Price Bid of those tenderers who are found responsive and satisfactory on evaluation of Technical Bid documents, will be opened after bringing all tenderers to the same footing and giving notice to the short listed tenderers, on a date to be decided and intimated later.

4.8 GENERAL INSTRUCTIONS TO TENDERERS

- 4.8.1 The submission of a tender by the tenderer implies that he has read the whole tender Documents including GCC-2016.
- 4.8.2 The tenderer is advised to visit and examine the site of work and its Surroundings, discuss with connected agencies and collect all necessary information on his own responsibility for preparing the tender (**Annexure VII shall be submitted**).
- 4.8.3 The tenderer is expected to examine the Tender Documents including all conditions, specifications, forms etc and also conditions in the G.C.C. Failure to furnish the information required in the Tender Documents/ G.C.C. or submission of a tender not conforming to the requirements in every respect, is likely to result in the rejection of the tender.
- 4.8.4 The tenderer shall quote for the work on percentage basis. The departmental rate for each item of work is given in the Schedule of Quantities. The tenderer shall fill the percentage above or below the Departmental rate, in the column provided for the purpose in the Schedule.
- 4.8.5 In case of discrepancy between the specifications and the drawings, the following order of preference shall be observed:
- a. Conditions & Specifications of tender
 - b. Drawings.
 - c. B.I.S Specifications.
 - d. Sound Engineering Practice.
- 4.8.6. If there are varying or conflicting provisions made in any document forming part of the Contract, the Chief Engineer, Cochin Port Authority, Cochin-682009 shall be the deciding authority with regard to the intention of the document which will be binding on the tenderer/ Contractor.
- 4.8.7 Any error in description, any omissions there shall not vitiate the Contract or release the Contractor from the execution of whole or any part of the works comprised therein according to specifications or from any of his obligation under the Contract.
- 4.8.8 The Chief Engineer, Cochin Port Authority shall have the right to omit or Suspend certain items of work or revise or amend the Tender Documents at any

time prior to the due date of submission of the tender. Such revisions or amendments or extensions if any, shall be communicated to all the bidders who have downloaded the Tender Documents, in the form of an addendum by telefax /e- mail / writing. In order to afford the Bidders with reasonable time to take addendum into account, or for any other reason, the Port Authority may, at its discretion, extend the due date for submission of tender.

4.8.9 All payments due to the Contractor under this Contract will be made in Indian Rupees only.

4.8.10 Tenders received after the date specified for submission shall not be opened.

4.8.11 The Bank Guarantees (BGs) to be furnished by the Contractors in connection with the tender shall be sent to by the Chief Engineer, Cochin Port Authority directly by the issuing bank under registered post with AD. The Contractor shall take the responsibility of sending BGs directly to the Port Authority by the issuing bank.

4.9 Bid Validity

Bids shall remain valid for a period not less than **One hundred and Twenty days (120 days)** from the deadline date for bid submission. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

In exceptional circumstances, prior to expiry of the original time limit, the Employer may request the Bidder to extend the period of validity for an additional period. The request and bidders response shall be made in writing. A bidder agreeing to the request will not be permitted to modify his bid (ie, the extension shall be unconditional).

SIGNATURE OF TENDERER.

5. GENERAL DESCRIPTION AND SPECIAL CONDITIONS OF CONTRACT

1. SCOPE OF WORK

1.1 The proposed work is for “RENOVATION OF COCHIN PORT OFFICER’S SILVER JUBILEE BUILDING”.

The work consists of the following:

CIVIL WORKS

- (i) Dismantling of Tiles, Concrete, various sanitary, Carpentry and Masonry items.
- (ii) Dismantling of Aluminium/ Gypsum Partitions, doors, windows, fixed glazing , False Ceiling.
- (iii) Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc.
- (iv) Demolishing brickwork.
- (v) Brick work with common burnt clay machine moulded perforated bricks.
- (vi) Repairs and new plastering works.
- (vii) Providing, laying and grouting joints of tile work.
- (viii) Structural steel works & finishing with epoxy paint.
- (ix) Providing, fixing, supplying, laying & jointing various plumbing & Sanitary items made of PVC, CPVC, CI, C.P Brass, PTMT etc.,
- (x) Providing ,fixing panelled or paneled and glazed shutters for doors , windows or clerestory windows etc.,
- (xi) Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames.
- (xii) Providing and fixing to existing door frames Glass Fibre Reinforced Plastic (FRP) panelled door shutter.
- (xiii) Painting and Associated works.
- (xiv) Providing and fixing tiled false ceiling of specified materials.
- (xv) Cleaning and disposing of all dismantled materials and debris from the site after completion of work.

- 1.2** The work has to be executed in a functioning office. So the work shall be meticulously planned in consultation with the departmental supervisory staff to ensure minimal inconvenience to the employees.

2. WORK SITE

The work has to be carried out at COCHIN PORT OFFICER’S SILVER JUBILEE BUILDING at Willingdon Island. Security rules and regulations including obtaining passes etc. if any for work are to be observed by the contractor. The work is to be carried out without disturbing the office functioning and Port Activities. The work site is easily accessible through road.

3. TIME SCHEDULE AND MONITORING OF PROGRESS

- 3.1** The tenderer shall prepare and attach with the tender a detailed work schedule indicating key activities and critical items for completing the work within the

stipulated Contract period of **3 Months**. This time schedule will form the basis for monitoring the progress of work.

4. MATERIALS / FACILITIES TO BE PROVIDED BY DEPARTMENT

4.1. CONTRACTOR'S WORK AREA

Space will be made available to the Contractor free of rent for storing materials and equipments etc., adjacent to the work site for the duration of the Contract. After the work is over, Contractor shall at his cost, reinstate the area by clearing the temporary works, debris etc. as decided by the Engineer's Nominee.

5. CONTRACTOR'S RESPONSIBILITY

- 5.1 The tenderer shall visit the area before tendering. It will be deemed that the tenderer has visited the site and studied the site conditions before submitting the tender. The tenderer should get himself acquainted with the nature and extent of the work. No claim whatsoever will be entertained on the plea of ignorance of difficulties involved in execution of work or carriage of materials etc.
- 5.2 All materials, plants and equipments, required for the work shall be provided by the Contractor at his own cost, and shall conform to relevant I.S. Specification unless otherwise specified.
- 5.3 Samples of all materials, to be incorporated in the work shall be got approved by the Engineer's Nominee before procurement.
- 5.4 The Contractor shall thoroughly study the specifications and errors/ omissions/modifications if any shall be brought to the notice of the Engineer-in-Charge well in advance so that a final decision in the matter could be given in time.
- 5.5 All labour, skilled or unskilled shall be provided by the Contractor. Settling any dispute with the labour will be Contractor's responsibility. Insurance as per Indian Workmen's Compensation Act for the Contractor's workmen and Public Liability Policy shall be provided by the Contractor at his own cost.
- 5.6 The Contractor shall be solely responsible for any damage or injury to the persons or things caused or suffered during the execution of the work and shall be made good or compensated at his own cost.
- 5.7 The Contractor shall take all care and precautionary measures for avoiding any kind of damage/accidents in the work site due to any of his reasons. The Contractor shall indemnify the Port against any compensation whatsoever payable to the workmen for accident or loss arising out of and in the course of their employment under this Contract.
- 5.8 The work shall be arranged by the Contractor without causing any damage to Port structures. Any damage or accident caused by the Contractor's operation shall be compensated / made good at Contractor's risk and cost to the satisfaction of the Engineer's Nominee of the works, failing which department will do the rectification work and the cost incurred will be recovered from his bill or from security deposit.
- 5.9 The Contractor shall not construct any structure, even of temporary nature, for any purpose at site, except with the written permission of the Engineer's Nominee of the work and any construction so put up shall be removed by the Contractor whenever the Engineer's Nominee calls upon the Contractor to do so.

- 5.10 The Contractor shall remove all temporary works, clear and make good the site, at his cost to the satisfaction of the Engineer's Nominee before the site is returned to the Port Authority. All materials shall be disposed to any place as pointed out by the Engineer's Nominee of the work and site shall be cleared in every respect at no extra cost after completion of work.
- 5.11 The Contractor shall remove all materials brought to work site / stacked at the work site or anywhere else within the Port area and clear the site at his cost to the full satisfaction of the Engineer's Nominee before the site is returned to the Port Authority. All such materials including debris, tools & plants etc. shall be disposed off to any place as pointed out by the Engineer's Nominee or be taken away from the location and shall be cleared in every respect and to reinstate to its original condition at no extra cost to the Port Authority immediately after completion of the work. In case, any such material is found left in the work site or anywhere in the Port area, rent for the storage space occupied by the Contractor, either for stacking the materials /debris or for areas used for such purpose but not cleared thereafter, will be recovered as per the prevailing Scale of Rate of Cochin Port Authority, for the rent applicable for open storage space for commercial purpose, for the period for which the area had been occupied by the Contractor. In addition to the above, in case the Port requires the area immediately for its use, Port will repossess the land after restoring it to its original condition, material will be confiscated and disposed off at the risk and cost of the Contractor, after issuing two notices giving 15 days' time each for removing the material. All expenses incurred in this shall be recovered by disposing off the material if any confiscated. If any balance amount still remains to be realized that will be recovered from the Contractor by appropriate means.
- 5.12 The Contractor shall observe all safety regulations during the execution of the work. Safety measures, precautions, warning signals etc. shall be taken/provided at the Contractor's cost, as directed by the Engineer-in-Charge of the work. The Contractor shall provide all necessary personnel protection equipments such as helmet, lifeguard, goggles, boots, safety belts etc. to the workmen at his own cost and it shall be the Contractor's responsibility to ensure that they use it while on the work site.
- 5.13 The Contractor shall ensure that no laborers with criminal background are engaged for the work.
- 5.14 The contractor shall take all precautions for not to damage any cables, pipelines etc. passing through the area of work.
- 5.15 The Contractor shall comply with all the provisions of the Indian Workmen's Compensations Act, Public Liability Policy, Provident Fund Regulations, Employees Provident Fund and ESI Act etc. amended from time to time and rules framed there under and other laws affecting the Contract labour that may be brought in to force from time to time.
- 5.16 **The bidders having EPF/ ESI registration certificates only shall be considered for qualification in the tenderers, if applicable, as per EPF /ESI Acts.**
In case, the Tenderer does not have the required number of employees

which makes such registration mandatory, an Undertaking as per Annexure I to the effect shall be furnished.

- 5.17 The Contractor shall provide, at every work place, at which 20 or more women workers are ordinarily employed, crèches of reasonable size and with adequate facility for the use of their children under the age of six years at his risk and cost.
- 5.18 The Contractor shall also be responsible for arranging and carrying out works as mentioned in Clauses 1.1 & 1.2 above.
- 5.19 **Defect Liability period of the work is one (1) year from the date of completion of the work.**

6. POWER AND WATER

- 6.1 **Electric power required for the work can be supplied by the department from the nearest existing line of the Port Authority at prevailing rates.** The cost of drawing temporary lines/ cables/ providing switches and making connection and metering arrangements etc, shall be borne by the Contractor. If there is any disruption in the power supply due to supply failure/ restrictions imposed by the Kerala State Electricity Board, the department shall not be held responsible and the Contractor has to make suitable alternative arrangements at their cost.
- 6.2 **Water required for the work shall be arranged by the Contractor at his own cost.**

7. WORKMANSHIP

- 7.1 All the works shall be done strictly according to relevant B.I.S. specifications unless otherwise specified. Whenever special conditions and other specifications deviate from the B.I.S. the former shall prevail.
- 7.2 The whole work shall be completed in a diligent manner within the Contract period and defect or imperfection if any, observed during the Defect Liability Period/ guarantee period the same shall be rectified at Contractor's cost to the full satisfaction of the Engineer's Nominee within the time allowed.
- 7.3 Precautions shall be taken for not to damage cables/ pipe lines etc.
- 7.4 The work shall be arranged in the order of preference and as directed by the Engineer's Nominee of work.

8. TEMPORARY WORKS

- 8.1 All scaffolding, staging, bracing and other temporary works required for proper execution of the works, shall be provided by the Contractor at his own cost, unless stated otherwise and that should be inclusive of all materials, labour, supervision and other facilities. The layout and details of such temporary works shall have prior approval of the Engineer's Nominee, but the Contractor shall be responsible for proper strength and safety of the same. All temporary works shall be so constructed as not to interfere with any permanent work or with the work of other agencies. If it is necessary to remove any of the temporary works at any time to facilitate execution of works or work by other agencies, such removal and re erection, if required, shall be carried out by the Contractor at the direction of Engineer's Nominee without any delay and any extra cost on this account shall be borne by the Contractor.

8.2 On completion of the works, temporary works if any provided by the Contractor shall be removed from the site and the area shall be reinstated to the original condition at his own risk and cost.

9. TIME FOR COMPLETION

9.1 The time allowed for carrying out the work as mentioned in the memorandum shall be strictly observed by the Contractor. The work shall throughout the time period be proceeded with diligence, time being deemed to be the essence of the Contract. The number of days lost due to heavy rain shall be certified by the Engineer's Nominee. The Contract period shall be extended for such certified days also without imposing compensation for delayed performance.

9.2 The whole work shall be completed in accordance with the provisions under Contract Data or such extended time as may be allowed as per clause 29 of G.C.C.

10. WORKING TIME

The normal working time of the Port Authority is from 8 a.m. to 4.00 p.m. on all weekdays. If the Contractor wishes to carry out the work beyond normal working hours and or on holidays, he should get specific approval from the Engineer's Nominee for the same. Necessary supervision will be arranged by the department and the expenditure to be incurred in this connection will be borne by the department.

11. RATES FOR VARIOUS ITEMS

The rate specified for each item shall be all inclusive value of the finished work, income tax and other taxes but excluding Service Tax.

12. ALTERATIONS / ADDITIONS / OMISSIONS

The quantities given in the bill of quantities (Schedule of items) are only approximate and payment will be made as per actual quantity of work done and rate specified.

13. MEASUREMENT

The quantities shall, unless otherwise stated, be measured in accordance with I.S.1200.

14. For levying compensation as per Clause-49 of General Conditions of Contract (GCC), the Employer is not required to have documentary evidence to quantify or prove the losses suffered by the Employer due to delay in completion of work by the Contractor, as per conditions.

15. Clause-25 of GCC- "Settlement of Disputes and Arbitration" is not applicable in this Contract.

16. Clause-26 of GCC- "Computerised Measurement Book" is modified to the extent as detailed below.

Measurements of Work Done:

Executive Engineer (hereinafter called the Engineer's Nominee) shall, except as otherwise provided, as certain and determine by measurement the value in accordance with the Contract of work done.

All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the Contract.

All measurements and levels shall be taken jointly by the Engineer's Nominee or his authorised representative and by the Contractor or his authorised representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer's Nominee and the Contractor or their representatives in token of their acceptance. If the Contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the Contractor or his authorised representative is not available and the work of recording measurements is suspended by the Engineer's Nominee or his representative, the Engineer's Nominee and the Department shall not entertain any claim from Contractor for any loss or damages on this account. If the Contractor or his authorised representative does not remain present at the time of such measurements after the Contractor or his authorised representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer's Nominee or his representative shall be deemed to be accepted by the Contractor.

The Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The Contractor shall give not less than seven days' notice to the Engineer's Nominee or his authorised representative in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer's Nominee or his authorised representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer's Nominee's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer's Nominee or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions

stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this Contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the Contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

17. MODIFICATIONS TO GCC

The following clauses of GCC shall be replaced and modified as below:-

17.1 Definitions

Following definition stand replaced as:

Market Rate is the rate decided by the Engineer on the basis of the cost of materials and labour at the site where the work is to be executed plus 15% to cover all overheads and profits

17.2 Clause 45 and Clause 80 of GCC shall be modified as below;

Clause 45-Rates for items to be inclusive of Taxes The rate quoted by the Contractor shall be inclusive of the cost of provision of plant and equipment, materials, labour, execution, supervision, maintenance, overheads and profits and every incidental and contingent cost and charges whatsoever excluding Goods and Service Tax (GST). GST as may be applicable from time to time shall be shown separately in the invoice. The Employer will perform such duties in regard to the deduction of such taxes at sources as per applicable law. Any new Taxes, levies, duties imposed after signing the Contract shall be reimbursed by the Employer on production of documentary evidence. The invoice to be submitted by the Contractor should include the GST Registration Number of the Contractor as well as the Employer.

17.3 Clause 80-Taxes and Duties

Income Tax The Contractor and his staff shall be responsible for payment of all personal income taxes to the concerned authorities as per the law in force from time to time. Deduction of Income Tax shall be made by the Employer from each certificate of payment to the Contractor as per the prevailing rate such other rates as may be specified by the Central Government from time to time, on the gross amount of the Contractor's bill for payment. The Contractor shall comply all the GST Regulations viz. timely uploading of bills, issue of debit/ credit notes etc.

GST -TDS Under GST Law Shall Be Deducted As Per Prevailing Rate

17.4 Sub clause 43.2 under Clause 43:Payments,..... in GCC 2016 stands amended as given below:

43.2 Payment of bills for Civil Works shall be regulated as detailed hereunder:

43.2.1 Any Interim/Final bill which is incomplete in any respect shall be returned to the Contractor within 5 days of date of submission of bill to the Engineer or his Nominee.

43.2.2 Interim bills shall be paid within 21 days of date of submission of bills in full shape, by the Contractor, as detailed below.

- 43.2.3 Clarifications/corrections if any required on an Interim bill submitted, shall be sought from the Contractor within 4 days of submission of the bill and also, all such clarifications/corrections required shall be sought at one go except in exceptional circumstances. The Contractor shall submit the clarifications including carrying out corrections in the bill, if required, within 4 days thereafter. The clarified / corrected bill shall be verified and forwarded to Finance Department within the next 4 days. Clarifications if any required by the Finance Department shall be sought within 3 days and the Engineer/Nominee shall clear it on top priority within the next 3 days and, finally, the bill shall be paid to the Contractor within 3 days thereafter, i.e., within a total 21 days of date of submission of bills in full shape, as indicated above.
- 43.2.4 However, on request by the Contractor, 75% of the bill amount shall be paid within 7 days of submission of the bill. Balance amount of the verified bill shall be paid within 21 days of the submission of the bill, on completion of all contractual requirements as brought out at sub clause 43.2.3. above.
- 43.2.5 Final bill shall be paid within 3 Months of issue of Taking Over Certificate by the Engineer / Nominee, as detailed below.
- 43.2.6 The Contractor shall submit the Final bill to the Engineer / Nominee within 20 days of issue of Taking Over Certificate by the Engineer / Nominee. The bill shall be checked and all clarifications/corrections required on the bill submitted, shall be sought from the Contractor within 15 days thereafter. The Contractor shall submit the clarifications including carrying out corrections in the bill, if required, within the next 10 days. The clarified / corrected bill shall be verified and forwarded to Finance Department within the next 15 days. Thereafter, clarifications if any required by the Finance Department shall be sought within 10 days and the Engineer/Nominee shall clear it on top priority within the next 10 days and, finally, the bill shall be paid to the Contractor within 10 days thereafter, i.e., within a total 3 Months of issue of Taking Over Certificate by the Engineer / Nominee, as indicated above.
- 43.2.7 However, on request by the Contractor, 50% of the final bill amount shall be paid within 7 days of submission of the bill, which will be adjusted against the final bill payment, on completion of all contractual requirements as brought out at sub clause 43.2.6 above.

17.5 Clause 21-Possession of Site

The clause stands ~~Deleted~~ and will not be considered under the purview of this contract.

- 18.** Any disputes and differences between the parties shall be resolved in the Jurisdiction of Courts in Cochin alone.
- 19.** In case of any contradiction between the Clauses in Tender Document and that in GCC, the clauses in the tender document shall prevail

SIGNATURE OF TENDERER

DETAILED SPECIFICATIONS FOR MATERIALS TO BE USED ON WORK

6.1 GENERAL

- 6.1.1 Except where otherwise specified or authorized by the Engineer-in-Charge, materials supplied by the contractor shall conform to the latest edition of the Indian Standard Specifications and code of practices published by the Indian Standard Institution. Samples of materials to be supplied by the contractor shall be shown to the Engineer-in-Charge sufficiently in advance for approval of its quality for use on the work.
- 6.1.2 All materials supplied shall be stored appropriately to prevent deterioration/ damage from any cause what so ever and to the entire satisfaction of the Engineer-in Charge.
- 6.1.3 The materials required for the work shall be brought to the site and stacked at the places shown by the Engineer-in-Charge and the same shall be got approved for use in work sufficiently advance so that the progress of the work is not affected by the supply of materials.
- 6.1.4 Payment for the materials supplied, shall be given only after they are used on the work.
- 6.1.5 Tolls are payable by the Contractor as per rules for vehicles using the Portös road for supplying the materials.

6.2 FINE AGGREGATE FOR MAKING MORTAR FOR MASONRY WORK / PLASTERING WORK

- 6.2.1 Fine Aggregate used for masonry mortar shall conform to IS:2116. Sand used for plastering shall conform to IS:1542-1992.

6.3 AGGREGATES FOR CONCRETE

- 6.3.1 Aggregates (fine and coarse) for concrete shall comply with the requirements of IS: 383 ñ öSpecifications for coarse and fine aggregate from natural sources for concreteö Aggregate shall be obtained from sources approved by the Engineer-in-Charge. Aggregates, which are not perfectly clean, shall be washed in clean water to the entire satisfaction of the Engineer-in-Charge.
- 6.3.2 The fine aggregate shall be clean, hard, durable, uncoated, dry and free from injurious, soft or flaky pieces and organic or other deleterious substances.
- 6.3.3 Each type of aggregate shall be stored separately for the approval of Engineer-in-Charge. Wet aggregate delivered at the site shall be kept in storage for at least 24 hours to ensure adequate drainage before being used for concreting.

6.3.4 Contractor shall maintain at site at all times such quantities of each type of aggregate as are considered by the Engineer-in-Charge to be sufficient to ensure continuity of work.

6.4 CEMENT

6.4.1 Quality of cement used for the work shall be 53 grade ordinary Portland cement conforming to IS:12269 or Pozzolona cement conforming to I.S. 1489 unless otherwise approved by the Engineer-in-Charge.

6.4.2 The cement required for the work will have to be procured by the contractor and shall comply with the relevant IS. As far as possible, the cement required for the work will have to be procured from the government agencies. The cement shall, if required by the Chief Engineer / Engineer-in-Charge, be tested and analyzed by an independent analyst at the Contractor's cost and result produced to the Engineer-in-Charge.

6.4.3 Supply of cement shall be taken in 50kg bags bearing manufacturer's name and BIS marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS codes. In case, test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.

6.4.4 A cement godown of adequate capacity as directed by the Engineer-in-Charge shall be constructed by the contractors at the site of the work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The key of one lock shall remain with the Engineer-in-Charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge.

6.4.5 The cement brought to the site and cement remaining unused after completion of work shall not be removed from the site without written permission from /of the Engineer-in-Charge.

6.4.6 The cement shall be stored in a weather proof building with facilities for inspection.

6.4.7 The contractor shall maintain a cement register showing dates of receipt and issue, quantities used daily and balance which shall be accessible to the Engineer-in-Charge.

6.4.8 For cement stored in silo, clauses 1.1.3.3 and 1.1.3.4 are not applicable.

6.5 WATER

- 6.5.1 Clean fresh water free from oils, acids, alkalies, salt, sugar, organic materials or other harmful materials shall be used for washing aggregates, mixing and curing of concrete. The water used shall comply with clause 5.4 of IS:456-2000. Potable water is generally considered good for mixing concrete.
- 6.5.2 **Cochin Port Authority will not provide/supply water for the work.** Water has to be arranged by the contractor himself for the construction works including curing work at his own risk and cost.
- 6.5.3 Samples of water arranged by the contractor shall be taken by the Engineer in Charge and got tested in accordance with the provisions of relevant BIS codes. In case test results indicate that the water arranged by the contractor does not conform to the relevant BIS codes, the same shall not be used for any works. The cost of tests shall be borne by the contractor.

6.6 ADMIXTURES IN CONCRETE

- 6.6.1 Admixture in concrete will be allowed only with prior approval of the Engineer-in-Charge. The contractor shall produce test certificates from recognized laboratories before use, if so desired by the Engineer-in-Charge.

6.7 VITRIFIED TILE

- 6.7.1 The tiles shall be of approved premium quality, Johnson or Simpolo or Asian or Somany or Orient Bell make or equivalent and of approved colour and shade. The tiles shall generally conform to IS 15622. They shall be flat, and true to shape and free from blisters crazing, chips, welts, crawling or other imperfections detracting from their appearance. The tiles shall be nominal size of 100cm x 100cm or 80cm x 160cm or 120cm x 240cm or 120cm x 180 cm or 60cm x 120cm or 320cm x 160 cm and of minimum thickness 9mm and as directed and approved by the Employer. The size, colour and shade shall be got approved from the Engineer-in-Charge before purchasing. The minimum rate of the tile to be used for the work is specified in the schedule. The contractor shall produce invoice for verifying the rate.
- 6.7.2 The tiles shall be sound, true to shape, flat and free from flaws and other manufacturing defects affecting their utility.
- 6.7.3 The top surface shall be free from welts, chips, craze, specks, crawling or

other imperfections detracting from the appearance when viewed from a distance of one meter. The top surface shall be either polished or matt as specified.

6.7.4 Minimum 95% of tiles shall be free from visible defects that would impair the appearance of a major area of tiles.

6.7.5 The tiles shall conform to IS 15622 for dimensional tolerance, physical and chemical properties. Half tiles for use as full tiles shall have dimensions which shall be such as to make the half tiles when jointed together (with joints matching the pattern of floor tiles) match with dimensions of full tiles.

6.8 EPOXYGROUT

6.8.1 Grout is the material that is used to fill the space between adjacent tiles and support the joints.

6.8.2 The Epoxy grout consists of mix of 0.70 kg of organic coated filler of desired shade and mixing of 0.10kg of hardener and 0.20 kg of resin per kg. They have very low water absorption, higher compressive strength and are resistant to staining and easy to maintain. Epoxy grout is a waterless mix formed by mixing a base material (part A) and a hardener (part B). These components are mixed at site just prior to grouting.

6.8.3 Generally, epoxy grouts require no additional sealer to protect the surface.

6.9 REINFORCEMENT STEEL

6.9.1 Material for reinforcement shall consist of Thermo Mechanically Treated (TMT) bars of grade Fe-500D conforming to IS:1786, or higher grade as approved by the Engineer-in-Charge. The reinforcement steel shall be of tested quality and free from loose mill scale, rust, oil, paint, mud, or any other coating that may impair the bond between concrete and steel. All reinforcement bars shall be cleaned thoroughly before being placed in position.

6.9.2 Bars shall be cut, bent, cranked, hooked, or welded (where necessary) to the required shapes and dimensions as shown in the structural drawings or as directed by the Engineer-in-Charge. Cutting, bending and fabrication shall be carried out using approved mechanical equipment to ensure accuracy. All laps, splices, bends, hooks, and anchorage lengths shall be provided in accordance with relevant IS codes and as specified in the drawings. Welding of reinforcement, if permitted, shall be carried out in accordance with IS:2751 and IS:9417, using approved electrodes and qualified welders.

- 6.9.3 The binding wire used for tying reinforcement shall be annealed mild steel wire of 16 gauge (1.6 mm diameter) conforming to IS:280, and shall be tied securely at every intersection and joint to prevent displacement of bars during concreting. Adequate cover blocks and supports made of cement mortar or non-corrosive material of the same grade of concrete shall be provided to maintain the specified cover to reinforcement. Reinforcement bars shall be properly supported and secured using chairs, spacers, and stools to maintain their correct position and alignment before and during concreting.

6.10 EPOXY PAINT

- 6.10.1 Epoxy paint has got excellent adhesion properties and offers a balanced aesthetic and corrosion protective surface. Epoxy offers good resistance to water and humidity. Epoxy coating are used because of their outstanding chemical resistance, durability, low porosity and strong bond strength and it provides dry tough and protective coatings. Epoxy coatings are created, by chemical reaction using an epoxide resin and polyamine hardener.

6.11 WATER-THINNABLE CEMENT PRIMER

- 6.11.1 The primer used for the work shall be Silicon based primer, manufactured by Asian / Nerolac/ Berger/ Nitco or equivalent of premium quality.

6.12 ACRYLIC EMULSION PAINT EXTERIOR/INTERIOR

- 6.12.1 The weatherproof exterior acrylic emulsion paint and interior acrylic emulsion paint must be of approved premium quality and from a recognized manufacturer. The coverage of both paints shall adhere to the specifications provided by the manufacturer. The colour and shade of the paints shall be determined as per the directives of the Engineer-in-Charge.
- 6.12.2 The painting of internal walls shall consist of two coats of premium quality interior-grade acrylic emulsion paint, which contains a volatile organic compound (VOC) content of less than 50 grams per litre from an approved brand and manufacturer. Additional coats shall be applied as necessary to achieve a uniform shade and colour.
- 6.12.3 The painting of external walls shall be executed with two or more coats of 100% premium acrylic emulsion paint that complies with a VOC content of less than 50 grams per litre. This paint shall possess ultraviolet (UV) resistance as per IS 15489:2004, as well as resistance to alkali, fungi, and dirt. The exterior paint shall be of the required shade and shall include

silicone additives. The application shall be conducted over and including a priming coat of approved exterior primer.

6.12.4 The weather proof exterior acrylic emulsion paint shall be of approved premium quality either 'Apex Ultima' by Asian Paints, 'Weather coat' by Berger or Nerolac Excel or 'Weather shield' by ICI Dulux or Snowcryl XT-premium by Snowcem India Ltd. or Jotun Paints. The interior acrylic emulsion paint shall be of approved premium quality either manufactured by Asian Paint, Berger or Dulux or Nicholson or Jotun Paints. The coverage shall conform to the manufacturer's specification. The colour/ shade shall be as per direction of the Engineer-in-Charge.

6.12.5 The coverage shall conform to the Manufacturer's specification. The colour / shade shall be as per schedule or as per the direction of Engineer-in-Charge. . The paint shall be brought to the site of work by the Contractor in its original containers in sealed condition. The material shall be brought in at a time in adequate quantities to suffice for the whole work or at least a week's work. The materials shall be kept in the joint custody of the Contractor and the Engineer-in-Charge. The empty containers shall not be removed from the site of work till the relevant item of the work has been completed and permission obtained from the Engineer-in-Charge.

6.12.6 The Contractor shall invariably produce the Test Certificates and Bills with batch number and date, signed by an authorised person of the Manufacturer / Dealer, while seeking final approval of the Engineer-in-Charge for use on the Work.

6.13 SYNTHETIC ENAMEL PAINT

6.13.1 The Synthetic Enamel paint shall be of approved premium quality and shall conform to IS : 2932 (2003). The coverage shall conform to the Manufacturer's specification. The colour / shade shall be as per schedule or as per the directions of Engineer-in-Charge. The paint shall be brought to the site of work by the Contractor in its original containers in sealed condition. The material shall be brought in at a time in adequate quantities to suffice for the whole work or at least a week's work. The materials shall be kept in the joint custody of the Contractor and the Engineer-in-Charge. The empty containers shall not be removed from the site of work till the relevant item of the work has been completed and permission obtained from the Engineer-in-Charge.

6.13.2 The Contractor shall invariably produce the Test Certificates and Bills with batch number and date, signed by an authorized person of the Manufacturer

/ Dealer, while seeking final approval of the Engineer-in-Charge for use on the Work.

6.14 STRUCTURAL STEEL

- 6.14.1 The mild steel flats / plates used for the work shall conform to I.S. 2062. The material shall be free from visible as well as hidden defects such as pitting cracks, laminations, twists etc. and excessive rusting.
- 6.14.2 It is not necessary for the Contractor to obtain separate approval in case mild steel tube/pipe/plate is purchased from Steel Authority of India Ltd. or TATA Iron & Steel or Jindal Steel & Power Ltd. (JSPL). For purchase from other sources, the contractor shall apply sufficiently in advance and obtain written permission of the Engineer-in-Charge for making purchase from such sources.
- 6.14.3 Mild Steel Rectangular / Square Hollow Sections used shall be of Yst 310 grade conforming to IS : 4923. Pipes shall be designated by their outer dimension and weight per metre. It shall be free from visible as well as manufacturing defects such as pitting, cracks, laminations, twists etc. and excessive rusting.
- 6.14.4 Mild Steel tubular sections used shall be of Yst 320 grade conforming to IS 806 & 1161. Tubes shall be designated by their nominal bore and weight per metre. It shall be free from visible as well as manufacturing defects such as pitting, cracks, laminations, twists etc. and excessive rusting.

6.15 VITREOUS CHINA CISTERNS

- 6.15.1 The thickness of the body including cover shall be not less than 6 mm for vitreous China cisterns. The outlet of each syphon or stand pipe shall be securely connected to the cistern by means of lock nut. The cistern shall be free from manufacturing faults and other defects affecting their utility. All working parts shall be designed to operate smoothly and efficiently. Cistern shall be mosquito proof. A cistern shall be considered mosquito proof only if there is no clearance any where which would permit a 1.6 mm wire to pass through in the permanent position of the cistern i.e. in the flushing position or filling position. The breadth of a low level cistern, from front to back shall be such that the cover or seat, or both, of water closet pan shall come to rest in a stable position when raised. The cistern shall be supported on two cast iron brackets of size as approved by the Engineer-in-Charge
- 6.15.2 All vitreous sanitary appliances (Vitreous China) shall conform to IS 2556 (Part-I) general requirements.

6.15.3 Flushing Cisterns

The flushing cisterns shall be automatic or manually operated high level or low level as specified, for water closets and urinals. A high level cistern is intended to operate with minimum height of 125 cm and a low level cistern with a maximum height of 30 cm between the top of the pan and the underside of the cistern. Cisterns shall be of following type (i) Vitreous China (IS 774) for Flushing type (ii) Automatic Flushing Cistern (IS 2326) and (iii) Plastic cisterns (IS 7231).

6.15.4 Wash Basins

Wash basins shall be of white vitreous china conforming to IS 2556 (Part -I) and IS 2556 (Part-4). Wash basins either of flat back or angle back as specified shall be of one piece construction, including a combined overflow. All internal angles shall be designed so as to facilitate cleaning. Each basin shall have a rim on all sides, except sides in contact with the walls and shall have a skirting at the back. Basins shall be provided with single or double tap holes as specified. The tap holes shall be 28 mm square or 30 mm round or 25 mm round for pop up hole. A suitable tap hole button shall be supplied if one tap hole is not required in installation. Each basin shall have circular waste hole to which the interior of basin shall drain. The waste hole shall be either rebated or beveled internally with diameter of 65 mm at top. Each basin shall be provided with a non-ferrous 32 mm waste fitting. Stud slots to receive the brackets on the underside of the wash basin shall be suitable for a bracket with stud not exceeding 13 mm diameter, 5 mm high and 305 mm from the back of basin to the centre of the stud. The stud slots shall be of depth sufficient to take 5 mm stud. Every basin shall have an integral soap holder recess or recesses, which shall fully drain into the bowl. A slot type of overflow having an area of not less than 5 sq. cm, shall be provided and shall be so designed as to facilitate cleaning of the overflow. Where oval shape or round shape wash basins are required to be fixed these shall be fixed preferably in RCC platform with local available stone topping either fully sunk in stone top or top flush with the stone topping as directed by Engineer-in-Charge.

The wash basins shall be one of the following patterns and sizes as specified

(a) Flat back: 660 x 460 mm (Surgeon's Basin)

630 x 450 mm

550 x 400 mm

450 x 300 mm

1. Angle back: 600 x 480 mm

400 × 400 mm

White glazed pedestals for wash basins, where specified shall be provided. The quality of the glazing of the pedestal shall be exactly the same as that of the basin along with which it is to be installed. It shall be completely recessed at the back to accommodate supply and waste pipes and fittings. It shall be capable of supporting the basin rigidly and adequately and shall be so designed as to make the height from the floor to top of the rim of basin 75 to 80 cm. All the waste fittings shall be brass chromium plated, or as specified.

6.15.5 Waste Fittings for Wash Basins and Sinks

The waste fittings shall be of nickel chromium plated brass, with thickness of plating not less than service grade 2 of IS 4827 which is capable of receiving polish and will not easily scale off. The fittings shall conform in all respects to IS 2963 and shall be sound, free from laps, blow holes and fittings and other manufacturing defects. External and internal surfaces shall be clean and smooth. They shall be neatly dressed and be truly machined so that the nut smoothly moves on the body. Waste fitting for wash basins shall be of nominal size of 32 mm. Waste fittings for sinks shall be of nominal size 50 mm.

6.16 P.T.M.T (Polytetra Methylene Tetraphthalate) Fittings

PTMT (Polytetra Methylene Tetraphthalate) is an engineering plastic (raw material imported) and have following physical properties:-

- (i) Tensile Strength: 500 Kg/cm²
- (ii) Compressive Strength: 900 Kg/cm²
- (iii) Rockwell hardness L-scale: 75
- (iv) Working temperature: -45° to 120°C.
- (v) E Value: 85000 Kg/cm²
- (vi) Density: 1.3 gm/cc
- (vii) Impact Strength : No Break

6.17 WATER CLOSET

- 6.17.1 Water closets shall be of white vitreous china conforming to IS 2556 (Part-1) and 2556 (Part-2), as specified and shall be of 'Wash down type'. The closets shall be either of the two patterns (Pattern I & Pattern II) and sizes as specified. The closets shall be of one piece construction. Each water closet shall have not less than two holes having a minimum diameter of 6.5 mm for fixing to floor and shall have an integral flushing rim of suitable type. It shall

also have an inlet or supply horn for connecting the flushing pipe of dimensions as specification, the flushing rim may be boxed or open type. In the case of box rims adequate number of holes, on each side together with a slot opposite the inlet shall be provided. The flushing rim and inlet shall be of the self draining type. The water closet shall have a weep hole at the flushing inlet. Each water closet shall have an integral trap with either S or P outlet with at least 50 mm water seal. For P trap, the slope of the outlet shall be 14 deg. below the horizontal. Where required the water closet shall have an antisiphonage 50 mm dia vent horn on the outlet side of the trap and on either right or left hand or centre as specified set at an angle of 45 deg. and invert of vent hole not below the central line of the outlet. The inside surface of water closets and traps shall be uniform and smooth in order to enable an efficient flush. The serrated part of the outlet shall not be glazed externally. The water closet, when sealed at the bottom of the trap in line with the back plate, shall be capable of holding not less than 15 litres of water between the normal water level and the highest possible water level of the water closet as installed.

6.17.2 GENERAL REQUIREMENTS FOR INSTALLATION OF W.C. PAN

- 6.17.2.1 The work shall be carried out, complying in all respects with the requirements of relevant byelaws of the local body in whose jurisdiction the work is situated.
- 6.17.2.2 Any damage caused to the building, or to electric, sanitary, water supply or other, installations etc. therein, either due to negligence on the part of the contractor, or due to actual requirements of the work, shall be made good and the building or the installation shall be restored to its original condition by the contractor. Nothing extra shall be paid for such restoration works except where otherwise specified.
- 6.17.2.3 For making good the damage to the under mentioned items of work, the specifications as given in the following paras shall apply, unless directed otherwise.

Masonry Work: The masonry work shall be made good by using the same class of bricks, tiles or stones as was damaged during the execution of the work. The mortar used shall be cement mortar 1:5 (1 cement: 5 fine sand) or as directed by the Engineer-in-Charge.

Plain Concrete Work : Concrete work for sub-grade of the flooring, foundations and other plain concrete works shall be cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size). A coat of neat cement slurry shall be applied at the junction with old work, before laying fresh concrete.

Cement Concrete Flooring and R.C.C. Work : Cement concrete 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20 mm nominal size) shall be used after applying a coat of neat cement slurry at the junction with old work, and the surface finished to match with the surrounding surface.

Plastering: Cement plaster 1:4 (1 cement: 4 sand) shall be used. The sand shall be fine or coarse, as used in the original work. The surface shall be finished with two or more coats of white wash, colour wash, distemper or painting as required, but where the surface is not to be white washed, colour washed, distempered or painted, it shall be finished as required to match with the surrounding surface.

Damage to any other item shall be made good as directed by the Engineer-in Charge.

All exposed G.I., C.I. or lead pipes and fittings shall be painted with approved quality of paint and shade as specified. All sanitary and plumbing work shall be carried out through licensed plumbers. On completion of the work the site shall be cleaned and all rubbish disposed off as directed by the Engineer-in-Charge.

6.18 GATE VALVE - GUN METAL

These shall be of the gun metal fitted with wheel and shall be of gate valve type opening full way and of the size as specified. These shall generally conform to IS 778.

6.19 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPES

CPVC pipes & fittings used in hot & cold potable water distribution system shall conform to requirement of IS 15778. The material from which the pipe is produced shall consist of chlorinated polyvinyl chlorides. The polymer from which the pipe compounds are to be manufactured shall have chlorine content not less than 66.5%. The internal and external surfaces of the pipe shall be smooth, clean and free from grooving and other defects. The pipes shall not have any detrimental effect on the composition of the water flowing through it.

Each pipe shall be clearly and indelibly marked in ink/paint or hot embossed on white base at intervals of not more than 3 m. The marking shall show the following:

(a) Manufacturer's name or trade-mark

- (b) Outside diameter,
- (c) Class of pipe and pressure rating, and
- (d) Batch or lot number

The fittings shall be as follows:

- (a) Plain CPVC solvent cement fittings from size 15 mm to 160 mm.
- (b) Brass threaded fittings.
- (c) Valve from size 15 mm to 160 mm
- (d) *Brass Threaded Fittings*: All types of one end brass threaded male/female adaptors in various fittings like coupler, socket, elbow, tee are available for transition to other plastic/metal piping and for fixing of CP fittings. Ball, Gate valves in CPVC are available in all dimensions. All fittings shall carry the following information:
 - (1) Manufacturer's name/trade mark.
 - (2) Size of fitting

6.20 GLASS

The glass to be used on the work shall be of good quality conforming to IS:2835 and free from defects scratches etc. The thickness of glass shall be as specified in the Schedule of quantities.

6.21 paneled DOOR AND WINDOW SHUTTERS

The contractor shall provide and fix paneled or paneled and glazed shutters for doors, windows, and clerestory windows etc of Second class teak wood of 35mm thick shutter, secured with butt hinges of the required size and necessary screws.

6.22 FIBRE GLASS REINFORCED PLASTIC DOOR FRAMES

- 6.22.1 The FRP door frames shall be of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. Stainless steel stay shall be provided at the bottom to steady the frame.
- 6.22.2 FRP door shall be manufactured as per specifications laid down in IS:14856, nomenclature of items & direction of Engineer-in-Charge. Tolerance of size of frame to be + 2 mm and on size of rebate to be + 1 mm. The surface of the moulded frame shall be free from any visible defects such as small pores,

crazing, blistering, wrinkling, impurities, defective impregnation, colour blots and aggregate defects, as mentioned in IS 14856. Scattered pin holes duly repaired and finished by applying resin and not noticeable shall be acceptable. Frame laminate shall be flat and shall have smooth and level surface. Laminate shall be finished in colour & shade as approved by Engineer-in-Charge.

6.23 FIBRE GLASS REINFORCED PLASTIC (FRP) SHUTTERS

- 6.23.1 FRP Shutters shall be of factory made conforming to the specifications as per IS:14856 and nomenclature of item & direction of Engineer-in-Charge. The shutter has to be 30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.

SIGNATURE OF TENDERER

DETAILED SPECIFICATIONS FOR ITEMS OF WORKS

7.1 GENERAL

- 7.1.1 Except where otherwise specified or authorized by the Engineer-in-Charge, all items of works **executed** by the contractor shall conform to the latest edition of the Bureau of Indian Standard Specifications and code of practices published by the B.I.S. Where no such specifications or code of practice exists the latest B.I.S. codes of practice or any other equivalent / standard code of practice shall also be considered for adoption. The tenderer while indicating any such specifications shall enclose the full set of the publication so referred and not in extracts. Photostats / Xerox copies in duplicate shall be forwarded which shall not be returned to the contractor. In absence of any specification, the department deserves the right to adopt trade specifications and/or sound engineering practices for the specialized work as may be decided by the Engineer-in-Charge which shall be final, conclusive and binding on the contractor.

7.2 DISMANTLING AND DEMOLISHING

- 7.2.1 During demolition or dismantling, every precaution shall be taken by the contractor to prevent damage to any part of the structure and also to any adjacent structures which are to be left intact. Any damage caused to the structures, due to the carelessness and negligence of the contractor shall be made good by him at his own expense. Care must be taken by the contractor in such a way that debris shall not fall into water and if falls to be removed immediately.
- 7.2.2 All materials obtained from dismantling or demolition shall be the property of the CoPA unless otherwise specified and shall be kept in safe custody until they are handed over to the Engineer-in-Charge.
- 7.2.3 The demolition shall always be well planned before hand and shall generally be done in reverse order of the one in which the structure was constructed. The operations shall be got approved from the Engineer-in-Charge before starting the work. Due care shall be taken to maintain the safety measures prescribed in IS 4130 and construction and demolition waste management rules 2016 shall be followed.
- 7.2.4 Necessary propping, shoring and or under pinning shall be provided to ensure the safety of the adjoining work or property before dismantling and demolishing is taken up and the work shall be carried out in such a way that no damage is caused to the adjoining work or property. Wherever specified, temporary enclosures or partitions and necessary scaffolding with suitable

double scaffolding and proper cloth covering shall also be provided, as directed by the Engineer-in-Charge. It shall be ensured that no dust is generated while demolishing. Barricading shall be provided wherever required.

- 7.2.5 Necessary steps shall be taken to keep noise and dust nuisance to the minimum. All work needs to be done under the direction of Engineer-in-Charge. Helmets, goggles, safety belts etc., should be used whenever required and as directed by the Engineer-in-Charge. The demolition work shall be proceeded with in such a way that it causes the least damage and nuisance to the adjoining building and the public.
- 7.2.6 Dismantling shall be done in a systematic manner. All materials which are likely to be damaged by dropping from a height or by demolishing roofs, masonry etc. shall be carefully removed first. Chisels and cutters may be used carefully as directed. The dismantled articles shall be removed manually or otherwise, lowered to the ground (and not thrown) and then properly stacked as directed by the Engineer-in-Charge.
- 7.2.7 Any serviceable material, obtained during dismantling or demolition, shall be separated out and stacked properly as directed by the Engineer-in-Charge within a lead of 50 meters. All unserviceable materials, rubbish etc. shall be disposed off at authorized locations as directed by the Engineer-in-Charge.
- 7.2.8 Where existing fixing is done by nails, screws, bolts, rivets, etc., dismantling shall be done by taking out the fixing with proper tools and not by tearing or ripping off.
- 7.2.9 Appropriate screens shall be placed where necessary to prevent injuries due to falling pieces. Water spray shall be used to reduce dust while tearing down plaster from brick work. Safety belts shall be used by labourers while working at higher level to prevent falling from the structure. Wherever, possible mechanized working platform shall be used. First-aid equipment shall be made available at all demolition works of any magnitude.
- 7.2.10 The contractor shall maintain/disconnect existing services, whether temporary or permanent, wherever required by the Engineer-in-Charge.

7.3 CEMENT PLASTERING

- 7.3.1 Cement plastering shall be with the grade of mortar and of thickness specified in the schedule. The surface to be plastered shall be thoroughly cleaned and kept wet for 4 hours before plastering.
- 7.3.2 All the corners shall be rounded off to a radius of 25 mm unless otherwise specified.

- 7.3.3 Where smooth finishing is specified in the schedule the plastering shall be floated over with neat cement slurry using 2.2 kg of cement per square meter immediately after the final coat of plastering and rate quoted for plastering shall include cost of this finishing work.
- 7.3.4 The plastered surface on which glazed tiles or other similar type of finishing are to be provided subsequently shall not be finished smooth but shall be scarified for forming a base for providing the final surface finish as required.
- 7.3.5 The surface shall be cured for 7 days.
- 7.3.6 The rate shall include all labour and materials including scaffolding, curing etc. complete. required for completion of work. Measurement of the work under this head shall be made on the basis of the area of work done.

7.4 REPAIR TO PLASTER (12 mm TO 20 mm THICKNESS)

- 7.4.1 The work includes cutting the patch and preparing the wall surface. Scaffolding as required for the proper execution of the work shall be erected. If work can be done safely with the ladder or jhoola these will be permitted in place of scaffolding.
- 7.4.2 The mortar of the patch, where the existing plaster has cracked, crumbled or sounds hollow when gently tapped on the surface, shall be removed. The patch shall be cut out to a square or rectangular shape at position marked on the wall as directed by the Engineer-in-Charge or his authorized representative. The edges shall be slightly under cut to provide a neat joint.
- 7.4.3 The masonry joints which become exposed after removal of old plaster shall be raked out to a minimum depth of 10 mm in the case of brick work and 20 mm in the case of stone work. The raking shall be carried out uniformly with a raking tool and not with a basuli, and loose mortar dusted off. The surface shall then be thoroughly washed with water, and kept wet till plastering is commenced. In case of concrete surfaces, the same shall be thoroughly scrubbed with wire brushes after the plaster had been cut out and pock marked with a pointed tool, at spacings of not more than 5 cm. Centres, the pock being made not less than 3 mm deep. This is to ensure a proper key for the plaster. The surface shall be washed and cleaned and kept wet till plastering is commenced.
- 7.4.4 Mortar of specified mix with the specified sand shall be used. The surface shall be finished even and flush and matching with the old surrounding plaster. All roundings necessary at junctions of walls, ceilings etc. shall be carried out in a tidy manner.
- 7.4.5 All dismantled mortar & rubbish etc. shall be disposed off within 24 hours

- from its dismantling promptly as directed by the Engineer-in-Charge.
- 7.4.6 Doors, windows, floors, articles of furniture etc. and such other parts of the building shall be protected from being splashed upon. Splashing and droppings, if any, shall be removed by the contractor at his own cost and the surface cleaned. Damages, if any, to furniture or fittings and fixtures shall be recoverable from the contractor.
- 7.4.7 Curing shall be started as soon as the plaster has hardened sufficiently not to be damaged when watered. The plaster shall be kept wet for a period of at least 7 days.
- 7.4.8 **Cleaning of existing Reinforcement and passivating its surface**
- 7.4.8.1 The alkaline chemical rust remover as approved by the Engineer-in Charge and should be procured in sealed containers indicating the batch number and the date of manufacture etc.
- 7.4.8.2 The rust has to be removed from the surface of the reinforcement manually using chisels, wire brush, emery paper etc. as directed by Engineer-in-Charge at no extra cost, till the steel surface is cleared of all rust that could be removed manually or mechanically.
- 7.4.8.3 Then alkaline chemical rust remover, as approved by the Engineer-in Charge shall be applied with brush over the reinforcement surface thoroughly along the full length of rusted reinforcement. After 24 hours of its application the surface shall be cleaned with wire brush and all loose particles removed. It should then be washed clean, with water, thoroughly and allowed to dry. alkaline chemical rust remover should be applied to the reinforcement approximately one litre for 6 to 7 sqm. of the steel area (assuming the surface of the reinforcement of rough) the consumption of the alkaline chemical rust remover should be about 0.40 litres per 10 Sqm. area of RCC unit.
- 7.4.9 **Application of Bonding Coat on RCC**
- 7.4.9.1 Epoxy bonding adhesive shall be approved by the Engineer-in Charge. Bonding coat is required to be applied for adhesion of applied repair concrete or mortar to the parent concrete. For this, the surface should be thoroughly cleaned by brushes and by blowing air from hand operated pump. The surface shall then be saturated with water (but without excess water).
- 7.4.9.2 The components of bonding coat shall be weigh batched and mixed in specific proportions, in a clean container, as directed by the Engineer-in-Charge. They should then be blended to a uniform and homogeneous mixture, lump free and of creamy consistency.
- 7.4.9.3 The epoxy bonding adhesive, with a coverage rate of 2.20 sqm/kg, shall be applied by stiff nylon bristle brush. The bonding material should be worked

well onto the concrete surface of the parent concrete including reinforcement surface ensuring that no pinholes are visible.

7.5 PROVIDING AND APPLYING SYNTHETIC ENAMEL PAINT

- 7.5.1 Paints/ primers of approved premium brand and manufacture shall be used. Only ready mixed Paint (Exterior grade) as received from the manufacturer without any admixture shall be used. If for any reason, thinning is necessary in case of ready mixed Paint, the brand of thinner recommended by the manufacturer or as instructed by the Engineer-in-Charge shall be used.
- 7.5.2 The surface shall be thoroughly cleaned off all dirt, rust, dust, grease etc. with wire brush, sand paper etc., and be made perfectly clean and dry while painting. For wood surfaces visible knots, holes etc. shall be filled with appropriate filling material with some shade as paint and rubbed smooth before applying paint.
- 7.5.3 The number of coats shall be as per schedule. Successive coats shall be applied only on the next day after rubbing with the finest grade of wet abrasive paper and dusting of the loose particles.
- 7.5.4 Measurements of the work under this head shall be made on the basis of the area of work done and rate quoted shall include the cost of surface preparation, materials, labour, scaffolding etc. required for the completion of works as detailed above.

7.6 APPLICATION OF EPOXY PAINT

- 7.6.1 Epoxy paint (two or more coats) shall be applied as per manufacturer's specifications after applying appropriate priming coat on exposed iron/steel surfaces.
- 7.6.2 All rust, scales and Old paint shall be removed by scrapping or by brushing with steel wire brushes. Hard skin of oxide formed on the surface of wrought iron during rolling which becomes loose by rusting, shall be removed. Surface must be dried, cleaned & made free from oil, grease, dirt, dust & all other contaminants that could interfere with adhesion of coating. If the surface is wet, it shall be dried before priming coat is undertaken. Before primer is applied, holes and undulations, shall be filled up and rubbed smooth.
- 7.6.3 The primer shall be applied with brushes, worked well into the surface and spread even and smooth. The painting shall be done by crossing and laying off. Paint shall be applied with a brush on the cleaned and smooth surface. Horizontal strokes shall be given, First and vertical strokes shall be applied

- immediately afterwards. This entire operation will constitute one coat. The surface shall be finished as uniformly as possible leaving no brush marks.
- 7.6.4 Epoxy paint is supplied in two parts i.e. (base and hardener). Stir the base and hardener separately. Mix hardener gradually into the base under continuous stirring as per mixing ratio as specified by the manufacturers.
- 7.6.5 The epoxy paint shall be consumed within the working pot life as specified by the manufacturers. Part mixing should be avoided. To achieve optimum performance of the product, minimum 2-3 coats by brushing would be required to get the desired dry film thickness (DFT) as specified by the manufacturer.
- 7.6.6 Rate shall include the cost of all labour and material involved in all operation including priming coat.

7.7 CALCIUM SILICATE BOARD FALSE CEILING

7.7.1 Material & Fixing

- 7.7.1.1 8 mm thick Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process shall be used.
- 7.7.1.2 Frame work is made of special section, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I channels 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long.
- 7.7.1.3 The perimeter of ceiling fixed to wall/ partitions with the help of rawl plugs at 450mm centre, with 25mm long dry wall screws @ 230mm interval, including fixing of Calcium Silicate Board to ceiling section and perimeter channels with the help of dry wall screws of size 3.5 x25mm at 230mm c/c, including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes, finishing with jointing compounds in three layers covering up to 150mm on

both sides of joints and two coats of primer suitable for boards, all as per manufacture's specification and also including the cost of making opening for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in charge but excluding the cost of painting.

7.7.1.4 Manufacturers test certificate/ report of invoice shall be submitted for every delivery challan by suppliers.

7.7.2 **Precaution:**

7.7.2.1 All wet trades such as plastering, conduiting and painting etc, be completed prior to start of false ceiling works. Air conditioning duct work is to be completed preferably even before the suspension of the grid section. Electrical chasing or drawing lines & cables, etc are to be in place before start of false ceiling work. No unauthorized weight is put on false ceiling. Lighting fixtures, diffusers are to be suspended independently with proper chain/wire & dash fasteners as directed by Engineer In Charge/manufacturer guide line. The area shall be made dry prior to ceiling installation work.

7.7.2.2 Care should be taken while placing Light Weight calcium silicate tiles into the grid so that there will be no displacement to grid and stains/ dirty marks put by the workers. (worker should preferably wear clean soft cotton gloves while placing tile).

7.7.3 **Measurements**

7.7.3.1 Length and breadth shall be measured correct to a cm. Areas shall be calculated nearest to 0.01sqm. No deduction in measurements shall be made for openings of areas upto 0.36 Sqm. Nothing extra shall be payable either for any extra material or labour involved in forming such openings. For openings exceeding 0.36 sqm in area, deductions in measurements for the full opening in multiple of area of each tile (0.36 Sqm) will be made.

7.7.3.2 The rate shall include the cost of all materials and labour involved in all the operations described above

7.8 STRUCTURAL STEEL WORK

7.8.1 Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer. Workmanship of structural steel shall be in accordance with IS 800. The material shall be free from visible as well as hidden defects such as pitting cracks, laminations,

twists etc. and excessive rusting.

- 7.8.2 All structural steel members and parts shall have straight edges and blunt surfaces. If necessary, they shall be straightened or flattened by pressure unless they are required to be of curvilinear forms. They shall also be free from twist. Pressure applied for straightening or flattening shall be such as would not injure the materials. Hammering shall not be permitted. Adjacent surfaces or edges shall be in close contact or at uniform distance throughout.

7.9 PLAIN & REINFORCED CEMENT CONCRETE

7.9.1 General

The concrete used for all works, concreting procedure etc. shall be in accordance with IS:456-2000.

7.9.2 Concrete Mix

Mix used for Cement Concrete shall be as specified in the schedule.

7.9.3 Nominal Mix

For nominal mix concrete, proportion of fine aggregate to coarse aggregate shall be 1:2 by mass. The minimum cement content per cubic meter of nominal mix concrete shall be as per table 5 of IS: 456-2000.

7.9.4 Size of Coarse Aggregate

For all concrete, 20 mm size graded aggregate conforming to IS:383-2016 shall be used unless otherwise specified. If 20 mm graded aggregates as per IS:383 are not readily available, graded 20 mm aggregate shall be obtained by blending 20 mm and 12.5/ 10 mm aggregates in the proportion arrived based on the combined sieving of aggregates.

7.9.5 Mixing of Concrete

- 7.9.5.1 Concrete shall be mixed in a drum or pan type batch mixer, the type and capacity of which is to be approved by the Engineer-in-Charge. Time allowed for mixing, after all ingredients have been placed in the mixers shall not be less than two minutes. If there is segregation after unloading from the mixer, the concrete should be remixed.

- 7.9.5.2 Ready mix concrete from outside source shall be allowed for use on the work subject to the conditions that: (i) written permission shall be obtained from the Engineer-in-Charge, (ii) all quality control measures as stipulated by the Engineer-in-Charge are strictly adhered to by the Contractor at his cost, (iii) all design mix calculations as per Clause 2.3.4 of Tender Document shall be submitted by the contractor for approval of the Engineer-in-Charge & approval obtained; and (iv) all expenses towards conveyance and incidentals of providing departmental supervision at the

mixing plant shall be borne by the Contractor.

7.9.6 Transporting, placing, compacting and curing of concrete

- 7.9.6.1 Transporting placing, compacting and curing of concrete shall be as per clause 13 of IS:456-2000. Placement of concrete shall be done with concrete pumps and pipelines unless otherwise approved by the Engineer-in-Charge in special cases.
- 7.9.6.2 Concrete shall be transported from the mixer to the worksite as rapidly as possible which will prevent the segregation or loss of any ingredient, and for maintaining the workability.
- 7.9.6.3 The concrete shall be placed and compacted before setting commences and should not be subsequently disturbed. Care should be taken to avoid displacement of reinforcement or movement of formwork.
- 7.9.6.4 All concrete shall be vibrated unless otherwise specified or approved by the Engineer-in-Charge and such vibrating shall be as required by the Engineer-in-Charge. The mechanical vibrators complying with IS:2505, IS:2506 or IS:4656 shall be used for compacting concrete. All vibrations shall be carried out to a plan approved by the Engineer-in-Charge. No workman shall be allowed to operate the vibrator without having received instructions and training in its use. Care must be taken to avoid segregation and excessive vibration.
- 7.9.6.5 Concreting shall be carried out continuously upto construction joints, the positions and arrangement of which shall be as directed by the Engineer-in-Charge. When the work has to be resumed the construction joints shall be prepared in accordance with clause 13.4 of IS:456-2000.
- 7.9.6.6 Unless otherwise specified, all concrete shall be kept continuously in a damp condition by ponding or by covering with a layer of sacking, canvas, hessian or similar materials with fresh water for not less than 7 days after laying the concrete. If curing is not done properly the department will be at liberty to engage labour for curing and the expenditure incurred will be recovered from the contractor's bill. The decision of the Engineer-in-Charge will be final on this.
- 7.9.6.7 Stripping time for the form work shall be as stipulated in clause 11.3 of IS:456-2000. Any impression, fins etc. that may occur from the form work shall be removed and treated with cement mortar 1:1.5 (1 cement: 1.5 sand).
- 7.9.6.8 Contractor shall arrange to fix any fixtures wherever necessary while doing concreting work without any extra cost. Cost of fixtures will be paid separately, if it is provided by the contractor.
- 7.9.6.9 The unit rate quoted by the tenderer shall be for the finished work and deemed to include cost of all materials and labour, form work, provision of holes, recess, other contingent items etc. required for the completion of

work as specified etc

7.10 REINFORCEMENT STEEL

General

Reinforcement bars, if supplies are arranged by contractor unless otherwise specified, shall be either plain round mild steel bars grade I as per IS 432 (Part I) or medium tensile steel bar as per IS 432 (Part I) or hot rolled mild steel and medium tensile steel deformed bars as per IS 1139 or cold twisted steel bars as per IS 1786, as shown and specified on the drawings. Wire mesh or fabric shall be in accordance with IS 1566. Substitution of reinforcement will not be permitted except upon written approval from Engineer.

Plain round mild steel bars grade II as per IS 432 (Part I) may be used with prior approval of Engineer in writing and with 10% increase in the reinforcement area but its use shall not be permitted in structures located in earthquake zones subjected to severe damage (as per IS 1895) and for structures subject to dynamic loading (other than wind loading), such as frames supporting rotary or reciprocating machinery, etc.

All reinforcement shall be clean, free from grease, oil, paint, loose mill scale, loose rust, dust, bituminous material or any other substances that will destroy or reduce the bond. All rods shall be thoroughly cleaned before being fabricated. Pitted and defective rods shall not be used.

All concrete in the works shall be of design mix as defined in IS 456, unless it is a nominal mix concrete such as 1:3:6, 1:4:8 or 1:5:10. Whether reinforced or otherwise, all design mix concrete works to be carried out under this specification shall be divided into the following classifications:

Providing, fabricating and placing in position reinforcement steel

The quality of the steel shall be as mentioned in the materials section. The bars shall be fabricated as per the drawings and binding with **16-gauge GI binding wire** etc. Laps and splices for reinforcement shall be as shown on the drawings. Splices in adjacent bars shall be approved by Engineer. The bars shall not be lapped unless the length required exceeds the maximum available lengths of bars at site.

Bending

Reinforcing bars supplied bent or in coils, shall be straightened before they are cut to size. Straightening of bars shall be done in cold and without damaging the bars. This is considered as a part of reinforcement binding fabricating work.

All bars shall be accurately bent according to the sizes and shapes shown on the detailed working drawings/bar bending schedules. They shall be bent gradually by machine or other approved means. Reinforcing bars shall not be straightened and re-bent in a manner that will injure the material, bars containing cracks or splits shall be rejected. They shall be bent cold, except bars of over 32 mm in diameter which may be bent hot if specifically approved by Engineer. Bars bent **hot** shall not be heated beyond cherry red colour (not exceeding 845°C) and after bending shall be allowed to cool slowly without quenching. Bars incorrectly bent shall be used only if the means used for straightening and rebinding shall not injure the material. No reinforcement shall be bent when in position in the work without approval whether or not it is partially embedded in hardened concrete. Bars having kink or bends other than those required by design shall not be used.

Fixing

Reinforcement shall be accurately fixed by any approved means and maintained in the correct position shown in the drawings by the use of cover blocks, spacers and chairs as per IS 2502 to prevent displacement during placing and compaction of concrete. Bars intended to be in contact at crossing points shall be strongly bound together at all such points with two no. 16 gauge annealed soft iron wire. The vertical distance required between successive layers of bar in beams or other members shall be maintained by providing of mild steel spacer bars at such intervals that the main bars do not perceptibly sag between adjacent spacer bars.

Cover

Unless indicated otherwise on the drawings, clear concrete cover for reinforcement (exclusive of plaster or other decorative finish) shall be as follows:

- a) At each end of reinforcing bar, not less than 25 mm nor less than twice the diameter of the bar whichever is less.
- b) For a longitudinal reinforcing bar in a column, not less than 40 mm, nor less than the diameter of the bar. In case of columns of minimum dimensions of 20 cm or under, with reinforcing bars of 12 mm and less in diameter, a cover of 25 mm may be used.
- c) For longitudinal reinforcing bars in a beam 25 mm nor less than the diameter of the bar.
- d) For tensile, compressive, shear, or other reinforcement in a slab or wall not less than 12 mm nor less than the diameter of such reinforcement.

- e) For any other reinforcement not less than 12 mm nor less than the diameter of such reinforcement.
- f) For footings and other principal structural members in which the concrete is deposited directly against the ground, cover to the bottom reinforcement shall be 75 mm. If concrete is poured on a layer of lean concrete the bottom cover may be reduced to 50 mm.
- g) For concrete surfaces exposed to the weather or the ground after removal of forms, such as retaining walls, footing sides and top, etc., not less than 50 mm for bars larger than 16 mm dia and not less than 40 mm for bars 16 mm dia or smaller.
- h) Increased cover thickness shall be provided, as indicated on the drawings, for surfaces exposed to the action of harmful chemicals (or exposed to earth contaminated by such chemical, acid, alkali, saline atmosphere, sulphurous smoke, etc.
- i) For reinforced concrete members, totally or periodically immersed in sea water or subject to sea water spray, the cover of concrete shall be 50 mm more than those specified in (i) to (v) above.
- j) For liquid retaining structures the minimum cover to all steel shall be 40 mm or the diameter of the main bars, whichever is greater. In the presence of sea water and soils and waters of a corrosive character the cover shall be increased by 10 mm.
- k) Protection to reinforcement in case of concrete exposed to harmful surroundings may also be given by providing a dense impermeable concrete with approved protective coatings, as specified by the Engineer.
- l) The correct cover shall be maintained by cement mortar cover blocks. Reinforcement for footings, beams and slabs on sub-grade shall be supported on precast concrete blocks as approved by Engineer. The use of pebbles or stones shall not be permitted.

Inspection

Erected and secured reinforcement shall be inspected, jointly measured and recorded and approved by Engineer prior to placement of concrete.

7.11 STRUCTURAL STEEL

Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer. Workmanship of structural steel shall be in accordance with IS 800. The material shall be free

from visible as well as hidden defects such as pitting cracks, laminations, twists etc. and excessive rusting.

All structural steel members and parts shall have straight edges and blunt surfaces. If necessary, they shall be straightened or flattened by pressure unless they are required to be of curvilinear forms. They shall also be free from twist. Pressure applied for straightening or flattening shall be such as would not injure the materials. Hammering shall not be permitted. Adjacent surfaces or edges shall be in close contact or at uniform distance throughout.

7.12 PROVIDING FLOORING WITH VITRIFIED FLOOR TILES

The tiles shall be set in cement mortar 1:4 (1 cement : 4 sand) of average 20mm thick laid to required level/ slope. Before laying cement mortar, the concrete surface shall be scrubbed with wire brush, all loose particles, foreign matters etc. shall be removed and the surface shall be made clean. Any undulations in the concrete shall be chipped off or made good with additional concrete of the same grade used for the under layer. The surface thus prepared shall be wetted and smeared with a coat of cement slurry using cement at the rate of 2.2 kg/m² of area just before the application of the mortar, so as to get good bond between base course concrete and plastering. For fixing tiles to mortar, neat cement slurry of honey like consistency using cement at the rate of 3.3 kg/m² shall be smeared on top of mortar bed. The joints between the tiles shall be uniform and of 3mm width.

After laying the tiles, the surplus cement grout along the joints shall be cleaned off. The day after the tiles are laid, all joints shall be cleaned with wire brush to a depth of 5mm and pointed with epoxy based grout, of approved make.

7.13 EPOXY BASED GROUTING FOR TILES

- 7.13.1 It shall be ensured that tiles are firmly set and adhesive or mortar is completely dry for 24 hours. All spacers, pegs, ropes and string shall be removed and joints be cleaned by removing free loose dirt particles.
- 7.13.2 The complete unit Part A (Base) and Part B (Hardener) shall be properly mixed in given ratio. The desired colour of grout shall be obtained by mixing required quantity of colour with base to ensure homogeneity. The grout shall be pressed firmly by using a hard rubber squeeze into joints ensuring that joints are completely filled. Excess grout material shall be removed from joints and surface by moving squeeze on grout line after 22 to 25 minutes.

The damp sponge shall be used in circular motion on tile surface to achieve the flush joint. After completion of work the grout haze shall be cleaned with clean water or soap solution. The suitable rubber gloves shall be used to avoid skin contact during application.

- 7.13.3 Length and breadth of grouted tile area shall be measured correct to a cm and the area shall be calculated in sqm correct to two places of decimal.

The rate shall include the cost of all materials and labour involved in all operations described above. Nothing extra shall be paid.

7.14 PROVIDING AND APPLYING INTERIOR ACRYLIC EMULSION PAINT

The surface shall be thoroughly cleaned of dust and then be sand papered to give a smooth and even surface. Over the prepared surface one base coat of primer for exterior/interior emulsion paint of same brand shall be applied with hand brush in horizontal stroke followed immediately by a vertical one which together shall constitute one coat. After the primer coat has dried for at least 48 hours, the surface shall be lightly sand papered to make it smooth. All loose particles shall be dusted off after rubbing and the surface cleaned well. The first finishing coat of exterior/interior emulsion paint shall then be applied with hand brush in horizontal stroke followed immediately by a vertical one which together shall constitute one coat. The second coat shall be applied in the same way of first coat to obtain an even surface, after the first finishing coat dried as per the directions of the Engineer-in-charge

Measurements of the work under this head shall be made on the basis of the area of work done and rate quoted shall include the cost of labour, materials, scaffolding etc. required for the completion of work

Application: The number of coats shall be as stipulated in the item. The Paint will be applied in the usual manner with brush, spray or roller. The Paint dries by evaporation of the water content and as soon as the water has evaporated the film gets hard and the next coat can be applied. The time of drying varies from one hour on absorbent surfaces to 2 to 3 hours on non-absorbent surfaces. The thinning of emulsion is to be done with water and not with turpentine. Thinning with water will be particularly required for the under coat which is applied on the absorbent surface. The quantity of water to be added shall be as per manufacturer's instructions. The surface on finishing shall present a flat 137 velvety smooth finish. If necessary more coats will be applied till the surface presents a uniform appearance.

Precautions

Old brushes if they are to be used with emulsion Paints, should be completely dried of turpentine or oil Paints by washing in warm soap water. Brushes should be quickly washed in water immediately after use and kept immersed in water during break periods to prevent the Paint from hardening on the brush.(b) In the preparation of wall for plastic emulsion painting, no oil base putties shall be used in filling cracks, holes etc. (c) Splashes on floors etc. shall be cleaned out without delay as they will be difficult to remove after hardening. (d) Washing of surfaces treated with emulsion Paints shall not be done within 3 to 4 weeks of application.

Measurements: The length and breadth shall be measured correct to a cm. Measurements of the work under this head shall be made on the basis of the area of work done and the rate quoted shall include the cost of labour, materials scaffoldings etc. required for the completion of the work.

SIGNATURE OF TENDERER

COCHIN PORT AUTHORITY

**RENOVATION OF COCHIN PORT OFFICER'S SILVER JUBILEE
BUILDING**

UNDERTAKING REGARDING EPF AND ESI REGISTRATION

I/ We, M/s _____ (Name & Address of the tenderer) solemnly affirm and undertake that I/ We do not have the required number of employees for taking registration under EPF Organisation and ESI Corporation. I/ We also undertake that I/ We take the full responsibility for all the consequences arising due to the above and indemnify CoPA officials for any actions taken in this regard

SIGNATURE OF TENDERER

ANNEXURE II

**PROFORMA OF UNDERTAKING THAT NO CHANGES HAVE BEEN MADE
IN THE TENDER DOCUMENT DOWNLOADED**

I/We _____
_____ do hereby confirm that no changes have been made in
the Tender document downloaded and submitted by us for the Tender No: **T6/T-
2112/2026-C (Renovation of Cochin Port Officer's Silver Jubilee Building)**

Yours faithfully,

Signature :

Name & Designation:

PROFORMA OF POWER- OF-ATTORNEY/LETTER OF AUTHORITY

(To be submitted on Non-judicial Stamp Paper of appropriate value)

To

The Chief Engineer
Cochin Port Authority,
Cochin 682009.
Kerala, India.

Dear Sir,

We _____
do hereby confirm that Mr./Ms./Messrs _____ **[INSERT
NAME AND ADDRESS]**, whose signature is given below, is /are authorized to
represent us to bid, negotiate and conclude the agreement on our behalf with you
against Tender for **“RENOVATION OF COCHIN PORT OFFICER’S SILVER
JUBILEE BUILDING”**.

We confirm that we shall be bound by all and whatsoever our said agents shall commit.

Signature of the authorized person:

Name & Designation :

Yours faithfully,

Signature, name and seal of the certifying authority

FORMAT FOR FURNISHING BANK INFORMATION FOR e-PAYMENT

1	Name and full address of the beneficiary	
2	Credit Account No. (Should be full 14 digit)	
3	Account Type (SB or CA or OD)	
4	Name of the Bank	
5	Branch (Full address with telephone No.)	
6	MICR code (Should be 9 digit)	
7	Telephone/Mobile/Fax No. of the beneficiary	Telephone: Mobile : Fax :
8	Cancelled Cheque	

Signature with seal
(Authorized Signatory)

**PROFORMA OF BANK GUARANTEE FOR PERFORMANCE GUARANTEE/
SECURITY DEPOSIT**

(To be executed on non-judicial Stamp Paper of appropriate value)

[The bank, as requested by the successful Tenderer, shall fill in this form in accordance with the instructions indicated]

In consideration of the Board of Authorities Major Ports for the Port of *[insert name of Port]* incorporated by **The Board of Major Port Authority Act, 2021** as amended by Major Port Authority (hereinafter called *the Board*) which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include the Board of Trustees of the Port of *[insert name of Port]*, its successors and assigns) having agreed to exempt _____ (hereinafter called *the Contractor*)

(Name of the Contractor/s)

from the demand under the terms and conditions of the Contract, vide _____ & letter No. _____

(Name of the Department)

date _____ made between the Contractors and the Board for execution of _____ covered under Tender No. _____ dated _____ (hereinafter called *the said contract*) for the payment of Security Deposit in cash or Lodgement of Government Promissory Loan Notes for the due fulfilment by the said Contractors of the terms and conditions of the said Contract, on production of a Bank Guarantee for Rs. _____

(Rupees _____) only we, the (Name of the _____ Bank and _____ Address) _____

(hereinafter referred to as *the Bank*) at the request of the Contractors do hereby undertake to pay to the Board an amount not exceeding Rs. _____ (Rupees _____) only against any loss or damage caused to or suffered or which would be caused to or suffered by the Board by reason of any breach by the Contractors of any of the terms and conditions of the said contract.

2. We, _____, _____, do hereby

(Name of Bank)

(Name of Branch)

undertake to pay the amounts due and payable under this guarantee without any demur merely on a demand from the Board stating that the amount claimed is due by way of

loss or damage caused to or which would be caused to or suffered by the Board by reason of any breach by the Contractors of any of the terms and conditions of the said contract or by reason of the Contractors failure to perform the said contract. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to any amount not exceeding Rs. _____ (Rupees _____) only.

3. We, _____ (Name of Bank and Branch) _____, undertake to pay to the

Board any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, _____ (Name of Bank and Branch) further agree with the Board that the guarantee herein contained shall remain in full force and effect during the period that would be taken for performance of the said contract and that it shall continue to be enforceable till all the dues of the Board under or by virtue of the said contract have been fully paid and its claims satisfied or discharged or till the _____

(Name of the user department)

of the said certifies that the terms and conditions of the said contract have been fully and properly carried out by the said Contractors and accordingly discharge this guarantee. PROVIDED HOWEVER that the Bank shall be the request of the Board but at the cost of the Contractors, renew or extend this guarantee for such further period or periods as the Board may require from time to time.

5. We, _____ further agree with the Board

(Name of Bank and Branch)

that the Board shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said contract or to extend the time of performance by the said contract or to extend the time of performance by the said Contractors from time to time or to postpone for any time or from time to time any of the powers exercisable by the Board against the said Contractors and to forebear or enforce any of the terms and conditions relating to the said contract and we shall not be relieved from our liability by reason of any such variation or extensions being granted to be Contractors or for any forbearance, act or omission on the part of the Board or any indulgence shown by the Board to the Contractors or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

7. It is also hereby agreed that the Courts in *[insert city]* would have exclusive jurisdiction in respect of claims, if any, under this Guarantee.

8. We, _____ Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.

9. Notwithstanding anything contained herein :

a) Our liability under this Bank Guarantee shall not exceed Rs. _____

(Rupees _____ only);

b) this Bank Guarantee shall be valid upto ____*____; and

c) we are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before _____ (date of expiry of Guarantee).ô

Date _____ day of _____ 2026

For (Name of Bank)

(Name)

Signature

* The date will be sixty (60) days after the end of the period of Defect Liability as specified in the Contract.

SITE VISIT CONFIRMATION UNDERTAKING

I/We _____ here by certify that I/we have personally visited the site, or deputed my/our authorised representative.....visited the site, in connection with the Tender for work of **RENOVATION OF COCHIN PORT OFFICER'S SILVER JUBILEE BUILDING** after duly taking permission from concerned authority.

The site Visit was conducted on DayMonth of year 2026, and the existing site conditions, accessibility, scope of work, local conditions, availability of resources, constraints, and all other factors relevant for execution of the work were examined and understood before submission of the Tender.

I/We further confirm that the rates quoted by us are after fully acquainting ourselves with the nature and extent of the work and no claim on account of lack of knowledge of site conditions shall be raised at a later stage, and shall abide by the decisions of CoPA on this behalf.

Details of Person who conducted the site visit are as follows:

Name:

Designation:

Contact Number:

Yours faithfully,

Signature :

Name & Designation: