COCHIN PORT TRUST

COCHIN-682009, KERALA, INDIA

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TENDER DOCUMENT FOR PROVIDING AND ERECTING E-TOILETS AT CFS

TECHNICAL BID (e-Tendering Mode)

Website: www.tenderwizard.com/CPT

CHIEF ENGINEER'S OFFICE

COCHIN PORT TRUST

COCHIN-682009

TENDER No.T6/T-1961/2022-C **PRICE: Rs.840/-**

COCHIN PORT TRUST

TENDER FOR PROVIDING AND ERECTING E-TOILETS AT CFS

(Tender No.T6/T-1961/2022-C)

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SIGNATURE OF TENDERER

COCHIN PORT TRUST

CHIEF ENGINEER'S OFFICE,
COCHIN – 682009

No.T6/T-1961/2022-C **Date:-09-03-2022**

1. T E N D E R N O T I C E

1.1 Electronic tenders (e-tenders) in "**Two Cover System**" for **"PROVIDING AND ERECTING E-TOILETS AT CFS"** are invited by the Suptdg. Engineer(CM), Cochin Port Trust, Willingdon Island, Cochin- 9 and will be received **up to 14.30hrs. on 29/03/2022**.The tenders shall be submitted in accordance with the 'Instruction to Tenderers' and 'General Description and Special Conditions of Contract' etc. as detailed in the Tender Documents. The tenders will be opened by the Suptdg.Engineer, Cochin Port Trust at this office on the same day at **15.00 hrs**.

Estimated cost:Rs.14,04,070/-

1.2 The Tender Document can be down loaded from the e-tendering portal www.tenderwizard.com/CPT from **10.00hrs. on 09-03-2022 to 14.30hrs on 29/03/2022** by making online requisition & submission of Demand Draft / Banker's Cheque for **Rs.750/-+GST @12%(ie, Rs.840/-)** drawn in favour of the FA & CAO, Cochin Port Trust, payable at Kochi, being the cost of single copy of the Tender Document. **Scanned copy of the DD/ Banker's Cheque shall be attached with the e-tender.**

1.3 The Tender Documents are also available at Port's website **www.cochinport.gov.in** or Government of India (CPP) tender portal for reference.

1.4 The bidders need to obtain the one time User ID & password for log-in to e-Tendering Portal www.tenderwizard.com/CPT from the service provider M/s.KEONICS by paying registration amount of Rs.1124/- through online Payment using Credit/Debit Card/Net banking or DD in favour of "KSEDCL, Bangalore".

1.5 The tender shall be submitted by an individual or by a registered Partnership firm or by a Limited Company. In the event of the tender being submitted by a registered partnership firm, it must be signed individually by each partner thereof. In the event of absence of any partner, it must be signed on his behalf by the person holding a proper power-of-attorney, authorizing him to do so and to bind the partner in all matters pertaining to the Contract including the arbitration clause, such power-of-attorney to be attached with the tender which must disclose that the firm is duly registered under Indian Partnership Act. If the tender is made by a Limited Company it shall be signed by a duly authorised person who shall produce with the tender satisfactory evidence of the authorization. In the case of a Limited

Company the tender should be accompanied by the Memorandum and Articles of Association of the Company. **Joint Venture is not allowed in the tender.**

1.6 **The tenders shall be submitted "on line" strictly in accordance with the Instructions to Tenderers and General Description and Special Conditions of Contract given in the Tender Document.** The bidders shall submit scanned copy of all the required documents such as DD / Bankers Cheque towards the cost of tender form and EMD; proof of experience, financial details, etc. along with e-tenders.

1.7 Original DD / Bankers Cheque towards the cost of tender and EMD, shall be submitted in a sealed cover to the **Suptdg. Engineer (CM), Cochin Port Trust, W/Island, Cochin-682009, KERALA, and these original documents shall be reached to the employer within 3 (THREE) working days from the Bid Due date. Non submission of original financial instruments towards the cost of tender document, EMD, within the above period leads to disqualification of Bids.**

1.8 The intending bidder must have valid Class-II or III digital signature certificate to submit the bid. **For further details, please contact e-Tender Help Desk No. 080-40482000/ 9746118529/9605557738.**

1.9 EARNEST MONEY TO BE DEPOSITED

1.9.1 Each tender should be accompanied by an Earnest Money amounting to **Rs.14,050/-.** The Earnest Money can be deposited through Demand Draft or Banker's Cheque or Pay Order from a Scheduled Bank in India, drawn in favour of Financial Adviser & Chief Accounts Officer, Cochin Port Trust. The original DD/ Banker's Cheque/ Pay Order shall be submitted to the SE(CM), Cochin Port Trust, Cochin-9, **within 3 (THREE) working days from the Bid Due date.**. Scanned copy of the DD/ Banker's Cheque/ Pay Order shall be attached with the tender submitted "online". The Earnest Money deposited will not carry any interest.

1.10 Tender Submission/Opening:

1.10.1 The time schedule for various activities in connection with this tender will be as follows.

Description of activity	Schedule time	Venue
a)Last date & time for submission of tenders	14.30 hrs on 29/03/2022	-----
b)Public opening of Tenders	15.00 hrs on 29/03/2022	Chief Engineer's Office

1.10.2 Tender shall include Cover A containing hard copy of ***"EMD & COST OF TEDNER FORM"***. All other technical details including Technical Bid & Price Bid shall be submitted only **online.**

1.10.3 Technical Bid & Price Bid shall be submitted only 'Online'. The name and address of the tenderer shall be necessarily entered in the space provided in 'Price Bid'.

1.11 The right of acceptance of tender will rest with Port Trust Board who does not bind themselves to accept the lowest tender and reserves to themselves the authority to reject any or all of the tenders received without assigning any reason.

1.12 The Chief Engineer/ Dy. CE/ Suptdg. Engineer or his duly authorized assistant will open the tenders in the presence of intending tenderers who may be present at the time in person or through their authorized representative. In the event of a tender being rejected, the Earnest Money paid with such unaccepted tender shall be refunded to the tenderer by the Financial Adviser and Chief Accounts Officer direct.

1.13 i) The tenderer should keep open the validity of the tender normally for 60 days from the date fixed for its opening. However, it is also obligatory for the tenderer to keep the validity open for another 60 days for which request in writing/ telefax/e-mail by the Chief Engineer before the expiry of the original validity would be sufficient intimation. The receipt of the intimation of the Chief Engineer should be acknowledged.

ii) Should any tenderer withdraw his tender before these periods, or make any modification in the terms and conditions of the tender which are not acceptable to the department, the Earnest Money deposited by the tenderer shall be forfeited.

1.14 The tenderer shall visit the site of work in order to acquaint himself with the conditions of the site, the locality and its environment.

1.15 The tenderer shall be deemed to have full knowledge of all documents, site, etc. whether he has inspected them or not. The submission of a tender by tenderer implies that he has read this notice and General Conditions of Contract and has made himself aware of the scope and specifications and other factors bearing on the tender.

Securities:

1.16.1 Security Deposit (SD) shall be 3% of the Contract value or value of the work done whichever is higher and it shall consist of the following:

a) **Performance Security** 3% of contract value payable on award of the work.

B) **Retention Money**: NIL

In case, where the value of work done exceeds Contract value, Additional Security Deposit @ 3% of the excess amount will be deducted from the RA Bills. While making payment, which will be released along with the Performance Security only

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.

1.16.2 **Performance Security:** The Performance Security retained till end of Defect Liability period (1 year from the date of completion of work) shall be 3% of Contract Value or Cost of Work Done, whichever is higher. So, initially 3% of the Contract value shall be furnished as Performance Security.

In case, where the value of work done exceeds Contract value, Additional Security Deposit @ 3% of the excess amount will be deducted from the RA Bills, while making payment, which will be released along with the Performance Security only.

1.16.3 The Security Deposit/ Performance Security @ 3% of the value of the contract awarded or the value of the work done whichever is higher, shall be furnished by the Contractor to the Employer, not later than **21 days** from the date of letter of acceptance or such extension of that period as may be permitted by the Engineer in writing, and shall be furnished in one of the following forms:

i) Banker's Cheque/Demand Draft/Pay Order of a Scheduled Bank.

ii) An irrevocable Bank Guarantee(BG) enforceable and encashable at Cochin, drawn from any Scheduled Bank operating in India as per the prescribed proforma.

1.16.4 The Security Deposit/ Performance Security retained till end of Defects Liability Period **(1 year from the date of completion)** shall be 3% of Contract Value or Cost of Work Done, whichever is higher. So, initially 3% of the Contract value shall be furnished as Performance Security. **The BG furnished towards the Performance Security shall be valid until a date 30 days from the day of expiry of the Defect Liability Period stipulated as per the terms of the Contract**.

1.16.5 Unless Performance Security is furnished within the period as specified above or such extension of that period as may be permitted by the Engineer in writing, tenderer will be suspended and shall not be eligible to participate in the tenders invited by Cochin Port Trust for a period of **Two Years from the date of such suspension order**.

1.16.6 **Retention Money:** NIL. In case, where the value of work done exceeds Contract value, Additional Security Deposit @ 3% of the excess amount will be deducted from the RA Bills. While making payment, which will be released along with the Performance Security only.

1.16.7 Deleted.

1.16.8 **The Performance Security retained till end of Defect Liability Period (1 Year from the date of completion) shall be 3% of Contract Value or Cost of Work Done, whichever is higher.**

1.16.9 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 Additional Security Deposit recovered from the running account bills, shall amount to 3% of the Cost of Work done.

1.17 EMD shall be refunded to the Contractor on acceptance of Performance Security and entering into agreement.

1.18 In the event of the tenderer, after the issue of the communication of acceptance of offer by the Board, 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, the Board shall have full right to claim damages therefore either together with or in addition to the forfeiture of Earnest Money Deposit.

1.19 **Signing of Agreement:**

1.19.1 The successful tenderer will be required to execute within **21 days** from the date of receipt of work order, 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 there to, and

b) General Conditions of Contract-2016 (GCC), for the due and proper fulfillment of the Contract.

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

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

1.21 Failure to comply with conditions **1.13, 1.16 and 1.19** above will entail forfeiture of the Earnest Money.

1.22 Tenders received shall be considered for acceptance, only if it meet the Minimum Qualification Criteria stipulated below:

Minimum Qualification criteria required for considering tenders:

(i) Experience:

The tenderer should have successfully completed at least:

one similar work of value not less than Rs.11.23 lakhs

OR

two similar works, each of value not less than Rs.7.02 lakhs

OR

three similar works, each of value not less than Rs.5.62 lakhs,

during the preceding seven years ending 28th February 2022.

Explanatory notes:

(a) Similar work(s) means **"*Installation of e-toilets*".**

(b) The experience certificate of works executed in private sectors/organizations, shall be considered for qualification, only on submission of TDS certificate along with work order and completion certificate.

(c) Copy of completion certificates of each work issued by the owner/ responsible officer of the 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.

(d) 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 subcontractor 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.

(e) 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.

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

(ii) **<u>Financial Turnover:</u>**

Average Annual Turnover of the tenderer during the last three financial years ending 31st March 2021 shall not be less than Rs.4.21 lakhs.

In proof of this Audited Annual Accounts Statements or IT returns duly acknowledged by the Income Tax department along with computation statement signed by the Auditor/ Chartered Accountant, for the last three years shall be produced by the tenderer.

1.23 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.

1.24 Canvassing in connection with tender is strictly prohibited and tenders submitted by the Contractors who resort to canvassing will be liable to rejection.

1.25 The tenderer shall specify the PAN No. allotted to him so that Chief Engineer/ Executive Engineer can ascertain his liability to the Income Tax Department.

1.26 The tenderer shall furnish documentary evidence in support of Goods & Service Tax (GST) Registration.

1.27 Tender Documents can be seen at Chief Engineer's Office during working hours on all days except on Sundays, second and fourth Saturdays and Public Holidays.

1.28 Bidders who are registered with National Small Industries Corporation (NSIC), Govt. Of India Enterprises under "Single Point Registration Scheme" of Ministry of MSME shall be eligible for issue of tender document free of cost. They are required to submit documentary proof of such registration along with the offer, as detailed in Instructions to Tenderers, for claiming the available exemptions and also, a scanned copy of the Exemption Certificate duly notarised shall be uploaded in the e-tendering Portal.

1.29 **Taxes and Duties**:

1.29.1 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.

1.29.2. GST for the work will be paid extra by the Port. The GST applicable as per law can be billed on the Port Trust, 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 Trust 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.

1.29.3. Any stipulation by a tenderer that taxes and duties deductable from these bills should be borne by the Port Trust will result in the summary rejection of his /their tender.

1.30 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.

1.31 The undersigned reserves the right to reject/cancel/postpone any one or all tenders at any stage of the tender, which will be binding on all bidders.

1.32 This Tender Notice shall form part of the Contract.

Chief Engineer
Cochin Port Trust
For and on behalf of the Board of Trustees of the Cochin Port Trust

2. TENDER FOR WORKS

To

The Board of Trustees,
Cochin Port Trust
Through
The Chief Engineer
Cochin Port Trust, 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	:	**PROVIDING AND ERECTING E-TOILETS AT CFS.**
b)	Estimated cost Put to tender	:	**Rs.14,04,070/-**
c)	Earnest Money	:	**Rs. 14,050/-**
d)	Security Deposit	:	3% of the value of the Contract awarded or value of the work done whichever is higher. (Performance Security @ 3%)
e)	Percentage, if any, to be deducted from the bills	:	In case, Where the value of work done exceeds Contract value, Additional Security Deposit @ 3% of the excess amount will be deducted from the RA Bills, while making payment, which will be released along with the Performance Security only.
f)	Time allowed for commencement of work from the date of receipt of work order	:	7 days
g)	Time allowed for the work from the date of commencement of work	:	3 Months
h)	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 said conditions of Contract annexed here to so far as applicable or in default thereof forfeit and pay to the Board the sum of money mentioned in the said conditions and to execute an agreement with the Board in the prescribed form or in default thereof to forfeit the Earnest Money deposited by me/us. The sum of Rs..... has been deposited with Financial Adviser and Chief Accounts Officer of the Port Trust as Earnest Money: (a) the full value of which is to be absolutely forfeited to the Board in office without prejudice to any other rights or remedies of the said Board in office should I/We fail to commence the work specified in the Contract Data or should I/We not deposit the full amount of Performance Security specified in the Contract Data in accordance with clause 52 of the said conditions of Contract otherwise the said sum of Rs. ..... shall be retained by the Board as on account of such security deposit as aforesaid; 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 Conditions of Contract.

Dated the .....……..... day of …… 2022

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 …….....……2022.

Dated……

Chief Engineer
Cochin Port Trust

3. CONTRACT DATA

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

<table>
<tr><th>Sl. No.</th><th>Description</th><th>Reference Cl.No. of GCC</th></tr>
<tr><td>1</td><td>The following documents are also part of the Contract</td><td></td></tr>
<tr><td></td><td>The Schedule of other Contractors ----------
i)</td><td>(8.2)
N.A</td></tr>
<tr><td></td><td>The Schedule of Key personnel
<table>
<tr><th>Qualification of Staff</th><th>No.</th><th>Min. Experience (Years)</th><th>Rate of recovery in case of non-compliance</th></tr>
<tr><td>Graduate Engineer or</td><td>------</td><td>------</td><td>------</td></tr>
<tr><td>Diploma Engineer</td><td>1</td><td>5</td><td>Rs.15,000/-p.m</td></tr>
</table></td><td>(9)
N.A</td></tr>
<tr><td>2</td><td>The Employer is</td><td>(1)</td></tr>
<tr><td></td><td>The Board of Trustees,
Cochin Port Trust,
Cochin -9</td><td></td></tr>
<tr><td></td><td>Name of Authorized Representative:</td><td></td></tr>
<tr><td></td><td>Name: Dr. M. Beena,
Chairperson,
Cochin Port Trust,
Cochin -9.</td><td></td></tr>
<tr><td>3</td><td>The Engineer is:</td><td></td></tr>
<tr><td></td><td>Name : Shri. Paritosh Bala,
Chief Engineer,
Cochin Port Trust, Cochin-9.</td><td></td></tr>
<tr><td></td><td>The Nominee/ Engineer-in-Charge is:</td><td></td></tr>
<tr><td></td><td>Name : Sri.A.G.Sathyan, Suptdg. Engineer(CM)</td><td></td></tr>
<tr><td>4</td><td>Name of Contract: "Providing and erecting e-toilets at CFS. Tender No : T6/T-1961/2021-C</td><td>(1)</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Description</th><th>Reference Cl.No. of GCC</th></tr>
<tr><td>5</td><td>10 copies of Contract Agreement shall be furnished by the Contractor</td><td>[7.1]</td></tr>
<tr><td>6</td><td>Tender Document and other data are available at :
Chief Engineer’s Office,
Cochin Port Trust, W/Island,
Cochin – 682009, KERALA.</td><td>(7.2)</td></tr>
<tr><td>7</td><td>The Intended Completion Date for the whole of the Work is 3 Months with the following milestones:</td><td>(17.28)</td></tr>
<tr><td>8</td><td>Milestone dates:
<table><tr><td>Physical works to be completed</td><td>Period from the date of receipt of LoA to proceed with the work</td></tr><tr><td>3 Months</td><td>7 days</td></tr></table></td><td></td></tr>
<tr><td>9</td><td>The following shall form part of the Contract Document:
(1) Form of Agreement
(2) Letter of Acceptance
(3) Contractor’s Bid
(4) Contract Data
(5) General Conditions of Contract (GCC)
(6) Instructions to Tenderers
(7) General Description and Special Conditions of Contract
(8) Detailed Specifications for Materials and Works
(9) Drawings (if any)
(10) Schedule of quantities and
(11) Any other documents listed in the Contract Data as forming part of the Contract.
(12) 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</td><td>(2.3)</td></tr>
<tr><td>10</td><td>The Contractor shall submit a Program for the Works within 7 (Seven) days of date of the Letter of Acceptance.</td><td>(27)</td></tr>
<tr><td>11</td><td>The site possession date:
The site will be handed over within 7 (Seven) days after receipt of LoA and the site is free from encumbrances.</td><td>(21)</td></tr>
</table>

Sl. No.	Description	Reference Cl.No. of GCC
12	The Start Date shall be within **7 (Seven) days** from the date of receipt of the Letter of Acceptance (LoA) by the Contractor.	(1)
13	The site is located at W/ Island	
14	The Defects Liability Period is : One year from the date of completion of work.	(35)
15	The minimum insurance cover for physical property, 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.	(13)
16	The following events shall also be Compensation Events: **----------**	(44) **N/A**
17	The period between Programme updates shall be **30 days**	(27)
18	The amount to be with held for late submission of an updated Programme shall be Rs..…….. (Rupees…….)	(27) N/A
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 or value of the work done whichever is higher.	(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 : The advance payments as applicable to the Contract are: **----------**	[51] **N/A**
25	Repayment of advance payment for mobilization : --------	[51] **N/A**
26	Repayment of advance payment for Construction and Equipment: ----------	[51] **N/A**
27	Repayment of Secured Advance: ----------	**N/A**
28	The date by which "As Built Drawings" are required is within -- days of issue of certificate of completion of whole or section of the work, as the case may be.	(58) **N/A**
29	The amount to be withheld for failing to supply "As Built Drawings" and/or operating and maintenance manuals by the date required is Rs…… (Rupees **----------)**	(58) **N/A**

Sl. No.	Description	Reference Cl.No. of GCC
30	Schedule of Rates Applicable: CPWD DSR 2018 + 55% Cost Index x 0.8768 for deducting GST.	
31	Base Rate for materials to be considered for price variation :----------	(47)
(i)	Cement consumed for various items of work : Rs..... ……per tonne	N/A
(ii)	Reinforcement steel used under various items : Rs..... …….. per tonne	
(iii)	Structural Steel used under various items: Rs…….. per tonne	
(iv)	Bitumen under various items in: Rs…….. per tonne	
(v)	Bitumen Emulsion (MS&RS) under various items in: Rs…….. per tonne	
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)

4. INSTRUCTIONS TO TENDERERS

4.1 Electronic Tenders (e-tenders) on percentage basis under "Two Cover system" are invited for **"PROVIDING AND ERECTING E-TOILETS AT CFS."**

4.2 The tenderer shall submit the tender Cover-A (Hard Copy of EMD & Cost of Tender form). 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:

i. A. Technical Bid Documents (as per Sl. No 1 to 7 of the Contents sheet)
ii. B. Price Bid: Schedule of quantities of Work- Schedule-A and
iii. C. 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 shall contain – hard copy of EMD as described in Clause 1.9.1 of Tender Notice & Cost of Tender form as mentioned in Clause 1.2 of Tender Notice shall be submitted **within 3 (THREE) working days from the Bid Due date.**

4.5.2 Technical Bid (Online mode)

Technical Bid shall contain all technical and commercial details except Schedule of Quantities. It shall consist scanned/ soft copies of the following documents.

a) A covering letter from the tenderer enlisting the enclosures/ attachments.
b) Original Tender Document (Technical Bid) except Schedule of Quantities.
c) Copy of the documents in proof of fulfillment of the Minimum Qualification Criteria.
d) Copy of PAN Card, ESI/EPF & GST Registration documents.
e) Copy of Authorisation documents of Signatory of the bid in case of Registered Partnership firm / Limited company
f) Partnership deed or Memorandum and Article of Association of the company and registration certificate of the company as the case may be.
g) Any other relevant document.

4.5.2.3 Scanned copies of all documents as per Clause 4.5.2, EMD and Cost of Tender Form shall be submitted as "Technical Bid".

4.5.2.4 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. **<u>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</u>**.

4.5.3 Price Bid:

4.5.3.1 Price Bid shall contain only the "Schedule of Quantities", 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 PRE-QUALIFICATION CRITERIA

4.6.1. Selection criteria for qualifying the tenderers for opening the Price Bids in Cover 'B' of the tender will be as below:

(i) Experience :

The tenderer should have successfully completed at least
one similar work of value not less than Rs.11.23 lakhs
OR
two similar works, each of value not less than Rs.7.02 lakhs
OR
three similar works, each of value not less than Rs.5.62 lakhs,
during the preceding seven years ending 28th February 2022.

Explanatory notes:

a) Similar work(s) means "***Installation of e-toilets.***"

b) Copy of completion certificates of each work issued by the owner/ responsible officer of the 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.

c) The experience certificate of works executed in private sectors/ organisations, shall be considered for qualification, only on submission of TDS certificate along with work order and completion certificate.

d) 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.

e) 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.

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

(ii) **Financial Turnover:**

Average Annual Turnover of the tenderer during the last three financial years ending 31st March 2021 shall not be less than Rs.4.21 lakhs.

In proof of this Audited Annual Accounts Statements or IT returns duly acknowledged by the Income Tax department along with computation statement signed by the Auditor/ Chartered Accountant for the last three years shall be produced by the tenderer.

4.7. OPENING AND EVALUATION OF TENDERS

4.7.1 Technical Bids of the tenders received shall be opened at 15.00 hrs. on **29/03/2022,** the last date fixed for receiving the bid, in the SE'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.

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 Trust, 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 Trust 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 Trust 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 Trust directly by the issuing bank under registered post with AD. The Contractor shall take the responsibility of sending BGs directly to the Port Trust by the issuing bank.

SIGNATURE OF TENDERER.

5. GENERAL DESCRIPTION AND SPECIAL CONDITIONS OF CONTRACT

1. SCOPE OF WORK

1.1 The proposed work is for "**PROVIDING AND ERRECTING E-TOILETS AT CFS**". The work consists of the following:

(i) Providing precast cement concrete solid block masory.

(ii) Providing and filling with 6mm metal mixed with quarry dust.

(iii) Providing and laying Cement Concrete.

(iv) Plastering with Cement Mortar 1:4.

(v) Supply, installation, testing & commissioning of bio- digester enabled modular, unmanned and automated prefabricate public toilets.

1.2 The work shall be meticulously planned in consultation with the departmental supervisory staff and nearby users, so that minimum inconvenience is caused to the functions of the wharf.

2. WORK SITE

The work has to be carried out at Container Freight Station. The site is accessible through road. The work site is operational and protected area and hence security rules and regulations including obtaining passes etc. for work are to be observed by the contractor. The work is to be carried out without disturbing the normal Port operations.

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 2 (**Two)** 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 Contractors' 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 Trust. 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 Trust. 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 Trust 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 Trust, 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 labourers 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 contractor shall be registered under EPF and ESI Act and the employees employed under them shall be covered in the EPF and ESI scheme, as applicable under the act.

If the number of employees proposed to be engaged in the work is less than the threshold limit under ESI/ EPF act, an undertaking to this effect shall be included in the tender submission.

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 year from the date of completion of the work. Contractor is responsible to do all the Repairs, Maintenance and required Services to electronic, electrical, water supply & structural parts of the e-toilet during this period at free of cost. Contractor shall ensure uninterrupted service of the e-toilet blocks during the defect liability period.

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 Trust 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 Trust 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. 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.

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 at the rate of 2% plus surcharge or 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.

18. 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.

SIGNATURE OF TENDERER

6. DETAILED SPECIFICATIONS FOR MATERIALS TO BE USED ON WORK

1. GENERAL

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 code of practices published by the Bureau of Indian Standard. 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.

1.2 All the materials to be used on the Works shall have **BIS certification** mark if so available, unless otherwise specified elsewhere or shall be of approved brand with equivalent material as approved by the Engineer-in-Charge. Wherever, any brands are specified for the materials /products to be used on the Work, its equivalent quality material shall also be used, with the approval of the Engineer in Charge.

1.3 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.

1.4 The materials required for the Work shall be brought to the site and stacked at places shown by the Engineer-in-Charge and the same shall be got approved for use in Work sufficiently in advance so that the progress of the Work is not affected by the supply of materials.

2. AGGREGATES FOR CONCRETE

2.1 Aggregates (fine and coarse) for concrete shall comply with the requirements of IS:383 – 'Specifications for coarse and fine aggregate from natural sources for concrete'. 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.

2.2 The fine aggregate shall be clean, hard, durable, uncoated, dry and free from injurious, soft or flaky pieces and organic or other deleterious substances.

2.3 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.

2.4 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.

3. CEMENT

3.1 Quality of cement used for the Work shall be 43 grade ordinary Portland cement conforming to IS:8112 or 53 grade ordinary Portland cement conforming to

IS:12269 or Pozzolona cement conforming to IS:1489 unless otherwise approved by the Engineer-in-Charge.

3.2 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.

3.3 Supply of cement shall be taken in 50kg bags bearing manufacture's name and ISI 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.

3.4 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.

3.5 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.

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

3.7 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.

4. WATER

4.1 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.

4.2 **Cochin Port Trust 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.**

4.3 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.

5. 6 MM SIZE AGGREGATE

6mm size graded aggregate conforming to IS 383 shall be used and which are not perfectly clean shall be washed in clean water to the entire satisfaction of the Engineer-in-Charge.

6. PRECAST CEMENT CONCRETE BLOCKS

Factory made precast solid concrete blocks shall be in plain cement concrete of 1;1½ : 3 grade with 20mm /12mm graded metal. These blocks are to be cast in appropriate moulds preferably steel moulds, which shall provide a smooth surface. The finished blocks shall be cured properly for a minimum period of 14 days. Blocks damaged during the removal of forms and handling will be rejected.

7. SAND FOR MAKING MORTAR FOR MASONRY WORK / PLASTERING WORK

8. MATERIALS NOT SPECIFIED

8.1 All materials not herein detailed and fully specified but which may be required for use on Works, shall be subjected to the approval of the Engineer-in-Charge without which they shall not be used anywhere in the permanent Works

9. SAMPLING AND TESTING OF MATERIALS

9.1 Sampling and testing of the material supplied by the Contractor for use on the Work shall be done as per the provisions of the relevant BIS codes/specifications. In the absence of BIS specification in a particular case, the sampling and testing shall be done as directed by the Engineer-in-Charge as sound engineering practice. Material conforming to the specifications and approved by the Engineer-in-Charge shall only be used by the Contractor.

9.2 All the sampling and testing shall be done at the Contractor's cost.

SIGNATURE OF TENDERER

7. DETAILED SPECIFICATIONS OF ITEMS OF WORKS

1. GENERAL

Except where otherwise specified or authorised by the Engineer-in-Charge all items of Works executed by the Contractor must conform to the latest edition of the Bureau of Indian Standard (BIS) Specifications, I.RC., MORT&H's specifications and Code of practices published by BIS. Where no such specifications or code of adoption. The Bidder while indicating such specifications shall practice exists the latest BSS codes of practice shall also be considered for enclose the full set of the publication so referred and not in extracts. Photostat / Xerox copies in duplicate shall be forwarded which shall not be returned to the Contractor. In absence of any specification the department reserves the right to adopt trade specifications and /or sound engineering practices for the specialised Work as may be decided by the Engineer-in-Charge which shall be final, conclusive and binding on the Contractor. Detailed specifications of items of Works are described below:

2. PECAST CEMENT CONCRETE BLOCK MASONRY

2.1 The blocks shall be laid to level and alignment to bring out joint not more than 10 mm wide between the blocks. The grade of mortar shall be specified in the schedule of items. Curing shall be done for 7 days.

2.2 Payment for cement concrete block masonry shall be made on cubic meter. The rate shall include all labour and materials including curing etc. complete required for completion of work.

3. PLAIN CEMENT CONCRETE

3.1 **General**

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

3.2 **Concrete Mix**

Mix used shall be 1;2:4 Grade.

3.3 **Nominal Mix**

For nominal mix concrete, proportion of fine aggregate to coarse aggregate shall be 1:2 by volume. The minimum cement content per cubic metre of nominal mix concrete shall be as given below. Water cement ratio not exceeding 0.50.

Sl. No	Type of concrete	Cement content per Cu. M
1	1:2: 4 with 20mm size graded metal	320 Kg.

3.4 **Size of Coarse Aggregate**

For all concrete, 20 mm size graded aggregate conforming to IS:383 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.

3.5 **Mixing of Concrete**

3.5.1 Concrete shall be mixed in a drum type mixer. 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.

3.6 **Form Work**

3.6.1 The steel/ marine plywood formwork shall be used for concrete work. The form work shall be designed and constructed to the shape, lines and dimensions shown in the drawings within the tolerance limit and specified in clause 11.1 of IS:456-2000. Joints of the form works shall be made water tight by providing suitable beadings / gasket as approved by the Engineer-in-Charge. All rubbish, particularly chippings, shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be cleaned and thoroughly wetted or treated with an approved composition. Care shall be taken that such approved composition is kept out of contact with the reinforcement.

3.6.2 Before reuse, all forms shall be thoroughly scraped, cleaned, nails removed, holes that may leak suitably plugged and joints examined and when necessary, repaired and the inside retreated to prevent adhesion, to the satisfaction of Engineer. Warped timber shall be resized. Contractor shall equip himself with enough shuttering material to complete the job in the stipulated time.

3.6.3 Forms for sloped surfaces shall be built so that the formwork can be placed board -by- board immediately ahead of concrete placement so as to enable ready access for placement, vibration inspection and repair of the concrete. The formwork shall also be built so that the boards can be removed one by one from the bottom up as soon as the concrete has attained sufficient stiffness to prevent sagging. Surfaces of construction joints and finished surfaces with slopes steeper than 4 horizontal: 1 vertical shall be formed as required herein.

3.6.4 For forms for curved surfaces, the Contractor shall interpolate intermediate sections as necessary and shall construct the forms so that the curvature will be continuous between sections. Where necessary to meet requirements for curvature, the form timber shall be built up of laminated splines cut to make tight, smooth form surfaces. After the forms have been constructed, all surface imperfections shall be corrected and all surface irregularities at matching faces of form material shall be dressed to the specified curvature.

3.6.5 Care shall be taken to see that the faces of formwork coming in contact with concrete are perfectly cleaned and two coats of mould oil or any other approved material applied before fixing reinforcement and placing concrete. Such coating shall be insoluble in water, non-staining and not injurious to the concrete. It shall not become flaky or be removed by rain or wash water. Reinforcement and/or other

items to be cast in the concrete shall not be placed until coating of the forms is complete; adjoining concrete surface shall also be protected against contamination from the coating material.

3.7 **Transporting, placing, compacting and curing of concrete**

3.7.1 Transporting, placing, compacting and curing of concrete shall be as per clause 13 of IS:456-2000.

3.7.2 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.

3.7.3 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 form Work.

3.7.4 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.

3.7.5 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.

3.7.6 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.

3.7.7 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).

3.7.8 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.

3.7.9 The unit rate quoted by the tenderer shall be for the finished Work and deemed to include cost of all materials and labour, provision of holes, recess, other contingent items etc. required for the completion of Work but excluding shuttering as specified in the schedule etc.

4. CEMENT PLASTERING

4.1 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.

4.2 All the corners shall be rounded off to a radius of 25 mm unless otherwise specified.

4.3 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 metre immediately after the final coat of plastering and rate quoted for plastering shall include cost of this finishing work.

4.4 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.

4.5 The surface shall be cured for 7 days.

4.6 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.

SIGNATURE OF TENDERER