COCHIN PORT AUTHORITY
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e-TENDER DOCUMENT FOR

"REPLACEMENT OF OLD 11KV PANELS IN THE NEW POWER HOUSE SUBSTATION WITH NEW 11KV VCB PANELS"

(TECHNICAL BID)

(e-Tendering Mode)

Website: www.tenderwizard.com/COPT

(Tender No: F1/T-5/HT VCB PANELS-NPH/2026/M dt:02/11/2026)

OFFICE OF THE
CHIEF MECHANICAL ENGINEER,
COCHIN PORT AUTHORITY,
WILLINGDON ISLAND,
COCHIN-682 009

Cost of Tender Document: Rs.2,360/-

Signature of the Tenderer

COCHIN PORT AUTHORITY

Tender for "Replacement of old 11kV Panels in the New Power House Substation with new 11kV VCB Panels"

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Signature of the Tenderer

website: www.cochinport.gov.in
Chief Mechanical Engineer's Office,
Cochin Port Authority,
W/Island, Cochin – 682009, Kerala
Tele: 91-0484-2666639/0484-258-2300/2350
Email: cme@cochinport.gov.in; dycmeele@cochinport.gov.in

SECTION-I
1. NOTICE INVITING TENDER

Tender No: F1/T-5/HT VCB PANELS-NPH/2026/M **Dated:02/11/2026**

1. Notice Inviting Tender

Electronic Tenders **(e-Tenders)** on percentage basis is invited in Single Stage Two Cover bidding procedure [Technical Bid and Financial Bid], by the Chief Mechanical Engineer, Cochin Port Authority, Willingdon Island, Cochin-682009, from **Proprietorship/ Individual/ Limited company/ LLP meeting the Minimum Qualification Criteria** specified below for the work of **"Replacement of old 11kV Panels in the New Power House Substation with new 11kV VCB Panels"**

1.1 For submitting the e-tender, the prospective bidders willing to participate in this tender shall fulfill the Minimum Qualification Criteria and agree to the Terms and Conditions mentioned in the Tender Document. Tender timeline is available in the BID INFORMATION SHEET given in the Tender Document.

2. BID INFORMATION SHEET

A	Bid No.	**Tender No: F1/T-5/HT VCB PANELS-NPH/2026/M Dt.02/11/2026**
B	Name Of Work	**Replacement of old 11kV Panels in the New Power House Substation with new 11kV VCB Panels**
C	Brief Scope Of Work	SITC of SCADA compatible VCB Panels, earthing, cable termination, dismantling and removal of existing panels, modification of existing foundation for panels etc. in the New Power House of CoPA
D	Tender E-Publication Date	**02/11/2026**
E	Type Of Bidding System	e-Tender through e-Tendering portal www.tenderwizard.com/COPT
F	Type Of Tender	Single stage 2 cover system with EMD
G	Language Of Tender and All Correspondences	English
H	Download Period of Tender Documents	**FROM 02/11/2026 TO 24/11/2026 up to 2.30PM**

Signature of the Tenderer

I	Date, Time & Venue of Pre-Bid Meeting	Pre-bid meeting will be held in the CME's office of CoPA on **12/11/2026 11.00 AM,** through Video Conferencing to answer clarifications, if any, on the bid document and the link will be shared to the bidders on their request.
J	Online Bid-Submission Deadline Date	**24/11/2026 up to 3.00PM**
K	Techno- Commercial Bid Opening	**24/11/2026 at 3.30 PM in the e-tender portal**, at the Office of the Chief Mechanical Engineer, Cochin Port Authority, Cochin-9. After the deadline for submission of tenders, only technical bids will be opened on the due date of tender opening. Only tenders that are responsive to the mandatory requirements in the technical evaluation shall have their financial bids opened.
L	Price Bid Opening	Date and time will be informed later to the eligible bidders. The price shall be fixed. Prices quoted shall be net excluding GST. The currency in which the prices shall be quoted: Indian Rupees (INR).
M	Estimated Amount Put to Tender	**Rs.58,72,172/- excluding GST** (Rupees Fifty Eight Lakh Seventy Two Thousand One Hundred and Seventy Two only excluding GST)
N	Cost of Bid Document (Exemption shall be granted to MSEs on submission of NSIC/ MSME/ UAM certificate)	**Rs.2,360/-including 18% GST**. The cost of bid document and shall be furnished in the form of Demand Draft/ Banker's Cheque drawn in favour of FA & CAO, CoPA or through RTGS/NEFT mode.
O	Earnest Money Deposit (Exemption shall be granted to MSEs on submission of NSIC/ MSME/ UAM certificate)	**Rs.1,38,584/-** (Rupees One lakh Thirty Eight Thousand Five Hundred and Eighty Four only) shall be furnished either in the form of Insurance Surety Bond or through account payee Demand Draft, Banker's Cheque or an irrevocable Bank Guarantee drawn in favour of Financial Adviser & Chief Accounts Officer, CoPA, enforceable/encashable at Kochi, from any Commercial Banks or online payment in an acceptable form safeguarding the purchaser's interest in all respects. (State Bank of India, Cochin Port Authority Branch, IFSC Code: SBIN0006367, Account No.41401802288), The bid security shall be valid for a period of 45 days beyond the final bid validity period.
P	Contract Period	The entire work shall be completed & commissioned within **120 Days from the date of LoA**
Q	Validity of Tender	Bid shall remain valid for a period of **120** days from the date of Tender opening.
R	Contact Details of e-tender portal	**e-Tender Help Desk No.080-40482000 / 9746118529 / 9605557738.**
S	Name, Designation, Address And Other Details (For Submission Of Tender)	The Chief Mechanical Engineer, Cochin Port Authority, Willingdon Island, Kochi-682 009 Tel. 0484-2666639, 2582300, 2582350 Email: cme@cochinport.gov.in; dycmeele@cochinport.gov.in

Signature of the Tenderer

3. MINIMUM QUALIFICATION CRITERIA OF THE BIDDERS (MQC):

3.1 FINANCIAL CRITERIA :

The Bidder should have an Average Annual Financial Turnover of **Rs.17,61,700/-,** during the last three financial years, ending **31/03/2025** (viz.2022-23, 2023-24 & 2024-25)

Note: Documentary evidence such as balance sheet / profit and loss statement duly certified by Chartered Accountant with their UDIN (Unique Document Identification Number) with QR code if available shall be uploaded along with the Bid.

3.2 TECHNICAL CRITERIA:

The Bidder should have successfully completed "**similar works"** during last 7(seven) years ending last day of month previous to the one in which tenders are invited should be either of the following:

At least One similar completed work costing not less than **Rs. 46,97,750/-** (Excluding GST)

OR

At least Two similar completed works costing not less than **Rs. 29,36,100/-** each (Excluding GST)

OR

At least Three similar completed works costing not less than **Rs.23,49,000/-** each (Excluding GST)

Similar work means "Supply, Installation, Testing & Commissioning (SITC) of HT Installation work."

3.2.1 In order to meet the Technical criteria as per clause No.3.2 above, the bidder shall submit the following documents along with the technical bid:-

Self-attested photocopies of LOA/ Work Order/ Agreements showing the awarded contract value for "similar works" and satisfactory Completion Certificates issued by the Client, indicating the date of Completion and completed Contract Value. The Bidder shall also enclose detailed BOQ with rates and scope of work supporting the LOA/ work order/ agreements/ completion certificates.

The experience certificate of Works executed in private sectors/ Govt. organisations shall be considered for qualification, only on submission of statement as per **Annexure-5a**, **duly certified by a Chartered Accountant for the transaction of the projects. Chartered Accountant is to provide their UDIN (Unique Document Identification Number) while certification with QR code if available**.

3.3 The Bidder shall have valid "A" Class Electrical Contractor's license or above, issued by any State/ Central/ Union Territory, Licensing Authority**.** In case the Bidder does not possess "A" Class Electrical Contractor's license, the Bidder may execute the work through a licensed "A" Class Electrical Contractor and shall submit an undertaking to this effect on Kerala Stamp Paper of value Rs.200/-along with the Bid**.**

Amendments to the tender (if any) will be issued only through web site www.cochinport.gov.in, on CPP Portalwww.eprocure.gov.in and on e-Tendering portal www.tenderwizard.com/COPT

Sd/-
CHIEF MECHANICAL ENGINEER
COCHIN PORT AUTHORITY

Signature of the Tenderer

SECTION II
INSTRUCTIONS TO TENDERERS

1. Introduction

The subject work is for **Replacement of old 11kV Panels in the New Power House Substation with new 11kV VCB Panels.** The bidder shall visit the site, ascertain the site conditions and scope before Bidding.

1.1 **The scope of work includes the following works:**

Supply, installation, testing and commissioning of SCADA-compatible VCB Panels, cable termination, providing earthing and dismantling and removal of existing panels, modification of the existing foundation for the installation of Panels with cement concrete, RCC, C channels etc.

Detailed Scope of Works is given in Section-V, Technical Specifications.

2. General Instructions

2.1 The work is to be executed as described in the Bid document and in particular in the technical specifications, Special Conditions, Schedule of Quantities etc. and in general includes, but is not limited to supplying all items including consumables and equipment necessary to execute the work as described in the Bid Document.

2.2 Before submitting the bid, the bidder shall examine carefully all conditions of contract, specifications etc. The bidders shall inspect the site of work with prior appointment with the Engineer of the work to get himself acquainted with the site conditions and to assess and satisfy himself of the difficulties and constraints which may be involved in executing the work in the location. It will be deemed that prior to the submission of tender, the tenderer has visited the site and has satisfied himself as to the nature and location of the work, general and local conditions, particularly those pertaining to transportation, handling and availability and storage of materials, availability of labour, weather conditions, tidal variations at site, working conditions, ground level, nature of soil etc. and that the tenderer has estimated his cost accordingly and the Port will be in no way responsible for the lack of such knowledge and also consequences thereof to the tenderer. Failure to visit the site will in no way relieve the successful bidder of any of the obligations in performing the work in accordance with this Bid Document including addendum/corrigendum, within the quoted price.

2.3 Cochin Port Authority will not be held responsible for any technical snag or networks/ purchase failure during online bidding. It is the bidder's responsibility to comply with the system requirement, i.e. hardware, software and internet connectivity, at Bidder's premises to access the e-tender Portal.

2.4 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 Portal or internet connectivity failures.

2.5 Financial instrument towards cost of tender document/ tender processing fee and EMD (DD/BG/banker's cheque etc.) drawn in favour of the Financial Adviser & Chief Accounts Officer (FA &CAO), CoPA from any Commercial bank in India having its branch at Cochin shall be submitted in original at the Employer's office before the due date and time of opening of the bid and scanned copy of the same shall be attached with the e-tender. **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**.

2.6 Bank details of Cochin Port Authority are as follows: State Bank of India, Cochin Port Authority Branch, IFSC Code: SBIN0006367, Account No.41401802288.

Exemption from the payment of Cost of Tender Document and EMD shall be given to Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by the Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department. The tenderers shall furnish a copy of the NSIC / MSME / UAM certificates for the

exemption of EMD along with the Technical bid. Such Certificates should mention the QR code of such registration. The scanned copy of Exemption Certificate shall be uploaded in the e-Tender Portal.

According to the Gazette Notification of India dated 18.10.2022, the Ministry of MSME, Government of India, has allowed those registered MSME's to continue to avail of non-tax benefits for three years, instead of one year, in case of an upward graduation in their category and consequent reclassification. Non-tax benefits include benefits of various schemes of Government including Public Procurement Policy, Delayed Payments, etc.

2.7 In case of Tender Document being downloaded from the Cochin Port website, at the time of uploading, the Tenderer shall give an undertaking that no changes have been made in the Document. The Port's Tender Document will be treated as authentic Tender and if any discrepancy is noticed at any stage between the Port's Tender Document and the one submitted by the Tenderer, the Port's Document shall prevail. For the discrepancies found at any time, the Tenderer shall be liable for legal action.

2.8 The bidders need to obtain the one time User ID & password for log-in to in e- Tendering system www.tenderwizard.com/COPT from the service provider KEONICS (Karnataka State Electronics Development Corporation, Bangalore) by paying registration amount by online Payment using Credit/Debit Card/Net banking or DD in favour of "KSEDCL, Bangalore".

2.9 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.

2.10 Format for Self-Certification under Preference to "MAKE IN INDIA" Policy CERTIFICATE as per **Annexure–12**- In line with Government Public Procurement Order No.P-45021/2/2017-BE-II dt.15.06.2017 and No.P45021/2/2017-PP (BE-II) dt.04.06.2020 as amended from time to time along with clarifications/amendments and other references as issued from time to time, the Contractor has to certify that they are meeting the requirement of Minimum Local Content in goods/services/ works to be supplied by local supplier as per declaration. (Class-I Supplier (50%) or Class-II Supplier (20%) or Non-Local Supplier (Less than 20%). **Bids not accompanied by "MAKE IN INDIA" Policy CERTIFICATE as per Form – 12" shall be liable for rejection.**

2.11 The bidder should not have been blacklisted or debarred by any Central / State Government / Agency of Central / State Government / Public Sector Undertaking / Regulatory Authority of India at the time of submission of this bid. In this regard the firm should submit a declaration that they have not been blacklisted or debarred by any Central /State Government/ Agency of Central / State Government/ Public Sector Undertaking / Regulatory Authority of India at the time of submission of bid.

2.12 The Chief Mechanical Engineer, CoPA reserves the right to reject/cancel/postpone/annul the tenders at any stage of the tender without assigning any reason thereof, which will be binding on all bidders.

2.13 The tender notice shall form part of the tender document and is to be signed and uploaded along with the technical bid.

2.14 A bidder shall be deemed to have full knowledge of all documents, site conditions etc. whether he has inspected them or not. The submission of a bid by the bidder implies that he has read the notice and conditions of contract and has made himself aware of the scope and specifications and other factors bearing on the bid and that they are binding on him.

2.15 The bidders may please note that the EMPLOYER will not entertain any correspondence or query on the status of the offers received against this Bid. Bidders are also requested not to depute any of their personnel or agents to visit the Employer's offices for making such enquiries till finalization of the bid. Should the EMPLOYER find it necessary to seek any clarification, technical or otherwise the concerned bidder will be duly contacted by the EMPLOYER.

2.16 Canvassing in any form by the bidder or by any other agency acting on behalf of the bidder after submission of the bid may disqualify the said bidder. The Employer's decision in this regard shall be final and binding on the bidder.

2.17 EMPLOYER will not be liable for any financial obligation in connection with the work until such time the EMPLOYER has communicated to the successful bidder in writing his decision to entrust the Work (covered by the bid document).

2.18 Telex/E-mail offers will not be considered. Bidders should prepare their bid themselves and upload in the e-tender portal.

2.19 In case of an unscheduled holiday on the prescribed closing/opening day of the bid, the next working day will be treated as the scheduled prescribed day of closing/opening of the bid.

2.20 While evaluating the document, regard would be paid to National security considerations, at the discretion of the Cochin Port Authority. Bid received from any bidder may be summarily rejected on National security consideration without any intimation thereof to the bidder.

2.21 If there are varying or conflicting provisions made in any document forming part of the contract, the Chief Mechanical 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 Bidder.

2.22 In case the department desires to inspect the equipments/ machinery for confirmation of its availability and capacity etc., necessary arrangements shall be made by the contractor for such inspection at his own cost.

2.23 Any error in description, any omissions there from shall not vitiate the contract or release the contractors from the execution of whole or any part of the works comprised therein according to drawing and specifications or from any of his obligations under the contract.

2.24 All the Bank Guarantees (BGs) to be furnished by the contractors in connection with the tender shall be drawn in favour of FA&CAO, CoPA, sent to the Chief Mechanical 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.

2.25 **The contractor shall comply with all the provisions of the Indian Employee's Compensations Act, 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.**

2.26 **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. Work Order shall be issued only to the contractors who are registered under EPF organization and ESI Corporation. The contractors shall regularly remit the employer and employee contribution to the authorities. If not, the Department would remit the same and the amount so remitted shall be deducted from the part/final bill of contractors**.

2.27 **The contractor shall be registered under GST and shall furnish documentary evidence in support of valid GST registration**.

3. Invitation for Bids:

The Invitation for Bids is open to all eligible bidders meeting the Minimum Qualification Criteria.

4. Downloading of Tender Documents:

Tender documents can be downloaded from the e-Tendering portal www.tenderwizard.com/COPT on the dates specified in Bid Information Sheet 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. Interested bidders shall download the Tender Documents from these portals as per the provisions available therein. Tenders attaching all required documents shall be submitted "online" in the website www.tenderwizard.com/COPT, strictly in accordance with the Instructions to Tenderers and Terms & Conditions given in the tender document before the tender submission time mentioned in the tender. No Bids shall be accepted off-line (Hard copy).

5. One Bid per Bidder:

5.1 Each bidder shall submit only one bid. A bidder who submits or participates in more than one Bid will be summarily rejected.

5.2 The Bidder shall be a single entity (Proprietorship/ Individual/ Limited company/ LLP) meeting the Minimum Qualification Criteria

6. Cost of Bidding:

The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

7. Site visit:

The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the work site and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for execution of the Works. The costs of visiting the site shall be at the Bidders' own expense.

8. Clarification of the Bidding Documents:

The tenderers are advised to examine the Tender Document carefully and if there be or appear to be any ambiguity or discrepancy in the documents, or any clarifications needed on the Tender Documents; these shall be referred to the Chief Mechanical Engineer in writing at the following address, so as to reach them before the pre-bid meeting. It is to be noted that queries, clarifications received after the above date will not be considered.

Address:
The Chief Mechanical Engineer,
Cochin Port Authority, Willingdon Island,
Cochin,682009,Kerala,India.
Phone: 91-0484-2666639/2582300 /2352/2320, Fax: 91-0484-2666639
Email: cme@cochinport.gov.in , dycmeele@cochinport.gov.in

9. Pre-bid meeting:

Pre-bid Meeting will be conducted on the date notified in the Bid Information Sheet under NIT, through Video Conferencing and the link will be shared to the bidders on their request. A prospective tenderer requiring any clarification of the tender shall submit their queries to the Chief Mechanical Engineer in writing/e-mail well in advance before the pre-bid meeting. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder. Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be published in e-tender portal as well as in Cochin Port Authority official website as Addendum/ corrigendum. Any modification of the bid documents as a result of the pre-bid meeting shall be made exclusively through the issue of an Addendum/ corrigendum.

10. Amendment of Bidding Documents:

The Chief Mechanical Engineer, Cochin Port Authority shall have the right to omit or suspend certain items of work or revise or amend the Bid documents prior to the due date of submission of the Bid by issuance of addendum/corrigendum. Any addendum/corrigendum thus issued shall be part of the tender documents. The addendum/corrigendum, if any, shall be hosted in the e-tender portal as well as in the website of the Cochin Port. The bidders are requested to watch the e-tender Portal www.tenderwizard.com/COPT, CoPA website www.cochinport.gov.in and CPPP Website www.eprocure.gov.in for Addendums / Amendments/ Errata / Replies to the queries of the bidder etc., if any, issued by the Employer. 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 and upload a copy of the Tender Document and Amendments / Corrigendum duly signed on all the pages by the Authorised signatory with Company seal affixed. Any shortfall in uploading the same will render the Tender incomplete and such incomplete Tender Documents may be rejected by the employer and would not be evaluated.

In order to afford the Bidders with reasonable time to take addendum into account, or for any other reason, the Port may, at its discretion, extend the due date for submission of Bid and bid extension notice shall be hosted in the web site.

11. Preparation of bids:

All documents relating to the bid shall be in the English language.

12. Experience Criteria in MQC:

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 past years:

Year before	Multiplying Factor
One year [2024]	1.07
Two years [2023]	1.14
Three years[2022]	1.21
Four years [2021]	1.28
Five years [2020]	1.35
Six years [2019]	1.42

12.1 **Other Eligibility Considerations:**

Even though the tenderers meet the above qualifying criteria, they will be disqualified if they have:

(a) Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/ or

(b) Record of poor performance such as abandoning the works/ purchases, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

In this regard the firm should submit a declaration that they have no record of poor performance, at the time of submitting the tender.

13. Bid Prices:

13.1 **Percentage basis contracts**

The Bidder shall fill the percentage in figures above / below of departmental estimate amount for the work noted in the Bill of Quantities (As per the instructions given in BOQ) and the total quoted amount in words will appear automatically. The contract shall be for the whole work based on the priced Bill of Quantities submitted by the Bidder. Tenderer should ensure that his tendered percentage as per Price bid is not mentioned anywhere in any other documents in Technical bid submission, directly or indirectly. If any such mention is made, the tender will become invalid and shall become liable for rejection.

The rate quoted by the Tenderer 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.

13.2 **Currencies of Bid and Payment:**

The price shall be quoted in Indian National Rupees (INR).

14. Bid Validity:

Bids shall remain valid for a period of not less than 120 (one hundred and twenty) days from the Tender submission due date. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. Should any tenderer withdraw his tender before the validity period will be treated as non-responsive and will be left out of consideration.

15. Bid Security / EMD:

15.1 Each tender should be accompanied by an Earnest Money amounting to **Rs.1,38,584/-** (Rupees One Lakh Thirty Eight Thousand Five Hundred and Eighty Four only). The EMD shall be furnished in the form of Insurance surety bond/ Account Payee Demand Draft/ Banker‘s Cheque from a Commercial Bank in India in favour of FA&CAO, Cochin Port Authority, payable at Cochin or online payment in an acceptable form safeguarding the purchaser‘s interest in all respects. The Earnest Money deposit will not carry any interest. Any bid not accompanied by an acceptable Bid Security shall be treated as Non- responsive and shall be rejected by the Employer. Exemption shall be given to Micro and Small Enterprises **(MSEs)** as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department).

15.2 Forfeiture of Bid security/ EMD: Bid Security/EMD will be forfeited in the following cases:

(a) If a Bidder withdraws his bid during the period of bid validity.

(b) In the case of a successful bidder who fails

(i) to commence the work, within the specified time limit

(ii) to sign the Agreement or furnish the required Performance Security within the specified time limit.

16. No Alternative Proposals by Bidders:
Bidders shall submit offers that comply with the requirements of the bidding documents. Alternatives will not be considered

17. Format and Signing of Bid:

17.1 The Tenderer shall prepare one set of his Tender (all Volumes), duly completed and signed, along with the set of Drawings and other documents mentioned hereinafter. The Bid document shall be signed by a person or persons duly authorised to sign on behalf of the Bidder with signature duly witnessed and company seal affixed. Then it shall be scanned and uploaded in the e-tender portal for submission. **However, the Power of Attorney (in original) authorizing the signatory/s of the Tender shall be submitted in hard copy along with submission of tender fees and Bid Security Declaration**.

17.2 If the tender is made by an individual, it shall be signed by his full name and his address shall be given. In the event of the tender being submitted by a registered partnership firm, it must be signed individually by each partner thereof or it must be signed by person holding a proper power-of- attorney authorising 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 authorisation. In the case of a Limited Company the tender should be accompanied by the Memorandum and Articles of Association of the Company.

18. Bid Submission:
Bid shall be submitted in two parts, **Part - I: Technical Bid** and **Part - II: Price Bid through** e- tender mode.
For online submission of Technical Bid, the scanned copies of the documents under item nos. (a) to (v) as detailed in clause 19.1 below need to be submitted through e-Tendering mode on www.tenderwizard.com/ COPT.
Price bid in the provided format shall be submitted only through e-tendering mode on www.tenderwizard.com/COPT before 15.00 Hrs on **the date notified in NIT**. **Price bid in hard copy need not be submitted**.

19. Information Required in the Bid

19.1 **Part I -Technical Bid shall contain the following:**

(a) Copy of Financial instrument towards EMD/ or relevant certificate for exemption of EMD
(b) Copy of Financial instrument towards Cost of tender document processing fee/ or relevant certificate for exemption of EMD. (Original shall be submitted before bid opening)
(c) Letter of Submission (vide **Annexure-1**)
(d) Power of Attorney (vide **Annexure-2). Bids not accompanied by Power of Attorney (if applicable) shall be liable for rejection.**
(e) Organization Details (vide **Annexure-3**)
(f) Details of experience as per **Annexure -4a&4b** and Certificates in proof of experience in similar works as detailed under Clause 3 of NIT and Clause 12 of Instruction to bidders.
(g) Regarding works executed in Govt. organizations or private sectors, form as per **Annexure-*5a***, **duly certified by a Chartered Accountant for the transaction of the projects.**
Explanatory notes:
1) Self attested copy of completion certificates of each work and work order from the client shall be attached. The certificate shall contain the following details:
   (a) Work order no. and date
   (b) Details of work and completion cost
   (c) Date of commencement and Date of completion of the work.
2) The works indicated in **Annexure -4a& 4b** will only be considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments.

(h) **Statement duly certified by Chartered Accountant** showing Average Financial Turnover of the tenderer over the last three financial years [2022-23, 2023-24, 2024-25].(vide **Annexure-5**), supported by financial statements such as Balance sheets, Profit & Loss statements for the last 3 years ending March 2025.

(i) **Copy of Valid "A Class"** or above grade Electrical Contractor's license or an undertaking submitted in a stamp paper of Rs. 200/- as per MQC.
(j) Format for Self-Certification under Preference to "MAKE IN INDIA" Policy CERTIFICATE as per **Annexure–12. (**Bids not accompanied by MII certificate shall be liable for rejection.)
(k) Copies of PAN, GST, EPF and ESI registration.
(l) A detailed method statement (Technical Note) for carrying out of the works, along with implementation schedule showing sequence of operation and the time frame for various segments of temporary and permanent works (vide **Annexure-10).** The information provided will form part of the work methodology and the same shall be in line with the Specifications and Bill of quantities.
(m) Bid document including all addendum/corrigendum duly signed and sealed.
(n) Partnership deed or Memorandum and Articles of Association of the company and Registration certificate of the company as the case may be.
(o) Declaration as per **Annexure-13** that
    1) Confirmation that not made any payment or illegal gratification to any persons/ authority connected with the bid process so as to influence the bid process and have not committed any offence under PC Act in connection with the bid.
    2) We disclose with that we have made / not made payments or propose to be made to any intermediaries (agents) etc in connection with the bid.
(p) Bank information for e- Payment system as per **Annexure-15.**
(q) The proposed methodology and program of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion **Annexure-10**
(r) Plant and equipment proposed for the Project **Annexure-11**
(s) Historical Contract Non-Performance Pending Litigation and Litigation History- **Annexure-7 &8**
(t) Details of Tenderer for refund of EMD through E-Payment, if applicable **Annexure-14**
(u) Tenderers shall quote for the whole of the item as per Scope of Work on a single responsibility basis, such that the total Tender Price covers all the Contractor's obligations mentioned in the Tender Document
(v) Land border sharing Declaration as per **Annexure-19**

19.2 **Part II : "Price Bid"**

Tenderers shall provide price in the "**Price Bid**" as per the Bill of Quantities in e-tender portal, which shall be duly priced as per Clause no.13.1 above.

Tenderers shall provide price in the manner and detail called for Bid (Financial Proposal). The price shall only be mentioned in the BOQ uploaded in the e-tender portal and the quoted price shall be inclusive of all taxes and duties excluding GST

20. Deadline for Submission of the Bids:

E-tenders attaching all documents shall be submitted 'on-line' in the e tender portal strictly in accordance with the terms and conditions of tender document before the time and the day notified in Bid Information Sheet of NIT.

21. Bid Opening

The Chief Mechanical Engineer or his representative will open the tenders in the web portal www.tenderwizard.com/COPT. Technical Bid shall be opened in the office of the **Chief Mechanical Engineer, Cochin Port Authority** at 15.30 Hours on the last date fixed for receiving the Tenders.

Failure to submit Bid Security (EMD) or valid NSIC/MSME/UAM registration certificate will make the tender defective and will be treated invalid and price bids of those tenderers will not be opened.

22. Bid Opening – Price Bid:

Price Bid of those tenderers found responsive in the evaluation of Technical bid, will be opened later. Short listed bidders will receive intimation through E-tender portal www.tenderwizard.com/COPT.

23. Clarification of Bids:

The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

No Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to

the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.

Any effort by the Bidder to influence the Employer's bid evaluation, bid comparison or contract award decisions, may result in the rejection of his bid.

24. Examination of Bids and Determination of Responsiveness:

24.1 Prior to detailed evaluation of Bids, Cochin Port Authority will determine whether each Bid

a) meets the minimum eligibility criteria defined in Clause 3 under NIT.
b) is accompanied by the required cost of bid document and Bid security (EMD) or MSME/UAM reg. certificate
c) is responsive to the requirements of the Bidding documents.

24.2 A responsive Bid is one which conforms to all the terms, conditions and specification of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality or performance of the Works;

a) which limits in any substantial way, the Employer's rights or the Bidder's obligations under the Contract; or
b) whose rectification would affect unfairly the competitive position of other Bidders presenting responsive Bids.
c) Undertakes in the Technical Bid that he has not incorporated any conditions in the Financial Bid.
d) **The financial evaluation will be carried out together for all the items and contract will be awarded to the overall lowest offer.**

24.3 If a Bid is not substantially responsive, it shall be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

25. Evaluation and Comparison of Bids:

The Employer will evaluate and compare only the Bids determined to be responsive in accordance with Clause 24.

25.1 **Evaluation of Price Bid**

a) The tenderers shall quote their rates for the items as per schedule, excluding GST, in the E-tender portal www.tenderwizard.com/COPT on percentage basis.
b) Only those tenders, as determined to be substantially responsive to the requirements of the Tender Documents will be evaluated. Other non-responsive tenders will be rejected. Cochin Port's decision on this shall be final, conclusive and binding.
c) In order to determine the lowest evaluated bid, Cochin Port Authority will consider overall lowest of all the items together.

26. Alteration of tender documents:

No alteration shall be made in any of the tender documents or in the Bill of Quantities and the tender shall comply strictly with the terms and conditions of the tender document. The Employer may however ask any tenderer for clarifications of his tender if required. Nevertheless, no tenderer will be permitted to alter his tender price after opening of the tender.

27. Alternative conditions and Proposal:

The Tenderer shall note that alternative or qualifying tender conditions, or alternative design proposal for whole or part of the work will not be acceptable. Tenders containing any qualifying conditions or even Tenderer's clarifications in any form will be treated as non-responsive and will run the risk of rejection. Price Bid of such Tenderer's will not be opened.

28. Award of Contract:

The Employer will award the Contract to the bidder whose bid has been determined to be responsive to the bidding documents and who has offered the lowest evaluated bid price, provided that such bidder has been determined to be:

1. Eligible in accordance with the provisions of Clause 3 under NIT, and
2. Qualified in accordance with the provisions of Clause 3.

29. Letter of Award ("LoA)

Prior to expiry of the validity or extended validity period of the Tender, the Employer will notify the Successful Bidder through e-mail confirmed by registered letter that its Tender has been accepted. This Letter (hereinafter and in the Contract Conditions referred to as the "Letter of Award" (of the Tender) or

"LoA") shall specify the sum which the Employer will pay the Contractor (hereinafter and in the Contract Conditions referred to as the "Contract Price") in consideration of the execution and completion of the Works for the Project and the remedying of any defects therein by the Contractor in terms of the Contract.

30. Performance Security:

30.1 Performance Security for the Contract is **10% of the total contract value.** Within not later than 21 days from the date of receipt of the Letter of Acceptance by e-mail or within such time as extended by the Employer, the Successful Tenderer shall deliver to the Employer, a Performance Security for an amount equivalent to **5% of the total Contract price including taxes & duties,** rounded off to the nearest Rs.1000/- in any one of the following forms:

i) Insurance Surety Bond/ Banker's Cheque/ Account Payee Demand Draft from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority

ii) An irrevocable Bank Guarantee (BG) enforceable and encashable at Cochin, drawn in favour of FA&CAO, CoPA from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.

iii) Payment online in an acceptable form safeguarding the purchaser's interests in all respects.

30.2 Instead of submitting 5% performance security and remitting the balance 5% through deductions from running bill (retention money as per clause 32 below), **the contractor can submit the total security deposit, ie; 10% of contract value towards Performance Security.**

30.3 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, the BG shall be issued in favor of FA&CAO, Cochin Port Authority in the Format enclosed in **Annexure-17.**

The BG furnished towards the Performance Security shall be valid for a period until a date, 60 days from the day of expiry of the defect liability period stipulated as per the terms of the contract.

30.4 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, the Earnest Money will be liable to forfeiture and the Contract to cancellation.

30.5 Performance Security will be released/ refunded to the contractor not later than 14 days from the date of completion of defect liability period.

30.6 The Security Deposit will not carry any interest.

31. Forfeiture of Performance Security

Provisions of Sanctions for Violation as detailed under shall be applicable for forfeiture of Performance Security in case of a decision by the Employer to forfeit the same without assigning any reason for imposing Sanctions for Violation.

31.1 **Sanctions for Violations:**

Any breach of the aforesaid provisions by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer) shall entitle the Employer to take all or any one of the following actions, wherever required:-

(i) The Security Deposit/Performance Security shall stand forfeited either fully or partially, as decided by the Employer and the Employer shall not be required to assign any reason therefore.

(ii) To immediately cancel the Contract, if already signed, without giving any compensation to the Tenderer.

(iii) To cancel all or any other Contracts with the Tenderer. The Tenderer shall, be liable to pay compensation for any loss or damage to the Employer resulting from such cancellation/rescission and the Employer shall be entitled to deduct the amount so payable from the money(s) due to the Tenderer.

(iv) To debar the Tenderer from participating in future tendering processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the Employer.

(v) To recover all sums paid in violation of the Tender by Tenderer(s) to any middleman or agent or broker with a view to securing the contract.

(vi) Forfeiture of Performance Security in case of a decision by the Employer to forfeit the same without assigning any reason for imposing sanction for violation of this Tender.

31.2 The Employer will be entitled to take all or any of the actions mentioned above by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

31.3 The decision of the Employer to the effect that a breach of the provisions of this Tender has been committed by the Tenderer shall be final and conclusive on the Tenderer. However, the Tenderer can approach the Independent Monitor(s) appointed for the purposes of this Pact [In case Integrity Pact is applicable].

32. Retention Money: Retention Money @ 5% shall be retained from each payment due to the Contractor.

a. 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 after two months after Defect liability/Guarantee period.**

b. 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.

c. 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.

33. Signing of Agreement

33.1 After furnishing the Performance Security, the successful tenderer will be required to execute an Agreement at his expense within 28 (twenty eight) days from the date of LoA, on Kerala State Stamp Paper of appropriate value in the prescribed form**.** The agreement as finally executed will include the Employer's Bid Documents and the Bidder's offer as finally accepted by the EMPLOYER together with addendum/corrigendum, bid clarification and all correspondences exchanged between EMPLOYER and the bidder, if any. Till the formal agreement is executed, the Letter of Acceptance together with the offer as finally accepted along with correspondences shall form a binding contract between the two parties.

33.2 The Contractor shall make 4 copies of the Agreement and submit to the Employer hard bounded copy of the original as well as copies within 7 days following the date of signing of Agreement, at contractor's own expenses.

33.3 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 the 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

34. Release of Bid Security /EMD:

The Bid Security/EMD of unsuccessful bidder other than L1 and L2 will be refunded immediately after ranking of the Bids. The bid security of L2 bidder shall be refunded immediately after entering into agreement with L1 bidder and acceptance of the Performance Security. The Bid Security of the successful bidder will be discharged after he has signed the Agreement and furnished the required Performance Security.

35. Fraud and Corrupt Practices:

35.1 The bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this document, the Port shall reject the tender without being liable in any manner whatsoever to the bidder, if it determines that the bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "Prohibited Practices") in the Selection Process. In such an event, the Port shall, without prejudice to its any other rights

or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Port for, inter alia, time, cost and effort of the Authority, in regard to the Tender, including consideration and evaluation of such Bidder's Proposal. Such Bidder shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Bidder is found by the Authority to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

35.2 For the purposes of this Clause, the following terms shall have the meaning hereinafter respectively assigned to them:

a) "corrupt practice" means
   i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOA or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process; or
   ii) engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the Authority in relation to any matter concerning the Project;

b) "fraudulent practice" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

c) "coercive practice" means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person's participation or action in the Selection Process;

d) "restrictive practice" means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.

e) "undesirable practice" means
   i. establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or
   ii. having a Conflict of Interest

36. Rejection of Tender:

Any Tender not conforming to the foregoing instructions will not be considered. The Employer does not bind himself to accept the lowest or any tender and has the right to reject any tender without assigning any reason thereof. No representation whatsoever will be entertained on this account.

SIGNATURE OF BIDDER

SECTION III
GENERAL CONDITIONS OF CONTRACT (GCC)

A. General

1. Definitions

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

1.2 Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

1.3 Compensation Events are those defined in Clause 44

1.4 The Completion Date is the date of completion of the Work as certified by the Engineer or his nominee in accordance with Sub Clause 52

1.5 The Contract is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2(c) below.

1.6 The Contract Data defines the documents and other information which comprise the Contract

1.7 The Contractor is a person or corporate body who Bid to carry out the Works has been accepted by the Employer.

1.8 The Contractor's Bid is the completed Bidding documents submitted by the Contractor to the Employer.

1.9 The Contract Price is the price stated in the letter of acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

1.10 Days are calendar days, months are calendar months.

1.11 A Defect is any part of the Works not completed in accordance with the Contract.

1.12 The Defects Liability Period is the period named in the Contract Data and calculated from the Completion Date.

1.13 The Employer is the party who will employ the Contractor to carry out the Works.

1.14 Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

1.15 The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

1.16 The Intended Completion Date is the date on which it is intended that the Contractor shall complete the works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer or his nominee by issuing an extension of time.

1.17 Market Rate is the rate as 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.

1.18 Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

1.19 The Engineer or his nominee is the person named in the Contract Data (or any other competent person appointed and notified to the Contractor to act in replacement of the Engineer or his nominee) who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time and valuing the Compensation Events.

1.20 Plant is any integral part of the Works which is to have mechanical, electrical, electronic or chemical or biological function.

1.21 Ruling Percentage is the percentage by which the tendered amount of the works actually awarded is higher or lower than the corresponding estimated amount of the works actually awarded.

1.22 The Site is the area defined as such in the Contract Data.

1.23 Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

1.24 Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer or his nominee.

1.25 The Start Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Date

1.26 A Sub Contractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

1.27 Temporary Works are works designed, constructed, installed and removed by the Contractor which are needed for construction or installation of the Works

1.28 A Variation is an instruction given by the Engineer or his nominee which varies the Original Works.

1.29 The Works are what the Contract requires the Contractor to construct, install and turn over to the Employer as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer or his nominee will provide instructions clarifying queries about the Conditions of Contract.

2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

a) Agreement
b) Letter of Acceptance and notice to proceed with works
c) Contractor's Bid
d) Contract Data
e) Conditions of Contract including Special Conditions of Contract
f) Specifications
g) Drawings
h) Bill of quantities and
i) Any other documents listed in the Contract Data as forming part of the Contract.

3. Language and Law

The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer or his nominee's Decisions

Except where otherwise specifically stated, the Engineer or his nominee will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

The Engineer or his nominee may delegate any of the duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act 1872).

7. Contract Agreement

7.1 A suitable form is annexed as "FORM OF AGREEMENT" to the Tender Document. Upon signing the Contract Agreement, the Contractor shall make copies of Contract Documents, as indicated in the Contract Data, in hardbound cover which shall cover documents used in Contract/Agreement and provide the same to the Employer at no extra cost.

7.2 Data made available by the Employer in accordance with provisions of the Condition of Contract shall be deemed to include data listed elsewhere in the Contract and open for inspection at the office of the Engineer as indicated in the Contract data of the Cochin Port Authority (by prior appointment with the Engineer).

8. Subcontracting

8.1 The Contractor may subcontract with the approval of the Engineer or his nominee but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

Notwithstanding any subcontracting with such approval as required under above and notwithstanding that the Engineer shall have received copies of any sub-contract, the Contractor shall be solely responsible for the quality and proper execution of the works, performance of all conditions of contract in all respects as if such subletting had not taken place and as if such work has been done directly by the Contractor.

If any Sub-Contractor engaged upon the works at the site executes any work, which in the opinion of the Engineer or his nominee is not in accordance with the Contract condition, written notice may be given to the Contractor requesting him to terminate such sub contract and the Contractor, upon receipt of such notice shall terminate such sub contract and the said Sub Contractor shall forthwith leave the works, failing which the Employer shall have right to remove such Sub Contractors from site. No action taken by the Employer under this clause shall relieve the Contractor of any of his liabilities under the contract or give rise to any compensation, extension of time or otherwise.

8.2 Observance by Sub-Contractors
The Contractor shall be responsible for observance by his sub-Contractors of the foregoing provisions.

8.3 **Other Contractors**
The Contractor shall co-operate and share the site with other Contractors, public authorities, utilities and the Employer between the dates given in the Schedule of other Contractors. The Contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The Employer may modify the schedule of other Contractors and shall notify the Contractor of any such modification.

9 Personnel

9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the

Engineer or his nominee. The Engineer or his nominee will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the schedule.

9.2 If the Engineer or his nominee asks the Contractor to remove a person who is a member of the Contractor's staff from his work force stating the reasons, the Contractor shall ensure that the person leaves the site within seven days and has no further connections with the work in the contract.

9.3 The Contractor shall engage an authorized agent experienced and qualified technical personnel for managing and supervising the work and shall see that all of them are always at the work spot during the working hours, personally checking all items of work. He shall take such orders as may be given to him by the Engineer-in-charge from time to time and shall be responsible to carry them out properly. In case contractor fails to provide an agent as per terms given above, EMPLOYER reserves the right to deduct a reasonable amount from the contractor's bill, subject to a maximum of Rs.25,000/- per month, for every month of absence

10 Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks and the Contractor carries the risks which this Contract states are Contractor's risks.

11 Employer's Risks

The Employers risks are

a) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract;
b) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
c) any operation of the forces of nature (in sofar as it occurs on the Site) which an experienced Contractor:
    i. could not have reasonably foreseen, or
    ii. could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:
        A. prevent loss or damage to physical property from occurring by taking appropriate measures, or
        B. insure against.

12 Contractor's Risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

12.2 Excepted risks are riot (in so far as it is uninsurable) war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military usurped power or a cause solely due to use of occupation by the Employer of any portion of the work, any operation of the forces of nature that the Contractor could not have foreseen or reasonably provided against. (All of such are herein collectively referred to as the excepted risks).

13 Insurance

13.1 The Contractor shall provide in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractors risks.

a) loss of or damage to the Works, Plant and Materials
b) loss of or damage to Equipment;
c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer or his nominee for approval before the start date. All such insurances shall provide for compensation to be payable in the

types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effectthe insurance which the Contractor should have provided and recover the premiums the Employer has paid from any payments due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of insurance shall not be made without the approval of the Engineer or his nominee.

13.5 Both parties shall comply with all conditions of the insurance policies.

14 Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on the Site Investigation Report referred to in the Contract Data, supplemented by any information available to the Bidder.

15 Queries about the Contract Data

The Engineer or his nominee will clarify queries on the Contract Data.

16 Contractor to Construct the Works

16.1 The Contractor shall construct and install the works in accordance with the Specification and Drawings.

16.2 The Contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the Specifications. The Contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer or his nominee and the Contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the Specifications specified in Contract Data or in any Bureau of Indian Standard or any other published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the Contract.

16.3 The Contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

16.4 SITE MAINTENANCE DURING CONSTRUCTION
The Contractors shall time to time clear and remove all rubbish and obstructions from the site and the work area shall be kept clear and unobstructed at all times. Nothing extra shall be paid on this account.

17 The Works to Be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the works on the Start Date and shall carry out the works in accordance with the program submitted by the Contractor as updated with the approval of the Engineer or his nominee, and complete them by the Intended Completion Date.

17.2 The work shall be done in phases, in close co-ordination with civil/electrical/air conditioning false ceiling works and other works as directed by EMPLOYER.

17.3 The Contractor shall note that the site for installation will be made available in parts or in phases. It is the responsibility of the contractor to programme his work accordingly. No extra amount will be paid on account of site being made available in phases/parts.

18 Approval by the Engineer or his nominee

18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works or Permanent Works, in the case of Contractor's design to the Engineer or his nominee, who is to approve them if they comply with the specifications and Drawings.

18.2 The Contractor shall be responsible for design of Temporary Works.

18.3 The Engineer or his nominee's Approval shall not alter the Contractor's responsibility for design of the

Temporary Works.

18.4 All Drawings prepared by the Contractor for the execution of the temporary works, are subject to prior approval by the Engineer or his nominee before their use.

19 Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

19.2 Reporting of Accidents
The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the local police authorities immediately by the available means.

20 Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer or his nominee of such discoveries and carry out the Engineer or his nominee's instructions for dealing with them.

21 Possession of the Site

The Employer shall give possession of all parts of the Site to the Contractor, free from encumbrances. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be a Compensation Event.

22 Access to the Site

22.1 The Contractor shall allow the Engineer or his nominee and any person authorised by the Engineer or his nominee access to the Site or to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured, fabricated and /or assembled for the works.

22.2 Port Entry Permission - The Contractor shall submit prior application for Port entry passes to the concerned Port authority for his labours and the staffs engaged in the works.
The Contractor shall retain the original passes obtained by them in respect of their labour and staff engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

23 Instructions

The Contractor shall carry out all instructions of the Engineer or his nominee which comply with the applicable laws where the Site is located.

24 Disputes

If the Contractor believes that a decision taken by the Engineer or his nominee was either outside the authority given to the Engineer or his nominee by the Contract or that the decision was wrongly taken, the decision shall be referred to the Employer within 28 days of the notification of the Engineer or his nominee's decision.

25 Settlement of Disputes & Arbitration

25.1. Dispute Resolution

25.1.1 The Parties agree to use their best efforts for amicably resolving all Disputes arising under or in respect of this Agreement by mutual discussions.

25.1.2 Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:-

(i) If the Contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-charge

on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Engineer in writing for written instruction or decision. Thereupon, the Engineer shall give his written instructions or decision within 30 days of receipt of the Contractor's letter.

(ii) If the Engineer fails to give his instructions or decision in writing within the aforesaid period or if the Contractor is dissatisfied with the instructions or decision of the Engineer, the Contractor may, within 15 days of the receipt of Engineer's decision, appeal to the Chairperson who shall afford an opportunity to the Contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Chairperson shall give his decision within 30 days of receipt of Contractor's appeal.

(iii) If the Contractor is dissatisfied with this decision, the Contractor shall within a period of 30 days from receipt of the said decision, shall take further action in accordance with the conciliation procedure set forth in Clause 25.2.3.

25.2. Conciliation

25.2.1. In the event of any dispute or differences between the Port Authorities and the Contractor, which could not be resolved amicably by mutual consultations / Arbitration, then the Chairperson of Cochin Port Authority may refer such unresolved disputes or differences to the Conciliation and Settlement Committee (CSC) comprising of independent subject experts, constituted by the IPA and adopted by the Board of Major Port Authority for Cochin Port in its meeting dated 02.03.2022, to enable speedy disposal of pending / new cases.

25.2.2. Either the Port or the Contractor may send a reference about the dispute to the other party. The party initiating conciliation shall send to the other party a written invitation to settle or conciliate under this Part, briefly identifying the subject of the dispute. The concerned Technical Division in the Port shall send a request or response within 7 working days if a reference is received from the contractor thereby inviting the Contractor to depute a team of their representatives to interact with the Contract Management Division (CMD) constituted by each Port.

25.2.3. The procedure for referring disputes to the CSC will be as per the guidelines issued by IPA dated 05.10.2021, its amendment dated 21.03.2022 and subsequent amendments, if any. Recourse to such conciliation shall be open before, during or after the arbitration proceedings. The award of the Conciliation Committee / Council, if agreed by both the parties, shall then be placed for consideration of the Board of Major Port Authority for subject to the delegation of powers.

25.3. Arbitration

(i) Any disputes of a total value less than Rs.10 crores shall be resolved through arbitration by a Sole Arbitrator appointed by mutual consent of the parties.

(ii) Either party shall within a period of 30 days from the date of termination of conciliation proceedings, give notice to other party for appointment of arbitrator.

(iii) If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed jointly by both parties. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

(iv) It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Chairperson of the appeal.

(v) It is also a term of this contract that if the Contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer that the final bill is ready for payment, any claim of the Contractor shall be deemed to have been abandoned and absolutely barred and the Employer or his authorized representative shall be discharged and released of all liabilities under the contract in respect of these claims.

(vi) The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or reenactment thereof and the

rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

(vii) It is also a term of this contract that the Arbitrator / Arbitral Tribunal shall adjudicate only on such disputes as are referred to him and give separate award against each dispute and claim referred to.

(viii) It is also a term of the contract that if any fees are payable to the arbitrator the same shall be paid equally by both the parties.

(ix) It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he / they issues notice to both the parties calling them to submit their statement of claims and counter statement of claims.

(x) The seat and venue of the arbitration shall be at Cochin.

(xi) The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any party by whom and in what manner, such costs or any part thereof shall be paid.

25.4. Litigation

(i) Any disputes of total value above Rs. 10 crores not covered in the aforesaid arbitration clause shall be adjudicated by the courts.

(ii) Only Courts in Cochin alone shall have jurisdiction to adjudicate any disputes between the parties.

25.5. Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD)

Notwithstanding anything contained above, in the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contracts between Central Public Sector Enterprises (CPSEs/ Port Authorities inter se and also between CPSEs and Government Departments/ Organizations, such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22.05.2018.

26 Computerised Measurement Book

26.1 Engineer or his nominee shall, except as otherwise provided, ascertain and determine by measurement, the value of work done in accordance with the contract.

26.2 All measurement of all items having financial value shall be entered by the Contractor and compiled in the shape of the Computerised Measurement Book having pages of A-4size as per the format of the department so that a complete record is obtained of all the items of works performed under the Contract.

26.3 All such measurements and levels recorded by the Contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the Contractor from the Engineer or his authorized representative as per interval or program fixed in consultation with Engineer or his authorized representative. After the necessary corrections made by the Engineer or his nominee, the measurement sheets shall be returned to the Contractor for incorporating the corrections and for resubmission to the Engineer for the dated signatures by the Engineer or his nominee and the Contractor or their representatives in token of their acceptance.

26.4 Whenever bill is due for payment, the Contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer- and/or his authorized representative. The Contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks. The final, fair, computerized measurement book given by the Contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the Contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerised MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The Contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

26.5 The Contractor shall also submit to the department, separately his computerized Abstract of Cost and the Bill based on these measurements, duly bound, and its pages machine numbered along with three spare copies of the Bill. Thereafter, this Bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

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

26.7 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.

26.8 The Contractor shall give not less than seven days' notice to the Engineer 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 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 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.

26.9 Engineer 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.

26.10 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.

B. TIME CONTROL

27 Program

27.1 After the acceptance of his Tender, the Contractor shall, within fifteen days, submit to the Engineer-in-Charge for his approval, a detailed programme taking into account the total time period stipulated in the contract showing the order, the procedure and method in which he proposes to carry out the works.

27.2 He shall furnish the particulars in writing of his arrangements of manpower, plant and machinery and all other resources owned and dedicated to this work. Cash flow during the execution of project for procurement of materials and for carrying out of the works including temporary works which the Contractor intends to construct shall also be furnished.

27.3 In support of this programme, the Contractor shall submit a work schedule in the form of a CPM/PERT Chart. The Engineer-in-Charge shall if necessary modify the programme submitted by the Contractor and approval shall be given by the Engineer-in-Charge indicating the major milestones. The programme approved by the Engineer-in-Charge shall be final and binding on the Contractor. The approval by the Engineer-in-Charge of such programme, or furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the contract.

27.4 During the progress of work, the Contractor shall be required to furnish the resource mobilization plan as required by Engineer-in-Charge to keep up the target date of completion.

27.5 This CPM/PERT programme will be required to be updated every month or more frequently as directed by the Engineer-in-Charge, based on the actual progress, resource mobilisation and other field conditions actually prevailing.

27.6 PROGRESS REPORTS AND SCHEDULES

27.6.1 The Contractor shall submit to the Engineer-in-Charge by the third day of every fortnight, four (4) copies of a report in a duly approved format showing the progress made in construction of the works, mobilization of resources etc. during the previous fortnight.

27.6.2 The Contractor shall also submit by the end of every month his anticipated progress schedule for all items of work for the following month in four (4) copies in an approved proforma to the Engineer-in-Charge.

27.6.3 An order book of work shall be maintained and the Contractor shall acknowledge the orders given by the Engineer-in-charge and shall carry them out accordingly.

27.6.4 The Contractor shall particularly note that the tender rates of the various items shall be inclusive of all incidental charges, such as bailing, shoring, bunding, barricading and lighting, etc. if found necessary during execution and no extra shall be due therefore on any account to the Contractor.

27.6.5 The Contractor should see that the labour and staff employed by him behave in a proper manner and should dispense with services of such person or persons from the site as directed by the Engineer-in-charge.

28 Revised Program

28.1 The Engineer or his nominee's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer or his nominee again at any time for approval. A revised Program is to show the effect of Variations and Compensation Events.

29 Extension of the Intended Completion Date

29.1 The Engineer or his nominee shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.

29.2 The Engineer or his nominee shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer or his nominee for a decision upon the effect of a Compensation Event or Variation or any other events causing delay, beyond the control of the Contractor and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

29.3 Such Request for extension of time, to be eligible for consideration, shall be made by Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

29.4 **Extension of Time:**

29.4.1 If at any time during performance of the contract, the Contractor or its Sub-Contractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services, pursuant to GCC Clause 29, the Contractor shall promptly notify the Employer in writing of the delay, it's likely duration, and its cause. As soon as practicable after receipt of the Contractor's notice, the Employer shall evaluate the situation and may at its discretion extend the Contractor's time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

29.4.2 Except in case of Force Majeure, as provided under GCC Clause 33, a delay by the Contractor in the performance of its Delivery and Completion obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to GCC Clause 48 (Liquidated Damages), unless an extension of time is agreed upon, pursuant to GCC Clause 29.

30 Delays Ordered by the Engineer or his nominee

The Engineer or his nominee may instruct the Contractor to delay the start or progress of any activity within the Works.

31 Management Meetings

31.1 Either the Engineer or his nominee or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

31.2 The Engineer or his nominee shall record the business of management meetings and is to provide copies

of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer or his nominee either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32 Early Warning

32.1 The Contractor is to warn the Engineer or his nominee at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer or his nominee may require the Contractor to provide an estimate of the expected effect of the event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.

32.2 The Contractor shall cooperate with the Engineer or his nominee in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer or his nominee.

32.3 The Contractor shall immediately give notice in writing to the Engineer or his nominee upon happening of any event as detailed below if the work is delayed by:

i) force majeure, or
ii) abnormally bad weather, or
iii) serious loss or damage by fire, or
iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
v) delay on the part of other Contractors or tradesmen engaged by Engineer in executing work not forming part of the Contract, or
vi) any other cause which, in the absolute discretion of Engineer, is beyond the Contractor's control.

33 Force Majeure

"Force Majeure" means an exceptional event or circumstance:

(a) which is beyond a Party's control,
(b) which such Party could not reasonably have provided against before entering into the Contract,
(c) which, having arisen, such Party could not reasonably have avoided or overcome, and
(d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies;
(ii) rebellion, revolution, insurrection, or military or usurped power, or civil war;
(iii) ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste, from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
(iv) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds; and
(v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Sub Contractors and arising from the conduct of the Works;
(vi) floods, tornadoes, earthquakes and landslides.

C. QUALITY CONTROL

34 Identify Defects

34.1 The Engineer or his nominee shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer or his nominee may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer or his nominee considers may have a Defect.

35 Tests

35.1 If the Engineer or his nominee instructs the Contractor to carry out a test not specified in the Specification

to check whether any work has a Defect and if the test shows that it has defect, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

36 Defect Liability

36.1 The Engineer or his nominee shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

36.2 Every time notice of a Defect is given, the Contractor shall correct the notified defect within the length of time specified by the Engineer or his nominee's notice. To the intent that the works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall :

a) complete the work, if any, outstanding on the date stated in the Taking-Over Certificate within the date to be intimated by the Engineer and
b) execute all such work of amendment, reconstruction, and remedying defects, shrinkages or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

36.3 Cost of Remedying Defects

All work referred to in Sub-Clause 36(b) shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to:

a) The use of materials, Plant or workmanship not in accordance with the Contract, or
b) Where the Contractor is responsible for the design of part of the Permanent Works, any fault in such design, or the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

36.4 Defects Liability Certificate

The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Employer, with a copy to the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall be given by the Engineer within 28 days after the expiration of the Defects Liability Period, or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any works instructed, pursuant to Clauses 36, have been completed to the satisfaction of the Engineer.

36.5 Unfulfilled Obligations

Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfillment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability Certificate is issued and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

36.6 Uncorrected Defects.

If the Contractor has not corrected a Defect within the time specified in the Engineer's or his nominee's notice the Engineer or his nominee will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

37 Bill of Quantities

37.1 The Bill of Quantities shall contain items for the construction, supply, installation, testing and commissioning work to be done by the Contractor.

37.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

38 Changes in the Quantities

38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 % provided the change exceeds (+)10% of initial Contract Price, the Engineer or his nominee shall adjust the rate(s), to allow for the change.

38.2 The Engineer or his nominee shall not adjust rates for changes in quantities if thereby the Initial Contract Price is exceeded by more than 10% except with the prior approval of the Employer.

38.3 If requested by the Engineer or his nominee where the quoted rate (s) of any item(s) is abnormally high, the Contractor shall provide the Engineer or his nominee with a detailed cost breakdown of such rate in the Bill of Quantities.

39 Variations

39.1 The Engineer shall make any Variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following:

(a) increase or decrease the quantity of any work included in the Contract,
(b) omit any such work,
(c) change the character or quality or kind of any such work,
(d) change the levels, lines, position and dimension of any part of the Works,
(e) execute additional work of any kind necessary for the completion of the Works,
(f) change any specified sequence or timing of construction of any part of the Works.

No such Variation shall in any way vitiate or invalidate the Contract, by the effect, if any, of all such Variations shall be valued in accordance with Clause 40. Provided that where the issue of an instruction to vary the works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor. All Variations shall be included in updated Programs produced by the Contractor.

39.2 Instructions for Variations

The Contractor shall not make any such Variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

40 Payments for Variations

40.1 Variation permitted shall not exceed (+) 25% in quantity of each individual item, and (+)10% of the total contract price. Within 14 days of the date of instruction for executing varied work, extra work or substitution, and before the commencement of such work, notice shall be given either (a) by the Contractor to the Employer of his intention to claim extra payment or a varied rate or price, or (b) by the Employer to the Contractor of his intention to vary rate or price.

40.2 For items not existing in the Bill of Quantities or substitution to items in the Bill of Quantities, rate payable should be determined by methods given below and in the order given below.

i) Rates and prices derived from the rates of similar items in the Contract or as per prevailing DSR rates.
ii) Rates and prices in the Schedule of Rates applicable to the Contract plus Ruling Percentage.
iii) Market rates of materials and labour, hire charges of plant and machinery used, plus 15% for overheads and profits of Contractor.

40.3 For items in the Bill of Quantities but where quantities have increased beyond the variation limits, the rate payable for quantity in excess of the quantity in the Bill of Quantities plus the permissible variation shall be as determined by methods given below.

i) Rates and prices in the Schedule of Rates applicable to the Contract plus Ruling Percentage.

ii) Market rates of materials and labour, hire charges of plant and machinery used, plus 15% for overheads and profits of Contractor.

whichever is lower, but not less than the rate in the Bill of Quantities.

40.4 If there is delay in the Employer and the Contractor coming to an agreement on the rate of an extra item, rates as proposed by the Employer shall be payable provisionally till such time as the rates are finally determined or till date mutually agreed.

40.5 If the Engineer or his nominee decides that the urgency of varying the work prevent a quotation being given and considers not delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

41 Cash flow forecasts

When the Program is updated, the Contractor is to provide the Engineer or his nominee with an updated cash flow forecast.

42 Payment Certificates

42.1. The Contractor shall submit to the Engineer or his nominee monthly statements of the estimated value of the work completed less the cumulative amount certified previously.

42.2. The Engineer or his nominee shall check the Contractors' monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 51.6 of the Contract Data (Secured Advance).

42.3. The value of work executed shall be determined by the Engineer or his nominee.

42.4. The value of work executed shall comprise the value of the quantities of the items in the Bill of quantities completed.

42.5. The value of work executed shall include the valuation of variations and Compensation Events.

42.6. The Engineer or his nominee may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

43 Payments

43.1 Bills shall be prepared and submitted by the Contractor. Joint measurements shall be taken continuously and need not be connected with billing stage. System of 4 copies of measurements, one each for Contractor, Employer and Engineer or his nominee, and signed by both Contractor and Engineer or his nominee shall be followed.

43.2 Payment of Bills for civil works shall be regulated as detailed hereunder:

43.2.1 Interim Bills shall be paid within 21 days of date of submission of bills in full shape by the Contractor. 75% of the bill amount shall be paid within 7 days of submission of the bill, if on request by the Contractor. Balance amount of the verified bill shall be paid within 21 days of the submission of the bill.

43.2.2 Final Bill shall be paid within 3 months as detailed below on issue of Taking Over Certificate by the Engineer or his nominee. The Contractor shall submit final Bill within 30 days of issue of Taking Over Certificate. Engineer or his nominee shall check the bill within 30 days after its receipt and return the bill to Contractor for corrections, if any. The Contractor should re-submit the bill with corrections within 15 days of its return by the Engineer or his nominee. The re-submitted bill shall be checked and paid within 30 days of its receipt.

43.3 Payment for Electrical and Mechanical works shall be regulated as detailed below:

43.3.1 The Contractor shall be entitled upon certificates of the Engineer or his nominee to payments in accordance with the following provisions:

I) For supply portion :

i) 75% of the value, as certified by the Engineer or his nominee, of the materials from time to time delivered on the site.

ii) Balance 25% after completing the work in all respects, commissioning and handing over the installation to the Employer to the satisfaction of the Engineer and his nominee and his certification.

II) For erection portion :

i) 85% of the value as certified by the Engineer or his nominee, of the installation portion on completion of the erection work under contract, for which payments are claimed.

ii) Balance 15% along with other payments if any, after completing the work in all respects, commissioning and taking over the installation by the Employer to the satisfaction of the Engineer and his nominee and his certification.

III) For SITC items:

i. 75% of value of supply item as certified by the Engineer or his nominee.

ii. Balance 25% of value as certified by the Engineer or his nominee, after successful Installation, Testing & Commissioning of the entire items as per the work under contract.

43.3.2 For HT works, the work shall not be considered as completed until the installation is energized after obtaining approval certificate from Central Electrical Authority (CEA) and upon the issuance of taking over certificate by Engineer or his nominee. The final payment shall be made only after taking over the installation by the Employer.

43.4 All the interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer or his nominee relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer- or his nominee-charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

43.5 Pending consideration of extension of date of completion interim payments shall continue to be made as herein provided, without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

43.6 No further claims shall be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.

43.7 If an amount certified is increased in a later certificate as a result of an award by the Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in the award. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

43.8 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

43.9 All payments to the Contractor under the contract shall unless otherwise stated elsewhere be made to the Contractor in Indian currency through e- payments through designated Bank.

44 Compensation Events

44.1 The following mutually agreed Compensation Events unless they are caused by the Contractor would be applicable:

(a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.

(b) The Employer modifies the schedule of other Contractors in a way which affects the work of the Contractor under the contract.

(c) The Engineer or his nominee gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety.

(d) Other Contractors, public authorities, utilities or the Employer does not work within the dates and other constraints stated in the Contract that cause delay or extra cost to the Contractor.

(e) The effect on the Contractor of any of the Employer's Risks.

(f) Any other Compensation Events listed in the Contract Data or mentioned in the contract.

44.2 Whenever any compensation event occurs, the Contractor will notify the Employer, within 14 days and provide a forecast cost of the compensation event.

44.3 If a Compensation Event would cause additional cost or would prevent the work being completed in the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Engineer or his nominee shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.4 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast has been provided by the Contractor, it is to be assessed by the Engineer or his nominee and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable the Engineer or his nominee shall adjust the Contract Price based on Engineer or his nominee's own forecast. The Engineer or his nominee will assume that the Contractor will react competently and promptly to the event.

44.5 Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss:

44.6 All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the Board without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

45 Rates for items to be inclusive of Taxes

45.1 The Contractor's rates and prices shall include all taxes, duties and fees including Port charges like wharfage, Port dues, berth hire, pilotage etc. if any applicable, all charges and taxes whatsoever excluding Goods and Service Tax (GST) [For Civil/Mechanical/ Electrical works invited through e-tender portal www.tenderwizard.com /COPT and including Goods and Services Tax (GST) For Mechanical/Electrical works invited through e-tender portal www.tenderwizard.com/COPT in respect of materials, labour and plant and all other things obtained or used by the Contractor for the execution and maintenance of the Work or any temporary works.

45.2 GST as may be applicable from time to time shall be shown separately in the invoice. The invoice to be submitted by the Contractor shall include the GST Registration Number of the Contractor as well as the Employer.

45.3 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.

45.4 The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Work and of the rates and prices stated in the Schedule of Quantities.

45.5 The percentages/ rates / lumpsum amount as applicable shall except in so far as the Contract otherwise provides, cover all obligations of the Contractor under this Contract and all matters and things necessary for the proper completion and maintenance of the Work. The percentages/ rates / lumpsum amount quoted for each item shall be all inclusive value of the finished Work as per drawings and specifications and shall cover the cost of all constructional plants, temporary works, appliances, materials, both for the Work and temporary works, labour and all other matter in connection with each item quoted for.

46 Currencies

All payments shall be made in Indian Rupees unless specifically mentioned.

47 Price Adjustment

47.1 No price adjustment shall be made for works except for the provisions under clause 47.1.1 herein under and clause 47.2 for any subsequent change in legislation.

47.1.1 For Civil contract works, with intended completion period of the contract more than 12 months, Price adjustment shall be made for the variation in price of materials such as cement, reinforcement steel, structural steel, bitumen and bitumen emulsion. Compensation for variation in cost of the materials shall be regulated as described below subject to the condition that such compensation for variation in prices shall be only for the work done during the stipulated period of the contract including such period for which the validity of the contract is extended.

The rates quoted for the items in the Schedule of Quantities shall be based on the Base rates of the materials provided in the Contract Data and these base rates are applicable at the Supplier's local delivery point and shall not include cost of loading to Contractor's vehicle, transporting to work site and unloading and stacking at work site.

During execution and actual procurement by the Contractor, increase or decrease in the cost of materials over the Base rate (which results in an increase or decrease of cost to the Contractor in carrying out the works) shall form an addition or reduction as the case may be to or from the contract price and shall be paid to or allowed by the Contractor accordingly, provided that such increase or decrease shall relate only to the quantities of material which the Engineer is satisfied as reasonably required for the works. While considering the reasonable requirement of the materials for the work, allowance towards wastage/unusable cutting bits shall be permitted as provided in the Contract Data. The prices of materials considered for regulating the payment as aforesaid shall be the price charged by the suppliers approved by the Engineer at the supplier's local delivery point and this shall not include the cost of loading to the Contractor's vehicle, transporting to the work site and unloading and stacking at work site

47.2 Subsequent Legislation

If, after 28 (Twenty eight) days prior to the last date for submission of tenders for the contract, there occur changes to any National or State Statute, Ordinance or Decree or other Law or any regulation or bye law of any local or other duly constituted authority or introduction of any such state statute, Ordinance, Decree, Law, regulation or bye law which causes additional or reduced cost to the Contractor in execution of the contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor be determined by the Engineer or his nominee and shall be added to or deducted from the contract price and the Engineer or his nominee shall notify the Contractor accordingly with a copy to the Employer.

48 Retention

48.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Contract Data until Completion of the whole of the Works.

48.2 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 after One month after Defect liability/Guarantee period.

49 Liquidated Damages

49.1 In case of delay in completion of the contract, liquidated damages (L.D) may be levied at the rate of half per cent (½%) of the contract price per week of delay, subject to a maximum of 10 per cent of the contract price. the amount of liquidated damages can be adjusted or set-off against any sum payable to the contractor.

49.1.1 the employer, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time for completion, may allow further extension of time at its discretion with or without the levy of l.d. in the event of extension granted being with l.d, the employer will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half per cent (½%) of the contract value of the works for each week or part of the week subject to the ceiling defined in sub-clause 48 a.

49.1.2 the employer, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.

49.1.3 the employer, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.

49.1.4 in the event of such termination of the contract as described in clauses 48a(ii) or 48a(iii) or both the employer shall be entitled to recover LD upto ten per cent (10%) of the contract value and forfeit the security deposit made by the contractor besides getting the work completed by other means at the risk and cost of the contractor.

49.2 **Reduction of liquidated damages**

If, before the time for completion of the whole of the works or, if applicable, any section, taking over certificate has been issued for any part of the works or of a section, the liquidated damages for delay in completion of the remainder of the works or of that section shall, for any period of delay after the date stated in such taking over certificate, and in the absence of alternative provisions in the contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the works or section, as applicable. The provisions of this sub-clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

49.3 For levying LD, 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 agreement conditions.

50 Nominated Sub Contractors

All specialists, merchants, tradesmen and others executing any work or supplying any good, materials, Plant or services for which provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer or the Engineer, and all persons to whom by virtue of the provisions of the Contract, the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be Sub Contractors to the Contractor and are referred to in this Contract as "Nominated Sub Contractors".

51 Advance payment

The Employer shall make the following advance payments (as admissible in the contract data) if requested by the Contractor in writing:

51.1 Mobilisation Advance shall be paid up to 5% of Contract price, payable in two equal installments. The first installment shall be paid after mobilisation has started and next installment shall be paid after satisfactory utilisation of earlier advance for which, the Contractor shall furnish proof of the satisfactory utilization of the amount.

51.2 Construction/ installation equipment Advance shall be paid upto 5% of Contract price, limited to 90% of assessed cost of machinery. Equipment advance will be paid in two or more installments. First installment shall be paid after Construction Equipment has arrived at the site and next installment shall be paid after satisfactory utilisation of earlier advance (s).

51.3 Mobilization Advance and Construction Equipment Advance shall be paid at SBI PLR + 2% interest rate and against Bank Guarantee for Mobilization Advance and against hypothecation of Construction Equipment to the Employer.

51.4 Recovery of Mobilisation and Construction Equipment advance will start when 15% of the work is executed and recovery of total advance should be completed by the time 80% of the original Contract work is executed.

51.5 The above advance payments shall be admissible only for the works where estimated cost put to tender is more than Rs.5.0 crores.

51.6 Secured Advance

The Engineer or his nominee shall make advance payment in respect of materials and plant brought to site but not yet incorporated and installed in the Works in accordance with conditions stipulated in the Contract Data.

75% of cost of materials and plant brought to site for incorporation into the works only shall be paid as Secured Advance. Materials which are of perishable nature should be adequately insured.

The Contractor, on signing an indenture in the form to be specified by the Engineer, shall be entitled to be paid during the progress of the execution of the work upto 75% of the assessed value of any materials which are in the opinion of the Engineer nonperishable, non-fragile and noncombustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has

been made under this sub-clause are incorporated in the work the amount of such advance shall be recovered/ deducted from the next payment made under any of the clause or clauses of this contract.
Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer provided the Contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer shall be final and binding on the Contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel etc.

52 Securities

52.1 **Security Deposit (SD) shall be at 10% of the contract value or value of the work done whichever is higher and it shall consist of two parts:**
Performance Security to be submitted at award of the work
Retention Money to be recovered from Running Bills as detailed in Clause 47above and Clause 33in ITB
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.

52.2 **Performance Security shall be as below:**

a) For civil works :10 % of the Contract value (5% SD & 5% Retention)
b) For all Electrical and Mechanical works: 10% (5% SD & 5% Retention) of the Contract value.
c) Instead of submitting 5% performance security and remitting the balance 5% through deductions from running bill, **the contractor can submit the total security deposit, ie; 10% of contract value towards Performance Security**
d) The Performance Security shall be provided by the Contractor to the Employer not later than 21 days for domestic bids and 28 days for international bids from the date of letter of acceptance and shall be furnished in one of the following forms:
   i. Insurance Surety Bond/ Banker's Cheque/ Account Payee Demand Draft from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.
   ii. An irrevocable Bank Guarantee (BG) enforceable and encashable at Cochin, drawn from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.
   iii. Payment online in an acceptable form safeguarding the purchaser's interests in all respects.
e) The BG furnished towards the Performance Security shall be valid for a period until a date 30days from the day of expiry of the defect liability period stipulated as per the terms of the contract**.**
f) Unless performance Security is furnished within the period as specified in clause 50b above or such extension of that period as may be permitted by the Engineer in writing, the Earnest Money will be liable to forfeiture and the contract to cancellation.
g) Performance Security will be released / refunded to the Contractor not later than 30 days from the date of completion of Defect Liability / warranty period of the work.

53 Removal of Craft or Plant which has sunk

53.1 The Contractor shall forthwith and with dispatch at his own cost raise and remove any craft or plant (floating or otherwise) belonging to him or to any sub-Contractor employed by him (including also any plant which is held by the Contractor or any sub-Contractor under agreement for hire or hire-purchase) which may be sunk in the course of the construction completion or maintenance of the Works or otherwise deal with the same as the Engineer may direct or until the same shall be raised and removed, the Contractor shall set all such buoys and display at night such lights and do all such things for the safety of navigation as may be required by the Engineer or by Employer. In the event of the Contractor not carrying out his obligation imposed upon him by this clause the Employer may provide buoy and light such sunken craft or plant and raise and remove the same (without prejudice to the right of the Employer to hold the Contractor liable under General Conditions) and the Contractor shall refund to the Employer all costs incurred in connection therewith.

53.2 Contractor's Temporary Moorings

Should the Contractor need, in connection with implementing the Works, to provide temporary moorings for his craft he may be allowed to do so in location and manner approved by the Engineer subject to all necessary permissions being first obtained by the Contractor from the authorities concerned. The Contractor shall not lay his temporary moorings such as to interfere with the port traffic and such moorings shall be removed if and when required by the Employer.

54 Cost of Repairs

54.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability period shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

55 Completion

55.1 After completion of the work, the Contractor will serve a written notice to the Engineer or his nominee/Employer to this effect. The Engineer or his nominee/Employer upon receipt of this notice shall conduct a complete joint survey of the work within 7 days and prepare a defects list jointly. The defects pointed out by the Engineer or his nominee/ Employer would be rectified by the Contractor within 14 days and thereafter acceptance report be signed jointly by the Contractor and the Employer. This joint acceptance report shall be treated as 'Completion Certificate'. The Completion Report / Certificate to the Contractor will be issued only after obtaining 'No Claim Certificate' from the Contractor in the format approved by the department stating that they have no further claims against CoPA in respect of the Work.

55.2 No Claim Certificate:

No dispute or difference on any matter whatsoever, pertaining to the contract can be raised by the Contractor after submission of 'No Claim Certificate' as per the format in the tender document.

55.3 Substantial Completion of Parts

If any part of the Permanent Works has been substantially completed and satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the Permanent Works during the Defects Liability Period.

55.4 Surfaces Requiring Reinstatement

Provided that a Taking Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking Over Certificate shall expressly so state.

56 Taking Over

56.1 The Engineer or his nominee shall take over the Site and the Works within seven days of the Engineer or his nominee issuing a certificate of Completion.

56.2 Taking Over Certificate

When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer or his nominee to issue a Taking- over Certificate in respect of the Works. The Engineer or his nominee shall, within 21 days of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking- Over Certificate, stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instruction in writing to the Contractor specifying all the work which in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer or his nominee shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor

shall be entitled to receive such Taking Over Certificate within 21 days of completion, to the satisfaction of the Engineer or his nominee, of the Works so specified and remedying any defects so notified.

56.3 Taking Over of Sections or Parts

Similarly, in accordance with the procedure set out in above Clause 55, the Contractor may request and the Engineer or his nominee shall issue a Taking Over Certificate in respect of:

a) any Section in respect of which a separate Time for Completion is provided in the Contract Data , or
b) any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by the Employer, or
c) any part of the Permanent Works which the Employer has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract or has not been agreed by the Contractor as a temporary measure).

57 Final Account

The Contractor shall supply to the Engineer or his nominee a detailed account of the total amount that the Contractor considers payable under the Contract within 30 days of issue of Taking Over Certificate and the Engineer or his nominee shall certify any final payment that is due to the Contractor within 60 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer or his nominee shall issue within 30 days a schedule that states the scope of the corrections or additions that are necessary for the correction. If the Final Account is still unsatisfactory after it has been resubmitted the Engineer or his nominee shall decide on the amount payable to the Contractor and issue a payment certificate, within 60 days of receiving the Contractor's revised account.

58 Submission of 'As built Drawings'

"As built" Drawings are required to be submitted by the Contractor by the dates stated in the Contract Data. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer or his nominee's approval, the Engineer or his nominee shall withhold the amount stated in the Contract Data from payments due to the Contractor.

59 Termination:

59.1 **Termination for Default:**

The Employer, without prejudice to any other remedy for the breach of Contract, by written notice of default sent to the Contractor, may terminate the contract in the whole or in part:

If the Contractor fails to deliver any or all of the Goods within the period specified in the Contract, or within the extensions granted by the Employer pursuant to GCC Clause 25.

If the Contractor fails to perform any other obligation under the contract or

If the Contractor, in the judgment of the Employer has engaged in fraud and corruption as defined in Clause 27 under Instruction to Tenderers, in competing for or in executing the contract.

In the event the Employer terminates the contract in whole or in part, pursuant to GCC Clause 26.1.1, the Employer reserves its right to take any one or more of the following actions:-

The Performance Security is to be forfeited;

The Employer may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Contractor shall be liable to the Employer for any additional costs for such similar Goods or Related Services. However, the Contractor shall continue performance of the Contract to the extent not terminated.

59.2 **Termination for Insolvency:**

The Employer may at any time terminate the Contract by giving notice to the Contractor if the Contractor

becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Employer.

59.3 **Termination for Convenience:**

The Employer, by notice sent to the Contractor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Employer's convenience, the extent to which performance of the Contractor under the Contract is terminated, and the date upon which such termination becomes effective.

If the contract is terminated for convenience of the Employer as stated in GCC Clause 26.3 (a), the Goods that are complete and ready for shipment within twenty-eight (28) days after the Contractor's receipt of notice of termination shall be accepted by the Employer at the Contract terms and prices. For the remaining Goods, the Employer may elect:-

i. To have any portion completed and delivered at the Contract terms and prices; and/or
ii. To cancel the remainder and pay to the Contractor an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Contractor.

60 Payment upon Termination

60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer or his nominee shall issue a certificate for the value of the work done less advance payments received upto the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less any extra cost of completing the Works through other means which may be incurred by the Employer. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

60.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer or his nominee shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and loss of profit on uncompleted works less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

60.3 Employees of the Board not individually liable

No official or employee of the Board shall in any way be personally bound or liable for acts or obligation under the contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

61 Property

All materials on the Site, Plant, Equipment, Temporary Works and Works for which payment has been made to the Contractor by the Employer, are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

62 Release from Performance

If the Contract is frustrated by the outbreak of war or by other event entirely outside the control of either the Employer or the Contractor, the Engineer or his nominee shall certify that the Contract has been frustrated. The Contractor shall leave the Site and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

F. LABOUR LAWS AND MISCELLANEOUS CLAUSES

63 Labour

63.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

63.2 The Contractor shall, if required by the Engineer or his nominee, deliver to the Engineer or his nominee a

return in detail, in such form and at such intervals as the Engineer or his nominee may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer or his nominee may require.

64 Compliance with labour regulations.

During continuance of the contract, the Contractor and his sub Contractors shall abide at all times by all existing labour enactment and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules) regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/ bye laws/ Acts/ Rules/ regulations including amendments, if any, on the part of the Contractor the Engineer or his nominee/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer or his nominee shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

65 Safety, Security and Protection of the Environment.

Subject and without prejudice to any other provision of the Contract, the Contractor shall take all reasonable precautions:

a) In connection with the sea or any harbours, docks, rivers, streams waterways drains, watercourses, lakes, reservoirs and the like to prevent:
   i. Silting
   ii. Erosion of their beds or balks
   iii. Pollution of the water so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life.

b) In connection with underground water resources (including percolating water) to prevent
   i. Any interference with the supply to or abstraction from such sources
   ii. Pollution of the water so as to affect adversely the quality thereof.

c) All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out the work and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in regard or in relation to such liability.

d) The Contractor at his own cost shall make such provisions for lighting of Works, Temporary Works, Materials and Plant and shall provide all such marks and lights as may be required by the Employer or the Engineer or any other authority having jurisdiction over the Site together with all labour stores and services required for their efficient working and use at any time, day or night.

e) The Contractor shall also provide at his own cost every description of watching and maintenance required in connection with the foregoing, and all other services for protecting and securing all places dangerous whether to Contractor's workmen or to other persons until the Works are handed over to the Employer, or till such time when the Engineer decides that such services are no longer required.

f) All lights provided by the Contractor shall be placed or screened such as not to interfere with any navigation lights or with any traffic or signal lights of any local or other authority.

66 Insurance of Works and Contractor's Equipment

The Insurance shall be issued by any Insurance Company from its Branch at Cochin which has been determined by the Contractor to be acceptable to the Employer.

67 War Risks Insurance

If the Contractor receives instructions from the Employer to insure against war risks, such insurance if normally available shall be effected, at the cost of the Employer, with the Insurance Company acceptable to the Employer and shall be in the joint names of the Employer and the Contractor.

68 Royalties

Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation. If any, for getting stone, sand, gravel, clay or other materials by him and his subordinates and his subcontractors and required for the works, at the rates and such conditions as notified by the State Government and shall be realized from the Contractor by way of deductions from the interim certificates and/or final certificate for payments to the Contractor for the gross quantity of material used for or in connection with the work. The royalty will not be deducted if the Contractor submits the Mineral Dispatch Permit (MDP) for the quantity executed by the Contractor for the requisite quantity of material incorporated in works for which MDPB issued.

69 Transport of Contractor's Equipment or Temporary Works

69.1 If it is found necessary for the Contractor to move one or more loads of heavy constructional plant or equipment materials or pre-constructed units or parts of units of work over roads, highways or bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be deemed to be included in his contract price.

70 Transport of Materials or Plant

70.1 The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any claim made by the concerned authorities in respect of damage or injury to roads, highways or bridges. In case of failure of the Contractor to settle such claims and in case the Employer is held responsible for payment to the authorities, then the Employer shall settle the claim and the Employer's expenses in this regard, as certified by the Engineer, may be deducted by the Employer from any money due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly with a copy to the Employer.

71 Labour Laws & Regulations

The Contractor shall at all times during the continuance of the Contract comply fully with all existing Acts, regulations and bye-laws including all statutory amendments and re-enactment of State or Central Govt. and other local authorities and any other enactments and act that may be passed in future either by the State or the Central Govt. or local authority, including Indian Workmen's Compensation Act, Contract Labour (Regulation And Abolition) Act 1970 and Equal Remuneration Act 1976, Employees' State Insurance Act, 1948, Factories Act, Minimum Wages Act, Provident Fund Regulations. Employees' Provident Fund Act and schemes made under the same Act, Health and Sanitary Arrangements for Workmen, Insurance and other benefits and shall keep the Employer indemnified in case any action is commenced for contravention by the Contractor. If the Employer is caused to pay or reimburse any amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated here-forth on the part of the Contractor, the Engineer shall have the right to recover from the Contractor any sum required estimated to be required for making good the loss or damage suffered by the Employer. The Contract shall maintain the records prescribed under ESI Regulations & EPF scheme and make the contribution towards ESI and EPF in respect of persons employed by Contractor. The Contractor shall also make available such records for inspection by ESI Inspector and EPF organization during the inspection and furnish copies of all such records to the Employer regularly.

71.1 Accident Prevention Officer

The Contractor shall have on his staff on site an officer dealing with all matters regarding safety and protection against, accidents of all staff and labour. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents.

71.2 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his staff and labour and for the preservation of peace and protection of Persons and property in the neighborhood of the Works from the same.

71.3 Health and Safety

Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour and, in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance services are available at the camps, housing and on the site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

71.4 Supply of Water

The Contractor shall, so far as is reasonably practicable, having regard to local conditions provide on the Site, to the satisfaction of the Engineer's Representative, an adequate supply of drinking and other water for the use of the Contractor's staff and work people**.**

71.5 Alcoholic Liquor or Drugs

The Contractor shall not import, sell, give, barter or otherwise dispose of any alcoholic liquor, or drugs or permit or suffer any such importation, sale, gift, barter disposal by his sub-contract agents or employees.

71.6 Arms and Ammunition

The Contractor shall not give, barter or otherwise dispose of to any persons or person, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

71.7 Festivals and Religious Customs

The Contractor shall in all dealings with labour in his employment have due regard to all recognised festivals, days of rest and religious or other customs.

71.8 Epidemics

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

71.9 Employment of Person in the Service of Others

The Contractor shall not recruit or attempt to recruit his staff and labour from amongst persons in the service of the Employer or other agencies engaged for any works of the Employer.

71.10 Housing for Labour

Save in so far as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labour employed for the purposes of or in connection with the Contract, including all fencing water supply (both for drinking and other purposes), electricity supply, sanitation, cook houses fire prevention and fire-fighting equipment, furniture other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps/housing provided by the Contractor, shall be removed and the site reinstated to its original condition, all to the approval of the Engineer. The land for construction of labour camps shall be allotted only outside the security area to the extent available and such areas allotted as per the prevailing lease rent.

71.11 Fair Wages, Records, Inspection

The Contractor shall pay the labourers engaged by him on the work not less than a fair wage which expression shall mean whether for time or piecework the respective rates of wages as notified under the provisions of the Minimum Wages Act from time to time.

The Contractor shall maintain records of Wages and other remuneration paid to his employee in such form as may be convenient and to the requirements of the Employer/Engineer and the Labour Enforcement Officer (Central), Ministry of Labour, Govt. of India, or such other authorized person appointed by the Central Govt. The Contractor shall allow inspection of the aforesaid Wage Records and Wage Slips to the Engineer and to any of his workers or to his agent at a convenient time and place after

due notice is received, or to any other person authorized by him on his behalf.

71.12 Port Entry Permission

The Contractor shall submit prior application for Port entry passes to the concerned Port authority for his labours and the staffs engaged in the works.

The Contractor shall retain the original passes obtained by them in respect of their labour and staff engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

71.13 Site - Protected Area

The Site of Work is a protected area. Entry to the Port premises is regulated by entry passes. These passes will be issued by the Central Industrial Security Force or any other authority authorized by the Employer. The Contractor should furnish a list of person for whom the passes are to be issued to the Engineer and arrange to obtain the passes from the appropriate authority, based on the recommendation of the Engineer and abide by the Rules of the Cochin Port Authority with regard to entry etc. For the entry of trucks and other vehicles also, the Contractor should obtain necessary permits at his own cost .

The Contractor shall retain the original passes obtained by them in respect of their labour and staffs engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

72 Life Saving Appliances and First Aid

The Contractor shall provide and maintain upon the Works sufficient proper and efficient life saving appliances and first aid equipment to the approval of the Engineer. The appliances and equipment shall be available for use at all times.

73 Action in case Work not done as per Specifications

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer or his authorised subordinates in charge of the work and all the superior officers, officer of the Quality Control Organisation of the Department, Vigilance Commissions, and the Contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the Contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

If it shall appear to the Engineer or his nominee or his authorised subordinates in charge of the work or to the Chief Vigilance Commissioner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract the Contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer or his nominee specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer or his nominee in his demand aforesaid, then the Contractor shall be liable to pay compensation at the same rate as under Clause 49 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer or his nominee may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the competent authority may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the Contractor. Decision of the Engineer or his nominee to be conveyed in writing in respect of the same will be final and binding on the Contractor.

74 Action where no Specifications are specified

74.1 In the case of any class of work for which there are no such specifications as referred to in Clause 16, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there is no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer or his nominee.

75 Bribes

If the Contractor, or any of his Sub Contractors, agents or servants gives or offers to give to any person any bribe, gift, gratification or commission as an inducement or reward for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or for showing or forbearing to show favour or disfavor to any person in relation to the Contract or to any other contract with the Employer, then the Employer may enter upon the Site and the works and terminate the employment of the Contractor and the provisions of Clause 59 hereof shall apply as if such entry and termination had been made pursuant to that Clause.

The bidders shall give an undertaking that they have not made any payment or illegal gratification to any person/authority connected with the bid process so as to influence the bid process and have not committed any offence under the Prevention of Corruption Act in connection with the bid.

The bidders shall disclose any payments made or proposed to be made to any intermediaries (agents etc) in connection with the bid.

76 Details to be Confidential

The Contractor shall treat the details of the contract as private and confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper of elsewhere without the previous consent in writing of the Employer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to the decision of the Employer whose award shall be final.

77 Contractor's Temporary works, office etc

77.1 The Contractor shall submit to the Engineer for his approval not less than 15 days before commencement of erection of any part of Temporary Works, drawings and detailed proposals for the method of construction of Temporary works such as office, store, false work and temporary platforms, pre-casting yard, workshop, etc. which he intends to construct for the execution of the contract and no such work shall be constructed before obtaining the written approval of Engineer or his nominee. These temporary works, office, store etc. shall be erected at or near the work area subject to approval of the Employer and the land space for the same will be allotted free of ground rent to the extent available. The Contractor shall obtain permission for any Temporary Works and would ensure that during execution of works the statutory requirements of the concerned authorities such as Cochin Port Authority, Police, Customs, etc. would be complied with.

77.2 Submission of Reports, Returns etc

All reports, statements, returns, drawings, diagrams etc. which the Contractor is required to submit to the Engineer during the progress of the Works, shall be furnished in triplicate without any additional cost.

78 Water Supply

Water required for the construction works including curing work shall be arranged by the Contractor on his own at his cost.

79 Power Supply

79.1 The Electricity connection for lighting, welding and other mechanical works to the extent available will be made available by the Employer within the Port area. Drawing of power lines/cables etc. from the

available source of supply of power to the actual work site, providing switches and making connections etc. shall be arranged by the Contractor at his cost. The temporary lines and connections by the Contractor shall be approved by the Engineer's representative before availing power. The Contractor shall provide Energy Meter to read consumption in units.

79.2 The Contractor shall indicate his requirement of power to the Engineer within 15 days from the date of the letter of acceptance of the tender. The Contractor shall pay to the Employer, the power charges as per the prevailing Tariff schedule of Cochin Port Authority in force during the work of the Contractor. The Contractor shall also pay the connection and disconnection charges as applicable.

79.3 The Contractor shall submit a complete drawing of the power points, wiring, diagram indicating all electrical loads, earthing etc. in complete shape along with the completion report. The Energy Meter provided is calibrated by Kerala State Electrical Inspectorate /TMR division, KSEB and such a Certificate to be produced. For non supply of power at any stage port will not be responsible and the Contractor shall not have any claim whatever for loss or damage.

79.4 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 like generator, welding set etc. at their cost.

80 Taxes and Duties

80.1 The Price will be fixed and inclusive of all the duties and taxes excluding GST. All investments, operating expenses, incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder.

80.2 The Contractor shall be solely responsible for all taxes that may be levied on the Contractor or on the earnings of any of his employees or personnel engaged by him and shall hold the Owner/Purchaser indemnified and harmless against any claims that may be against the Owner/Purchaser in this behalf. The Owner/Purchaser does not undertake any responsibility whatsoever regarding taxes under Indian Income Tax Act of the Contractor or his personnel. If it is obligatory under the provision under the Indian Income Tax deduction of Income Tax at source shall be done by the Owner/Purchaser.

80.3 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 contractors account.

80.4 GST will be governed as per the prevailing Rules. TDS Under GST Law shall be deducted as per prevailing rate.

80.5 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 as per prevailing rates 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 with all the GST Regulations, viz. timely uploading of bills, issue of debit/ credit notes etc

81 Noise and Disturbance

81.1 All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out the work and from and against all claims demands proceedings damages costs charges and expenses whatsoever in regard or in relation to such liability.

82 Safety Code

82.1 Necessary Indian Dock Safety regulations for the safety purpose shall be adhered to by the Contractor and he will be held responsible for any violations of the same. The set of such conditions (regulation) is available with Cochin Port Authority and the Contractor is required to go through it before tendering.

82.2 Besides the above, the Contractor shall also scrupulously adhere to and observe the following safety codes:

i) The Contractor has to provide sufficient barricades to site of work so that traffic plying nearby should not damage the recently concreted work. In case of any damage on account of above, the entire responsibility will remain with Contractor and nothing extra will be paid on this account.

ii) Suitable and strong scaffolds should be provided for the workmen for all work that cannot be safely done from ground.

iii) No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between the two adjacent rungs shall not be more than 30 cm.

iv) Hoisting machines and tackles used in the works including their attachments, anchorage and supports shall be in perfect condition as per stipulations of the relevant Rules. The ropes used an hoisting or lowering materials or as means or suspension shall be of durable quality and adequate strength and free from defects.

v) The excavated material shall no be placed within 1.5 meters of the edge of the trench or half of the depth of the trench, whichever is more. All trenches and excavation shall be provided with necessary fencing to lighting. Every opening in the floor of a building or in a working platform be provided with suitable fence to prevent the fall of persons or materials. No floor, roof or other parts of the structure shall be so overloaded with debris or materials as to render it unsafe

vi) Workers employed on mixing and handling materials such cement, cement mortars concrete, lime mortar and asphalt shall be provided with protective footwear and rubber hand gloves and thin cloth for covering face and head.

vii) Those engaged in welding work shall be provided with welder protective eye shield and glove.

viii) All safety rules shall be strictly followed while working on live electrical systems or installations as stipulated in the relevant Rules.

83 Port Authority Rules

83.1 The Contractor shall observe the Conservancy Rules relating to the harbour and shall always take such necessary additional steps to keep the harbour waters free of noxious or unhygienic matters coming from his works as are required by the Employer. Under no circumstances shall inflammable materials be allowed to spill into the harbour waters.

83.2 The Contractor shall always observe and comply with the working rules and regulations of the Port Authority in force or as issued from time to time.

83.3 The Contractor's plants, equipments, floating crafts, dredgers, materials etc. which are brought to site for facilitating the proper execution of the contract work within the port area are not liable to port dues and charges like wharfage, berth hire and other charges during the period of contract and until expiry of defect liability period.

84 Execution of work

84.1 The Contractor shall be required to execute the work in such a way so as not to cause any damage, hindrance or interference with port activities going on in the area or nearby. He should not also deposit the materials at such places which may cause inconvenience to the public and the work going on in the nearby area. The Contractor shall have to make good all damages done by him to the structures nearby while executing the work and no extra payment shall be made to him on that account.

84.2 All the materials required to be used in the work shall have to be got approved from the Engineer-in-Charge before stacking at the site of work.

84.3 Barricading, including proper lighting arrangement in the night at the required places shall have to be provided by the Contractor at his own cost, including necessary arrangements for proper movement of traffic by carefully maintained approaches and road diversions with suitable sign boards for indications of road signs etc. as directed by the Engineer-in-Charge.

85 Drawings & Designs

a) General details of the works are shown on the drawings accompanying the tender document. The Engineer will supply to the Contractor from time to time during the progress of the works such further working drawings as will be necessary in his opinion for the proper and adequate execution and maintenance of the Works in accordance with the Engineer's designs and/or any modification thereof as decided by the Engineer and the Contractor shall carry out the work in accordance with the said working drawings. Two sets of such working drawings will be issued. If the Contractor requires more

sets he will have to make his own arrangement at his cost.

Residual Design, Detailing & Engineering: - Generally, detailed design and engineering of the work shall be provided by the Engineer. During execution of the work the residual design, detailing and engineering, if needed, is to be carried out by the Contractor at no extra cost to the Employer. Such design, detailing & engineering shall be got approved by the Contractor from the Engineer. For equipments/ Installations detailed drawings need to be produced by the Contractor at no extra cost to the Employer. Such detailing & engineering shall be got approved by the Contractor from the Engineer.

b) In the event of the Contractor proposing any alteration/ modification to the Engineer's design, detail, method of construction, he shall at his own expenses prepare and submit for approval of the Engineer copies in duplicate (in the first instance) of detailed working drawings which may be required for such alteration/ modification and at the same time call the attention of the Engineer to any alternative detail or modification of the contract drawings which the Contractor may wish to make at least 30 days prior to the commencement of the work or part of the work to which such drawings relate. The Contractor shall at the same time, if so required by the Engineer, furnish calculation sheets in duplicate relating to the strength and anticipated deflections in respect of such altered/ modified works. The Engineer will, after any such alteration which he may approve, record on the copies as amended his approval and will return one copy of the drawings and calculation sheets to the Contractor, who shall carryout the work in accordance therewith. The Contractor shall forward to the Engineer three additional copies of the working drawings and calculation sheets as approved in additions to these working drawings and calculation sheets as approved. In addition to these, working drawings are also to be submitted (the same procedure as in the case of the Contractor) in respect of any work proposed to be executed by sub-Contractors. The approval of the Engineer of all or any of the calculation sheets, drawings shall not relieve the Contractor of responsibility in connection with the execution of the altered/ modified or Sub Contractor's work.

c) Three complete sets of tracing film of all drawings showing every and all works 'As Made' under the Contract shall be made by the Contractor at his own expense and delivered to the Engineer within one month of the completion of the various sections of the work or at such times as directed by the Engineer. All departure /alteration /modifications from the Contract Drawings and supplementary working drawings issued by the Engineer also shall be incorporated in the "As Built" drawings. The drawings shall be fully dimensioned, of an approved size and as approved by the Engineer.

86 Monsoon Period

Normally Monsoon period will be reckoned from 1st June to 30th September.

87 Reports

The following reports shall be submitted for review as input to the Management meeting to be held as per Clause No 31 of Conditions of Contract

87.1 Daily reports

The Contractor shall submit daily report indicating daily activities, weather condition, actual manpower, equipment and the materials arriving on site.

87.2 Monthly Reports

Monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in triplicate. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7days after the last day of the period to which it relates. Reporting shall continue until the Contractor has completed all work, which is known to be outstanding at the completion date, stated in the Taking-Over Certificate for the Works.

87.3 Each report shall include:

a) Charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each Sub-Contractor,

b) Photographs in hardcopy & digital copy and videography in two sets showing the various stages of progress on the Site monthly;
c) For the supply of manufactured items, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
d) Commencement of manufacture,
e) Contractor's/ Engineer's inspections,
f) Tests,
g) Shipment and arrival at the Site;
h) Copies of quality assurance documents, test results and certificates of Materials;
i) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
j) Comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion In accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

88 Completion Documents

To treat that the work has been completed and issue a final payment certificate, the following documents will be deemed to form the completion documents:

a) The Technical documents according to which the work was carried out.
b) The set of construction drawings showing therein the modifications and corrections made during the course of execution signed by the Engineer.
c) Certificates of final levels and dimensions as set out for various works.
d) Certificates of tests performed for various works.
e) "As Built" Drawings.

89 Changes in firm's Constitution to be intimated

The Contractor shall intimate the Engineer in writing of any change made in the constitution of the firm

90 Indemnities

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and
b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:
c) arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, and
d) is attributable to any negligence, willful act or breach of the Contract by the Contractor, the Contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

91 Contractor's Staff and Labour

91.1 Workers above 60 years of age and below 18 years of age shall not be deployed by the contractor. All labour, skilled or unskilled shall be provided by the contractor. Settling any dispute with the labour, labour union, any Outside union, subcontractor will be contractor's responsibility. Loss of day in this regard should not be claimed for any hindrance at site. The workers engaged for works should have sufficient knowledge and experience in the respective fields. This shall be proved to the Engineer. The Owner may at any time request the contractor to remove from the Work/Site contractor's / subcontractor's supervisor or any other authorized representative including any employee of the Contractor or his Sub-contractor(s) or any person(s) deployed by Contractor for professional incompetence or negligence or for being deployed for work for which he is not suited.

91.2 The Owner may at any time object to and require the Contractor/sub-contractor to remove forthwith from the Site a supervisor or any other authorized representative or employee of the Contractor's /sub-

contractor(s) or any person(s), if in the opinion of the Owner, the person in question has mis-conducted himself or his deployment is otherwise considered undesirable by the Owner, the contractor/sub-contractor shall forthwith remove and shall not again deploy the person in question of the Work Site without the written consent of the Owner.

91.3 The workmen deployed by the contractor are strictly banned from use of any kind of Narcotics drugs / Alcohol / smoking etc. at site and any illegal activity by the work men should be reported to Engineer without delay and the contractor shall remove such persons from the work site forthwith.

G. SALIENT FEATURES OF SOME MAJOR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN CONSTRUCTION WORK.

(a) Workmen Compensation Act 1923:- The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

(b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

(c) Employees P.F and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the Employer plus workers @ 12% / 8.33%. The benefits payable under the Act are:

i. Pension or family pension on retirement or death, as the case may be.
ii. Deposit linked insurance on the death in harness of the worker.
iii. Payment of P.F accumulation on retirement/death etc.

The employees employed by the Contractor for the work of Port have to be enrolled under the relevant scheme of the EPF & MP Act 1952. The Contractor shall produce documents pertaining to the same for verification to the Engineer/ his nominee. Further the Contractor has to pay the necessary monthly contributions to the said scheme in respect of the employees employed by him for the work of CoPT and shall produce necessary document to show that the monthly contribution in respect of these employees due to the said scheme are paid.

In case the contractor has not paid the EPF contribution same will be recovered in the running bill and paid to the EPF Organization. Any delay in payment of contribution payable under the Act may be recovered as an arrear of Land Revenue

(d) Maternity Benefit Act 1961 or Maternity Benefit Amendment Act 2017:- The Acts provides for leave and some other benefits to Workmen/ employees in case of confinement or miscarriage etc.

(e) Contract Labour (Regulation & Abolition) Act 1970:-The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to- take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labor.

(f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment Construction of Buildings, Roads, Runways are scheduled employment.

(g) Payment of Wages Act 1936:-It lays down as to by what date the wages are to be paid when it will be paid and what deductions can be made from the wages of the workers.

(h) Equal Remuneration Act 1979:-The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

(i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of As per the provision of the Act and amendment issued from time to time. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of

applicability of this Act.

(j) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979:The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upon the establishment and back,

(k) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996:-All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or Construction work and other welfare measures, such as Canteens, First-Aid facilities. Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(l) ESI Act, 1948:-

(i) As per the Govt. Notification dt. 20.7.09, Cochin Port Authority has registered under the ESI Act with ESI Corporation and provision of ESI Act, 1948 are applicable to contract/casual employees drawing wages/Salary upto Rs.21,000/- per month and Working in Cochin Port Authority. Workers covered under ESI Act, are entitled for full medical care for self and family. Besides, cash benefit in the event of sickness, maternity and employment injury. Accordingly, the contractual/casual employees drawing wages upto Rs.21,000/- per month employed either directly by Port Authority or through Contractor are covered under ESI Act, 1948. It is obligatory on the part of the employer to calculate and remit ESI contribution comprising of employers' share of 3.25% plus employees' share of 0.75% which is payable on or before 15th of the following month, to which the salary relates.

(ii) In case the Contractor employs more than 20 employees, they should register their name with ESI scheme as per ESI Act, 1948 and obtain ESI Code. Both Employers share of 3.25% and Employees contribution of 0.75 % (recovered from employees), totally 4% to be paid as contribution to ESI in their Code on or before 15th of following month to which the salary relates and acknowledgement for the same shall be submitted to the Port while claiming the bill. The bill without the acknowledgement of ESI contribution will not be entertained. In case the contractor has not paid the ESI contribution same will be recovered in the running bill and paid to the ESI Corporation in contractor's code. Any delay in payment of contribution payable under the Act may be recovered as an arrear of Land Revenue.

In case the contractor employs less than 20 employees, the list of employees' name, their father's name, identification proof, one passport photo shall be submitted to the Port. The contribution of ESI amount, both Employers share of 3.25% and Employees of 0.75% (recovered from Employees salary), totally 4% shall be paid by the contractor in the Cochin Port Trust Code on or before 15th of the following month to which the salary relates or otherwise payment to the contractor will be withheld. If the contractor fails to comply with the above instruction, then the Principal Employer (Cochin Port Authority) will make payment to the ESI Corporation. Such amount will be deducted from any amount due to the contractor. Any delay in payment of contribution payable under the Act may be recovered as an arrear of Land Revenue.

As per the above Government Notification

i) All intending tenderer at the time of tender shall disclose all necessary documents as to whether they are covered under ESI Act or not.

ii) in case they are covered under ESI Act, they have to furnish the details of registration**.**

SECTION IV
SPECIAL CONDITIONS OF CONTRACT

1 Special conditions shall be read in conjunction with the general conditions of contract, specifications, drawings and any other document forming part of this contract wherever the context so requires.

Notwithstanding the Sub-division of the documents into these separate section and volume every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.

Where any portion of the General Conditions of Contract is repugnant to or at variance with any provision of the Special Conditions, the provisions of the Special Conditions shall be deemed to over-ride the provisions of the General Conditions of Contract and shall to the extent of such repugnancy of variations, prevail.

2 Measurements of Work Done:

In addition to the Clauses in GCC- 'Computerised Measurement Book', measurement of the work can also be done as detailed below.

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

2.2 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.

2.3 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.

2.4 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.

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

2.6 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.

2.7 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.

2.8 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.

2.9 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.

3 PHASING OF WORKS

The work has to be carried out in phases as approved by COPA from time to time so that the total project work can progress smoothly with least obstruction to the operations and also works of other Contractors/ agencies.

4 SAMPLES

The Contractor shall require to provide to CoPA samples of all the materials sufficiently in advance free of cost to obtain approval of CoPA. Approved samples shall be retained by COPA until the completion of the work and all materials and workmanship incorporated in the work are to conform to the approved samples in all respects. Rejected materials shall be removed from the site immediately under the supervision of COPA.

5 SCHEDULE OF QUANTITIES (SOQ)

The quantities given in the tender SOQ are tentative and shall vary as per the site/ CoPA requirements. Only required items & quantities are to be supplied/ installed. Contractor shall take detailed site measurements, for the items like Supply of HT & LT cables, Earth strips, piping, ducting etc., before placing purchase order / taking procurement action.

Contractor shall monitor the requirements of various items and shall report to CoPA Engineer in charge with regard to deviations in the existing items and requirement of additional / extra items, if any, for taking necessary action.

6 GENERAL REQUIREMENTS OF COMPONENTS

6.1 Quality of materials

All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and material as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

6.2 Inspection of material and Equipments

Materials to be used in the work shall be inspected by the engineer-in-charge. Such inspection will be of the following categories.

a) Inspection of materials/Equipments to be witnessed at the Manufacturer's premises in accordance with relevant BTS/Agreement Inspection Procedure. The contractor has to give inspection call for each item at least three weeks in advance. The inspection call should include (i) Name of the item (ii) Reference number of schedule of quantity (iii) Details of approval of specification/drawings etc (iv) Address of the suppliers/sub suppliers and (v) Tentative date of inspection. No item/equipment should be supplied without giving inspection call. All arrangements for conducting the inspection and testing at the factory shall be responsibility of the contractor. Inspection / despatch clearance issued by Engineer in charge does not absolve the contractor for the responsibility to meet the tender specification. After the receipt of inspection call for an item from the contractor COPA will depute inspectors to suppliers works. In case the offered item is not ready or inspection could not be carried out due to lack of facilities for testing etc. at supplier's works, the inspector will return and the item has to be re-offered for inspection as per its readiness. In this case all the expenses (boarding, lodging, travelling expenses etc.) of the inspector for the second inspection shall have to be borne by the contractor. In case any defect is noticed at a later stage the contractor has to rectify / replace the entire lot to meet specified standards.

b) To receive materials at site with manufacturer's Test Certificate(s)

c) To receive materials after physical inspection at site.

6.3 Ratings of components

All current carrying components in an installation shall be of appropriate ratings of voltage, current and frequency as required at the respective sections of the electrical installation in which they are used without their respective ratings being exceeded.

7 LIQUIDATED DAMAGES

For levying LD as per General Conditions of Contract, 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 agreement conditions.

8 CONTRACTOR TO SUBMIT PROGRAMME

After the acceptance of his Tender, the Contractor shall, within seven days, submit to the Engineer-in-Charge for his approval, a detailed programme taking into account the total time period stipulated in the contract showing the order, the procedure and method in which he proposes to carry out the works.

He shall furnish the particulars in writing of his arrangements of manpower, plant and machinery and all other resources owned and dedicated to this work. Cash flow during the execution of project for procurement of materials and for carrying out of the works including temporary works which the Contractor intends to construct shall also be furnished.

In support of this programme, the Contractor shall submit a work schedule in the form of a CPM/PERT Chart. The Engineer-in-Charge shall if necessary modify the programme submitted by the Contractor and approval shall be given by the Engineer-in-Charge indicating the major milestones. The programme approved by the Engineer-in-Charge shall be final and binding on the Contractor. The approval by the Engineer-in-Charge of such programme, or furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the contract.

During the progress of work, the Contractor shall be required to furnish the resource mobilisation plan as required by Engineer-in-Charge to keep up the target date of completion.

This CPM/PERT programme will be required to be updated every month or more frequently as directed by the Engineer-in-Charge, based on the actual progress, resource mobilisation and other field conditions actually prevailing.

9 TAXES AND DUTIES

All duties, taxes and other levies payable by the bidder/Contractor under the Contract, or for any other cause as applicable on the last date of submission of Bid, shall be included in the rates, prices and the total Bid Price submitted by the Bidder. All investments, operating expenses, incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder. However, such duties, taxes, levies etc. which is notified after the last date of submission of Bid and/ or any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities. Similarly if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.

9.1 The item wise rate quoted by bidder shall be inclusive of all taxes, duties & levies. Payment of GST is the responsibility of bidder/contractor.

9.2 The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the contract of the bidding document. The Company reserved the right to deduct / withheld any amount towards taxes, levies etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any statutory authority and the Company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

10 AUTHORIZED PERSONAL

The Contractor shall engage an authorised agent experienced and qualified technical personnel for managing and supervising the work and shall see that all of them are always at the work spot during the working hours, personally checking all items of work. He shall take such orders as may be given to him by the Engineer-in-charge from time to time and shall be responsible to carry them out properly. In case contractor fails to provide an agent as per terms given above, CoPA reserves the right to deduct a reasonable amount from the contractor's bill, subject to a maximum of Rs.25,000/- per month, for every month of absence.

11 QUALITY PLAN FOR MANUFACTURE OF EQUIPMENT

The Quality plan for manufacture is a document, which presents in a tabular form, the Quality Control checks to be exercised by the Contractor during the various stages of manufacture and dispatch in order to meet the requirements of this Contract. This plan shall detail the components manufactured, characteristics being controlled and acceptance norms for this characteristic and the agency responsible for performance and witnessing the checks.

After issuance of work order, the contractor shall submit to the Owner, the detailed quality plans to be followed during manufacture of all major equipment's. These quality plans shall be discussed mutually and updated by the Contractor taking into consideration the requirement of the Owner. The quality plan when approved shall form a part of the contract. This document shall be followed for inspection of the concerned equipment.

The details of the quality assurance/ quality checks envisaged by the Contractor during manufacturing of the equipment supplied by him or procured through his sub vendors/ sub-contractors shall be detailed out in the quality plans to be submitted by the Contractor. The contractor may also furnish any additional information regarding quality assurance/ quality checks in the additional sheets, if required. Quality plans for major equipment's manufactured by the Contractor or procured through his sub vendors/ sub-contractors shall be submitted during engineering. After approval of the Owner is accorded various quality plans shall be bound as a booklet and shall be submitted to the Owner as soon as possible. The contractor shall ensure that the approved quality plans are followed scrupulously by him and by his sub-vendors/ sub-contractors and manufacturing of the items covered under the quality plans shall be taken up only after Owner has approved the quality plan.

12 TEST REPORTS OF EQUIPMENTS

On completion of tests of equipment at manufacturer's works, the Contractor shall furnish four copies of test certificates to the Owner for approval and subsequent dispatch clearance. The test report shall invariably indicate identification data, including model no., sl. no. etc. of the equipment, method of application and duration of test along with test results. Only on approval of these test results by the Owner or Owner's representative, dispatch clearance will be issued for dispatch of material to site. Traceability certificate in original of testing equipment shall be submitted to the owner or his representative attending tests and a copy of the same shall be attached with the reports.

13 LIST OF APPROVED MAKES

It will be deemed that the contractor has priced the respective items on the basis of the approved makes. List of approved makes applicable for the contract is placed at respective volumes of technical specification.

i) Where makes have not been indicated in the approved make list, such items shall be of ISI marked/reputed brands/UL certified. Reputed brand implies a brand which is supported by nationwide sales & service distributors/ dealers/network/centers. And all such items shall be got approved from Engineer-In-Charge.

ii) Wherever "equivalent" mentioned against makes, suitable evidence shall be produced and get the prior approval of such makes from the Engineer-In-Charge.

14 TESTING AND MEASURING EQUIPMENTS

Equipment for measurement of work and testing the installation shall be procured by the Contractor for their use at their own cost. The same shall also be made available to COPA without any charges to COPA.

15 SITE MAINTENANCE DURING CONSTRUCTION

The Contractors shall time to time clear and remove all rubbish and obstructions from the site and the work area shall be kept clear and unobstructed at all times. Nothing extra shall be paid on this account.

16 STATUTORY APPROVALS

The scope of work also includes obtaining Initial and final approval/ NOC for the system from State Fire Department/concerned departments /local bodies/ other statutory bodies and liaison works with the department. All incidental expenses in this regard shall be borne by the contractor however the statutory fees paid to the authorities will be reimbursed at actual on submission of documentation evidence.

a) All the equipment to be supplied and works to be executed should conform to the Electrical Inspectorate/CEA Standards including all protection and metering accessories.
b) All necessary approvals for the items shall be obtained from CoPA prior to commencement of work.
c) All testing/calibration, etc. are to be carried out as per the requirements of statutory authorities. The tests/calibration certificates shall be submitted to COPA
d) Letters/documents required for obtaining sanction/ approval from various bodies like Navy, Railway, National Highway, Corporation, Traffic Police, PTCC etc. for laying of cables along side roads, railway lines, crossing of roads/railway line etc. for facilitating the work will be issued by CoPA as per the intimation from the contractor, however the contractor shall co-ordinate/ Liaison with respective bodies for getting sanction etc.
e) On completion of work, the contractor has to make arrangements for obtaining necessary safety / energisation certificate from Electrical Inspectorate / CEA by submitting necessary completion certificates, drawings, equipment details, load details, test results, etc. before energisation.
f) All costs incurred in obtaining such approval/certificates are to be borne by the contractor. Statutory fees paid shall be reimbursed on presentation of documents.
g) If the current rating of any of the switchgears including circuit breakers mentioned in the Schedule of requirements is not available or is not in conformation to the Inspectorate standards then it shall be rated to the nearest higher rating available with the current rating/fuse rating as specified.
h) The Electrical works shall be carried out as per Central/State Electrical Inspectorate standards/specifications /guidelines and the contractor shall get the approval and safety certificate from the inspectorate after the completion of work and before energisation.
i) The Contractor shall comply with proper and legal orders and directions of local or public authority or municipality and abide by their rules and regulations and pay all fees and incidental charges which may be liable during the contract period.

17 PERFORMANCE TESTING

17.1 At Manufacturers works

Before dispatching the equipment to site, the equipment will be inspected at the discretion of the COPA and tested for various parameters as detailed in the Technical Specifications, by the officials of COPA at the manufacturer's works and then cleared for shipment. The tenderer shall give adequate notice to enable COPA to plan their visit for such tests/inspection. The inspection conducted will however, not in any way absolve the contractor of his responsibility for the continued performance of the system/components after erection & commissioning at the designated site during the period of defects liability.

17.2 At site

(a) On-site testing shall be conducted to ensure that the machine performance continue to be with the contracted performance parameters for which contractor shall make necessary provisions during installation which will enable testing of the machines.
(b) All the required equipments and measuring instruments for carrying out the testing have to be arranged by the contractor. The instruments used shall be calibrated to test and the valid certificate of calibration should be submitted to the COPA's Engineer in charge.

18 COMMISSIONING AND HANDING OVER OF EQUIPMENTS

18.1 DEFECTIVE WORKS

If the works or any portion thereof shall be damaged in any way excepting by the acts of the Purchaser, or if defects not readily detected by prior inspection shall develop before the final completion and acceptance of the whole work, the Contractor shall forthwith make good, without compensation, such damage or defects in a manner satisfactory to the Purchaser/Engineer. In no case shall defective or imperfect work be retained.

18.2 INITIAL TRIAL

On completion of works, erection of equipment, each item of the work / equipment as applicable shall be thoroughly cleaned and inspected jointly by the Owner / Consultant and Contractor for correctness and completeness of installation and acceptability for initial trials of the equipment by the Contractor & Owner. During the above joint walk down, the list of equipment deficiency & defects shall be prepared and for such a punch list, action shall be initiated by the Contractor in agreed time frame. The list of tests to be performed prior to initial trials shall be mutually agreed and included in the Field Quality Plan by Contractor. Prior to starting of initial trials all site tests, calibrations and parameter settings as indicated in the technical specification shall be carried out. The purpose of these trials is to ensure integrity of each individual equipment for its operation in the system for initial operation.

18.3 INITIAL OPERATION

After successful completion of works, initial trials of all the individual equipment, all equipment's shall be operated together as a system. The purpose of this initial operation is to ensure integrity of all the sub-systems which compose the total system. Based on the observations made during initial operation, necessary corrections shall be effected in the equipment / systems to ensure proper integrated operation of the system. After satisfactory completion of initial operation for each equipment & sub-system, the complete equipment shall be considered ready for trial operation/performance guarantee testing. The Contractor has also to ensure that he trains Owner's Engineers at site dealing with this system in proper way. During commissioning of major equipment, contractor has to ensure the presence of commissioning Engineers of OEMs wherever required.

18.4 TRIAL OPERATION / PERFORMANCE GUARANTEE TEST

The method of trial operation, duration and loading conditions shall be discussed with the Engineer and a plan shall be prepared. During the period of trial operation, all the necessary adjustments in the plant/ equipments shall be made by the Contractor to establish that the complete system as a whole with all subsystems and with all standby equipment is ready for continuous operation. During these trials, all the standby equipments also shall be run alternatively and continuously to prove their performance.

A trial operation report comprising of dates and duration of trial, observations and recordings of various parameters to be measured shall be prepared by the Contractor and signed jointly by the Engineer and the Contractor. If the trial operation is not satisfactory, then based on the observations during trial operation, necessary modification/repairs to the plant/ equipment shall be carried out by the Contractor and on completion of such works, the trial operation shall be repeated again as per the relevant procedures.

18.5 FINAL ACCEPTANCE:

Final acceptance of the equipment/system is after obtaining statutory approvals from all statutory authorities as applicable as per Clause 22 of SCC.

19 HANDING OVER / CERTIFIED DATE OF COMPLETION

Up on the satisfactory commissioning of the entire system, the system shall be observed for 15 days. After this satisfactory trial period, the work shall be handed over officially and completion date recorded by Engineer-in-charge with all the prescribed formalities for handing over.

This date shall be reckoned, as the certified date of completion and the defects liability period shall commence from this date.

Until the handing over of the installation, the responsibility lies with the contractor for safety, upkeep etc.

20 COMPLETION CERTIFICATE

For all works completion certificate shall be submitted to COPA, after completion of work.

It is the responsibility of the contractor to provide and make arrangement of all spares including consumables for carrying out periodical/preventive maintenance during warranty / defect liability period without any cost to COPA. However, the tenderer should furnish a list of spares, they plan to make available at site, to take care of warranty period. These spares shall be supplied along with the equipment.

In case, any spares are required other than the listed spares, contractor will provide the same without any cost to COPA including customs duty.

21 GUARANTEE / WARRANTY

All the items of equipment and installations shall be guaranteed to be free from defective workmanship or materials for a period of 1 year from the date of handing over. The Contractor at his own cost shall rectify any defect /replace material that may appear during the period. Replacement of defective/ worn out parts/spares and consumables with new parts/spares and consumables shall be carried out as and when required by the Contractor at his own Cost during the guarantee Period. Any defects in the electrical and control wiring shall also be rectified.

During this period, the contractor shall without any extra cost, carry out all routine and special maintenance of the works executed by him and attend to any difficulties and defects that may arise in the day to day operation of the system within 24 hrs. of complaint reported by CoPA.

The Contractor shall guarantee that all material, machinery, Consumables and components, supplied, fabricated, designed and installed by him shall be free from defects due to faulty material and/or workmanship and that the system shall perform satisfactorily, and the efficiency of the system and all the components shall not be less than the values laid down in the specifications and the capacities shall be at least equal to those specified. During the guarantee period any or all components found to be defective shall be replaced or repaired free of charge and shortcoming found in the system as specified shall be removed at no extra cost. The Contractor shall provide the necessary personnel and tools for fulfilling the guarantee. If the defects are not remedied within a reasonable time, COPA may proceed to get the defects remedied at the Contractor's risk & expenses without prejudices to his right. The Contractor shall without any cost to the Employer carry out during the guarantee period all routine and special maintenance of the system and attend to any defects that may arise in the operation of the system.
The Contractor shall hold himself fully responsible for reinstallation or replace free of cost to COPA during the defect liability period as stipulated hereunder.

a) Any defective material supplied by the Contractor or defective workmanship of the Contractor.
b) Any material supplied by COPA which is proved to be damaged or destroyed as a result of defective workmanship by the Contractor.

22 ARRANGEMENT OF MATERIALS

All the materials required for this work should conform to relevant BIS Specifications unless otherwise specified. The copies of Purchase Vouchers & Gate Passes should be produced along with the materials. The test certificates, Routine test certificates and acceptance test certificates are also to be submitted.

23 STORAGE OF MATERIALS

The storage and custody of materials brought to site is the full responsibility of the contractor. Necessary store rooms if necessary should be constructed by the contractor. The land required for stores will be provided by the COPA free of cost. The store should have double lock arrangement with one key with the CoPA Engineer-in-charge and the other with the Contractor. **All materials supplied by the contractor should be covered under storage insurance.**

24 PROCUREMENT OF MATERIALS

Contractor shall make his own arrangements for the timely procurement of all materials required for the work. Status of procurement of every item required for the project is to be submitted every week. In case materials are not supplied in time, Engineer in charge will arrange for procurement directly from the supplier and the expenses incurred will be deducted from the contractor's bill. Immediately on award of contract, the contractor has to submit the list of makes of item, which he is planning to procure for the project and approval has to be obtained from the engineer in charge. After the make approval, detailed specification/drawings/ test reports etc of every item has to be submitted.

25 BYE-LAWS

25.1 The contractor shall comply with all bye-laws and regulations of local and statutory authorities having

jurisdiction over the works and shall be responsible for obtaining prior approval, if any, and payment of all fees and other charges, giving and receiving of all necessary notices and keeping the Engineer-in-Charge informed of the said compliance with the bye-laws, payments made, notices issued and received.
The Contractor shall indemnify COPA against all claims in respect of royalties, patent rights, design trademarks of name or other protected rights in respect of any plant, machine, work or materials used for or in connection with the work or temporary works and from and against all claims, demands proceedings, costs, charges and expenses whatsoever in respect of or in relation thereto. The Contractor shall defend all actions arising from such claims and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.

25.2 The Electrical works shall be carried out as per the local electrical inspectorate standards/specifications/guide lines and the contractor shall get the approval and safety certificate from the inspectorate after the completion of work and before energisation.

25.3 The Contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charges which he may be liable.

25.4 The contractor should liaise with local authorities to ascertain the underground cables, pipes, ducts etc., if any, in the areas of construction site and furnish to the Engineer-in-Charge the information and precautions that are being taken to avoid damages.

25.5 The work shall be carried out without infringing on any of the local Municipal Bye-Laws.

26 CONFORMITY TO RULES AND REGULATIONS

26.1 The work shall be carried out in the best workmanlike manner in conformity with this specification, the relevant specification/codes of practice of the Bureau of Indian Standards or IEC recommendations (Except where specified otherwise) and other relevant Indian/International standards with latest amendments, approved drawings and the instructions issued by the Engineer-in-charge or his authorised representative, from time to time. Equipment meeting any other authoritative standard, which ensures an equal or better quality than the above standards, will also be acceptable.

26.2 **In addition to the standards, all works shall also conform to the requirements of the followings:**

a) All Electrical works shall be carried out in accordance with the provisions of Indian Electricity Act- 2003, Indian Electricity Rules 1956 amended up to date (Date of call of tender unless specified otherwise)
b) The works shall also conform to relevant Bureau of Indian Standards' Codes of practice (COP) for the type of work involved.
c) Materials to be used in work shall be ISI marked/UL certified wherever applicable.
d) In all electrical installation works, relevant Safety codes of practices shall be followed.
e) Fire Insurance Regulations.
f) Regulations laid down by the Chief Electrical Inspector of the State Electrical Inspectorate/State Electricity Board/ Central Electrical Authority or any other agencies concerned.
g) Regulations laid down by Fire & Rescue Services and National Building Code.
h) Any other regulations laid down by the local authorities.
i) Installation & operating manuals of original manufacturers of equipment.

27 SAFETY

The contractor shall take necessary precautions to ensure safety of his crew, materials, equipment and the works during the period of the contract. No claim from the contractor for loss of or damage to equipment, materials, crew of the worksduring the course of the work due to natural causes like cyclones, gales, floods, rains or other cause or combination of causes will be entertained by COPA. The contractor shall be fully liable to compensate COPA for any loss or damage to works till the time of taking over of the work by COPA.

28 TESTING AND MEASURING EQUIPMENTS

Equipment for measurement of work and testing the installation shall be procured by the Contractor for their use at their own cost. The same shall also be made available to the Engineer-in-charge without any

charges to COPA. Equipment for measurement shall be made available at site for use of Engineer-in-Charge and shall be periodically calibrated.

29 SECURITY RULES

The contractor shall follow all Security rules existing in the Port premises and strictly adhered to security norms. The Port security is under CISF and entry to the restricted area will be subject to security checks and other security procedures existing in working Ports. Only selected persons will be permitted to enter to restricted areas under special permission as required for the completion of the project.

The contractor shall also follow at site all Security rules as may be framed by the COPA from time to time regarding removal of materials from site, issue of identity cards, control of entry of personnel and all similar matters. The contractor and his personnel shall abide by all security measures imposed by the Managing Director or his duly authorised representative from time to time.

The contractor shall take ultimate care while working in a running port and minimize nuisance to the public. All the work sites shall be separated by providing temporary partitions as directed by Engineer-in-charge. Fencing, partitions, signage shall be provided as per directions of Engineer-in-charge.

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SECTION V
TECHNICAL SPECIFICATION

1. SCOPE OF WORK

The subject work is for "Replacement of Old 11 kV VCB Panels in the New Power House Substation With New 11 kV VCB Panels" At Cochin Port Authority, Willingdon Island".

The brief scope of work is as shown below.

i. SITC of 12 KV, 800 A VCB Panels SCADA Compatible with 1 no. Incomer & 5 nos. Out goings as per As per IEC 62271 with Draw Out VCB s 800 A each, Copper Busbars, CT/PT, Numerical Relay, Battery with Charger etc.. Control Voltage: 24 V, DC; Motor Voltage: 240 V, A.C; Incomer-1 no.: With Numeric Relay, Lockout Relay, Annunciation Panel, Test Terminal Block, Voltmeter, Ammeter, selector Switches, Hooters etc.. Outgoing - 5 nos. with CT s , Numerical Relay, Lockout Relay, MFM, Test Terminal Block, Ammeter with Selector Switch etc.

ii. Removal of Existing Panel including shifting of panels to scrape yard and giving temporary connections of cables with necessary items as required so as to restore power till commissioning of New Panel.

iii. Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.

iv. Taking Auxiliary supply for Panel control/ spring charging Motor etc. as required from nearby supply point with necessary DB , cables etc. including supply of all items as required for commissioning the same.

v. Supply & Laying of GI strip of Size 6 MMX 40 MM and connecting earth points to MV Panels etc. using suitable Bolts & Nuts

vi. Supplying and making end termination with cable support and aluminium lugs for XLPE aluminium 3C x 300 Sq.mm 11 KV cables.

vii. Supplying and making Cable Joint using suitable Heat Shrinkable Cable Joint Kits for 11 KV XLPE aluminium conductor cable of 3C X 300 Sq.mm

viii. Modification of the Existing Foundation for the installation of Panels with cement concrete, RCC, C channels etc. as required including supply of items.

All accessories for operation and maintenance of the HT panels, rack in /Rack out items, Draw out tray/ supports etc. in complete.

2. ELECTRICAL DISTRIBUTION SYSTEM

2.1 GENERAL TECHNICAL PARTICULARS

Fault level at W/Island at 11 KV	: 25 KA
Anticipated Max. fault level	: 50 KA
Rated system voltage	: 11 KV
Rated frequency	: 50 Hz
Neutral earthing	: effectively earthed.
Installation of cable	: Underground burial.
Rated short circuit current at 11 KV side	: 25 KA
Proximity of extraneous heat source	: Nil
Max. Permissible operating temp. of conductor	
under normal Operation	: 90 0 C
Under short circuit	: 2500 C
Ground temperature	: 400 C
Type of installation	: Earthed
Maximum temperature of air	: 400 C

Minimum temperature of air	: 220 C
Maximum relative humidity	: 95%
Minimum relative humidity	: 10%
Average No. Of thunderstorm days	: 40 days
Average number of rainy days per annum	: 90 days

2.2 GENERAL CONDITIONS

In addition to the above, the scope intends to cover but not restrict to the following activities, services and works.

i. Complete design and engineering of all the systems, sub-systems, equipment, material and services.
ii. Providing engineering data, drawing and O&M manuals for Employer's review, approval and records.
iii. Supply, testing, packing transportation and insurance the equipments from the manufacturer's work to the site.
iv. Receipt, storage, insurance, preservation and conservation of equipment at the site.
v. Fabrication, pre-assembly (if any), erection, testing and putting into satisfactory operation of all the equipment/ material including statutory clearances & successful commissioning.
vi. In addition to the requirements indicated in Technical Specifications, all the requirements as stated in relevant regulations stipulated for successful commissioning of the installation also be considered as a part of this specification and Contractor is bound for compliance the same.
vii. The Contractor shall be responsible for providing all material, equipment and services specified or otherwise which are required to fulfill the intent of ensuring operability, maintainability and the reliability of the complete work covered under this specification.
viii. For individual equipment specifications reference shall be made to the relevant Technical Specification of the equipment as per contract condition.
ix. The Contractor shall be responsible for the overall management and supervision of works. He shall provide experienced, skilled, knowledgeable and competent personnel for all phases of the project, so as to provide the Employer with a high-quality system.

3. PROJECT MANAGEMENT & SITE SUPERVISION

In case the contractor intends to subcontract the electrical works, the subcontractor who will be employed shall be a class 'A' contractor Licensee issued by state electrical inspectorate/ central electricity authority. The contractor shall submit all the required credentials of the subcontractor to the employer for approval of the appointment of subcontractor

3.1 TESTING AND COMMISSIONING

The scope includes testing and commissioning of all equipment, sub-systems and systems of the project and putting them into successful commercial operation. The scope shall include but not limited to the requirements given elsewhere in the specification. The Contractor shall be responsible to provide all necessary testing and commissioning personal, tools and plant, test equipment, etc.

The Contractor shall submit to the Employer all drawings for review. He shall list out the detailed requirements of interface between Contractor's work and the material and services to be supplied by Employer.

The interpretation of the Employer in respect of the scope, details and services to be performed by the Contractor shall be binding, unless specifically clarified otherwise by the Employer in writing before the award of the contract.

Failure of any equipment to meet the specified requirements of tests carried out at works or at site shall be sufficient cause for rejection of the equipment. Rejection of any equipment will not be held as a valid reason for delay in the completion of the works as per schedule. Contractor shall be responsible for removing all deficiencies and supplying the equipment that meet the requirement after furnishing of necessary fresh type test report, as per relevant IS Standard from NABL Accredited Laboratory

4. COMPLIANCE OF ELECTRICITY ACT, REGULATIONS ETC.

Contractor is required to follow statutory regulations stipulated in Electricity Act 2003, Indian telegraph act 1889, Electricity (Supply) Act 1948, Indian Electricity Rules 1956, CEA (Regulation relating to safety of electrical installation) regulation 2010, with all amendments till date and other local rules and regulation referred in these specifications.

The Contractor shall comply with all the statutory rules and regulations prevailing in the state of Kerala including those related to safety of equipment and human beings. The successful Contractor (individual) or any of the partner of joint venture who has qualified, should obtain "A" class electrical license from Electrical inspectorate of Govt. of Kerala/GoI/ any other state/ Union territory etc, before award of contract and to be kept valid till such time all the erected work as per scope of the award is taken over by the Employer.

The Contractor shall obtain approvals & clearances and right of way from all agencies involved. All cable routes shall generally be routed along the road.

The Contractor shall be responsible for transportation to site all the materials to be provided by the Contractor as well as proper storage and preservation of the same at his own cost, till such time the erected installation is taken over by the Employer.

5. METHODOLOGY OF PROCUREMENT

All equipment's/material shall be sourced from reputed manufacturers only. All equipment/ material offered shall be of reputed manufacturers only as per the list of approved make mentioned in the tender document and who have designed, manufactured, completely tested for relevant Indian Standards and supplied the equipment/ material to various State Electricity Boards or other reputed utilities which are in trouble free services at least two different locations for a period of more than two (2) years as on the date of bid opening. All the items shall comply with Govt. Of India latest norms/ guideline's.

6. QUALITY ASSURANCE, INSPECTION AND TESTS

The Contractor shall offer proven and type tested equipment for the project. The type test Certificates shall be complete as per the relevant I.S., carried out by NABL, CPRI or any other statutory bodies responsible for testing of equipment and it shall not be older than 5 years.

If required, Sub-vender's credentials, copies of valid BIS license, past supply & performance certificates as per requirement will also be required for sub-vender's approval, if not already approved for a specific item.

In case during post award detail engineering stage, if any equipment is found to be not type tested or partially type tested, as per I.S., the Contractor shall carry out complete type test for the items at his own cost.

The Contractor shall arrange all type, routine and acceptance tests at manufacturer's works as per approved Material Quality Programme with CoPA's officer. Any expenditure in connection with deputing the representative to the manufacturer's work site will be borne by CoPA. The Contractor shall arrange the inspection program in consultation with engineer-in-charge to give sufficient advance intimation of the manufacturing and testing schedules to facilitate timely inspection of the equipments by CoPA. Fake inspection call will attract penalty as per the discretion of the employer.

The Contractor shall provide one set of tests reports to Employer on successful completion of the tests.

7. GENERAL TECHNICAL SPECIFICATIONS

7.1 SUPPLY OF MATERIALS – GENERAL

All materials required to complete the work as per given specifications & drawings etc, must be manufactured and supplied using fresh raw materials. Re-moulded, recirculated materials are not acceptable. The procurement of materials must be made directly from manufacturer or through authorized dealer / distributors. Documentary evidences to this effect are to be made available to the Engineer-in-charge for necessary checks / verification of source of supply of materials. Second hand materials / partial used materials / used materials would not be acceptable. The offer should be as per Technical Specification without any deviation. But any deviation felt necessary to improve performance, efficiency and utility of equipment must be mentioned in the Deviation Schedule with reasons duly supported by documentary evidences during pre bid meeting. Such deviations suggested may or may not be accepted by the employer. Any deviations projected after the pre bid meeting shall not be entertained at any cost.

8. 11kV VCB Panel and Accessories

This specification describes the general requirements governing the design of 11kV, 800A, LSC2B-PM, IAC A-FLR Indoor Switchgear and control gear fully type tested according to IEC 62271-200 standards. HT VCB Panel shall be manufactured tested and dispatched from OEM factory in whose name Type test reports are issued. The manufacturing, inspection at any stage shall be at OEM factory only.

Item Description: 12 KV, 800 A VCB Panels SCADA Compatible with 1 no. Incomer & 5 nos. Out goings as per IEC 62271 with Draw Out VCB s 800 A each, Copper Busbars, CT/PT, Numerical Relay, Battery with Charger etc. Control Voltage: 24 V, DC; Motor Voltage: 240 V, A.C;
Incomer-1 no: With Numeric Relay, Lockout Relay, Annunciation Panel, Test Terminal Block, Voltmeter, Ammeter, selector Switches, Hooters, LED indications lamps as required, Auto manual switch, Emergency switch etc.
Outgoing - 5 nos. each with CTs, Numerical Relay, Lockout Relay, MFM, Test Terminal Block, Ammeter with Selector Switch etc.

Rated voltage: 12 KV
Service voltage: 11 KV
Power frequency withstand voltage: 28 KV (rms)
Impulse Withstand Voltage: 75kV
Short time withstand current: 25 kA rms -3 s
Peak withstand current: 63 kA
Busbar rated current: 800 A
Internal arc classified: Type Tested as per IEC 62271-200 IAC A FLR 25 kA for 1 sec for all HT compartments (Busbar, Cable & Circuit Breaker)

Protection degree outer cover (IEC 60529): IP4X
Protection degree inner partitions (IEC 60529): IP2X
Ambient temperature (IEC 60694): -5 to +40 °C

8.1 CODES, STANDARDS AND SPECIFICATION

The electrical switchgears and the relevant equipment shall be designed, manufactured and tested according to the latest version of:

IEC 62271-1	Common Specifications for Switchgear & Control gear
IEC 62271-100	Circuit Breakers
IEC 62271-200	A.C. metal-enclosed switchgear and control gear for rated voltages above 1kV and up to and including 72kV and the IEC Code herein referred
IEC 60129	Alternating current disconnectors (isolators)
IS 2705	Current transformers
IS 3156	Voltage transformers
IEC 60255	Electrical relays
IEC 60529	Classification of degrees of protection provided by enclosures
IS13779, IS14697, IEC62052, IEC62053,	Panel Meter

Any other codes recognized in the country of origin of equipment might be considered provided that they fully comply with **IEC standards**.

The design of the switchgear shall be based on safety to personnel and equipment during operation and maintenance, reliability of service, ease of maintenance, mechanical protection of equipment, interchangeability of equipment and ready addition of future loads.

8.2 SERVICE CONDITIONS

The switchgear and control gear shall be suitable for continuous operation under the basic service conditions indicated below.

Ambient temperature	-5 to +45/50°C
Relative humidity	up to 9
Altitude of installation	up to 1000m above MSL,
Duty Cycle	O-0.3 sec-CO-3 min-CO

8.3 METAL CUBICLES

8.3.1 STRUCTURAL AND MECHANICAL CONSTRUCTION REQUIREMENTS

The switchgear and control gear panels shall be of the fully arc proof LSC 2B, PM, IAC AF-LR, free standing, floor mounting, flush fronted, withdraw able type, consisting of separate panels assembled into one or more sections to form a single structure with a common bus-bar assembly.

Cubicle construction: Sheet Steel material - Offered Panels are made of Aluzinc material, which is corrosion proof. The sheet steel is coated with unique silvery spangle composed of Al, Zinc and silicon for perfect harmony with steel. Aluzinc sheet thickness shall be 2.0 mm. However front doors and end covers are made of CRCA sheet thickness 2 mm with special re-enforcement. The design has been type tested for full short circuit rating for internal arc resistance.

The observation window on the CB compartment door shall be made of special toughened/ laminated glass of at least 6 mm thick. Observation window shall be of same material and construction as the type tested design/construction.

Gaskets: Ethylene Propylene Diene Monomer (EPDM)

The design of the panels shall be such that no permanent or harmful distortion occurs either when being lifted by eyebolts or when moved into position by rollers or trans-pallets.

The switchgear and control gear should have the minimum degree of protection (in accordance with IEC 60529)

- IP 4X for the enclosure
- IP 2X for the partition between compartments

The switchgear must be readily extendable in either direction.
Each cubicle shall be equipped with anti-condensation heater controlled by thermostat.

8.3.2 INTERLOCKING

Isolation and connection of the circuit breaker shall be carried out inside the compartment with the door closed.

The following interlocks shall be provided for service safety:

- interlocking which prevents racking-in and racking-out of the circuit breaker when closed
- interlocking which prevents manual or electrical closing of the circuit breaker in the intermediate positions between connected or isolated
- interlocking which prevents insertion of CB when control plug is disconnected

8.3.3 COMPARTMENTS OF EACH CUBICLE

Metal cubicles shall be divided in the following compartments.

- Bus bar compartment
- Circuit breaker compartment
- Cable compartment
- LV compartment

The switchboard shall have passed internal arc faulted containment testing for all 3 HT compartments (Busbar, Circuit Breaker, Cable) for 1 second at the rated fault current of 25 kA with IAC AFLR.

Each HV compartment should have individual exhaust channel / pressure relief flaps to let out over-pressurized hot gases at the top of the switchboard in case of an internal fault. Suitable factory fitted arc duct arrangement shall be provided for vending out the arc out of the switchgear room.

Front access doors with single action operator will be provided to the HV circuit breaker compartment. Bolted type CB door locking arrangement shall not be accepted.

The Switchgear Panel, Vacuum Circuit Breaker, Vacuum Interrupter bottle, Main Numerical Relay shall be of same OEM make only for reliable quality & optimal operation of the panels throughout the intended life of the switchgear panel.

8.3.4 BUSBAR COMPARTMENT

Bus bars shall be constructed from high conductivity Copper, comprising the 3 single phase Copper bus bars and the connections to the circuit breaker compartment.

The bus bar system shall be air insulated. The bus system is also required to withstand the specified impulse voltage level without the use of filled compounds, hand wound tapes etc. Bus bars shall be rated to withstand all dynamic and thermal stresses for the full length of the switchgear.

The frame and all other metallic non-current carrying parts of the switchgear shall be bonded together and earthed through the external connection to a through going earth bar along the switchgear. There are terminals for connection to the external station earth bar at the bottom of each cubicle.

8.3.5 CIRCUIT BREAKER COMPARTMENT

Comprising the withdraw able Vacuum Circuit Breaker for 11kV voltage level and all accessories required for its operation.

To ensure the integrity of the arc fault containment requirement, the operations must be carried out with the switchgear doors closed i.e. circuit breaker for opening and closing, racking of circuit breaker (or withdraw able voltage transformer) between service and test position.

Circuit breaker compartment door must be padlock able.

Access between the circuit breaker (or withdraw able voltage transformer) and bus bar / cable compartments shall be made through epoxy encapsulated spout bushings of uniform shape and dimension. Spouts are covered by automatic metal shutters, covering all three phases unless the circuit breaker is in service position.

a) Circuit Breakers

Circuit breakers shall be withdraw-able Vacuum type of floor rolling design. Wherever the complete assembly of interrupters, contact pressure springs and HV terminals (top and bottom) shall be type tested for compatibility of design.

Vacuum interrupters of the circuit breakers shall not be openly exposed design and shall be completely encapsulated in epoxy housing. Partial encapsulation / Open type vacuum bottles in VCB shall not be acceptable due to safety concerns. The Circuit Breaker shall be suitable for E2, M2 & C2 (Single capacitor Bank) class duty. The offered circuit breaker should have valid type tests to support the afore-mentioned duty class.

The circuit breaker shall be isolated by horizontal racking and positively fixing the unit into any one of the following positions:

- **Service position:** main and auxiliary circuits connected
- **Test position**: main circuits disconnected auxiliary circuits connected. Circuit breaker in its isolated position shall be completely contained in the apparatus compartment with shutters on main circuit closed and compartment front door closed.
- **Withdrawn position**: main circuits and auxiliary circuits disconnected. Circuit breaker is removed out of the cubicle.

Locking of circuit breaker compartment door shall be possible by means of padlocking

A position indicator switch or viewing window must be provided for visual indication of the circuit breaker test & service position.

The circuit breaker control auxiliaries shall be of the plug and socket type.

When the circuit breaker is in the service position removal of the control auxiliaries will not be possible.

The circuit breaker truck shall ensure earthing in both connected and disconnected positions.

An electro-mechanical device shall be provided to ensure the auxiliary circuits have been securely connected between the fixed and moving portions of the switchgear, before allowing closing operation of the circuit breaker. The voltage rating of the device shall be the same as the voltage used for the closing circuit.

Tripping and/or release coils shall be continuous rated to ensure longer life

The electrical tripping device shall be of a type which acts directly on the circuit breaker mechanism and shall give positive operation for a supply voltage of 70% of nominal control voltage and 85% of nominal control voltage.

The switchgear shall be provided with facilities for full operation from a remote point.

Circuit breakers shall be equipped with a motor wound spring stored energy operating mechanism with opening and closing operations independent of the operator, electric close and trip releases, manual on/off buttons and manual spring charging facilities.

It shall be possible to manually charge the circuit breaker operating spring in case of auxiliary supply failure.

Mechanical indication of the spring-charged condition shall be provided.

Circuit breakers shall be provided with a mechanically operated visual indicating device to display the circuit breaker switching state and a mechanical operation counter.

The circuit breaker operations of closing and opening shall be possible with the circuit breaker compartment door closed.

It shall be possible to trip the circuit breaker locally by mechanical means.

Circuit breakers will be provided with at least one spare normally-open and one spare normally-closed contact, each wired out to terminals for the connection of external wiring.

Circuit breakers shall be mechanical latching and electrical and mechanical tripping. The operating mechanism shall be trip-free and shall include an anti-pumping device.

The switchgear shall be with integrated earth switch in each feeder panel tested for Making capacity test

b) Shutters

Circuit breaker compartment should have automatic shutters, which shall be opened and closed by the mechanical drive of the circuit breaker.

The bus bar and circuit spout covers shall be operated independently of each other.

Padlock facilities can be provided on the metal shutters.

8.3.6 CABLE COMPARTMENT

This compartment shall have the following components

- current transformers
- voltage transformers
- cable terminals

It shall be possible to terminate up to a maximum of two single core for 630A HV cables per phase. The cable termination height should be a minimum of 600mm to facilitate ease of termination.

The access to the compartment will be possible by removing the front and/or the back plates, bolted to the main frame.

The entry of the cables shall be from the bottom of the cubicles. To prevent access of small animals to the live parts cable gland plates needs to be supplied.

Internal arc should be valid also at the rear side of cubicle.

a) Current Transformers

All current transformers shall comply with IS 2705.
Current transformers shall be of cast-resin type,2.5VA and ratios as required.

The rated primary current, turns ratio, knee-point voltage and resistance of the secondary windings (corrected to the maximum service temperature) will be according to submitted schedule for approval.

b) Voltage Transformers

All voltage transformers shall comply with IS 3156
Voltage transformers shall be of dry type, with ratings and ratios as required.
Voltage Transformer (VT) shall be cast resin with built-in primary fuses, VT's shall be draw out type.
The Line VT must be floor rolling draw out type either placed on rear side of panel or on CB side. The Line PT mounted on top side of panel shall not be acceptable due to operational limitations.

8.3.7 LOW VOLTAGE COMPARTMENT

All low voltage equipment shall be normally in contained in the low voltage compartment. In particular:

- Terminal blocks and wiring for interconnections between cubicles and for
- connecting the auxiliary cables
- Instruments, protection relay, metering devices, fuses etc.

On the top of the low voltage compartment, there shall be a cable duct for auxiliary connections between cubicles and towards the external installation. Similar channel shall be available at the bottom along the switchgear.

Plug-in type terminal blocks shall do all inter-cabling between cubicles.

Wiring will be done according to relevant IEC/IS standards.

Panel front on inside labelling will be done by using Engraved black labels in English language.

a) Relays

General Requirement

The Mail protective directional/bi-directional OC & E/F relays shall be numeric & communicable type (SCADA Compatible), as per detailed specification of relay separately provided. All relay shall be provided with 'Relay Failure Annunciation Contact'

General Requirement of Numerical relays:
It is intended to automate the switchgear specified in the scope of supply and use the communicable numerical relay for protection, control, Metering & Status monitoring.

All the feeders shall be remote controlled from EMPLOYER's SCADA and from the local console of the numerical relays.

Numerical multifunctional combined microprocessor based feeder protection and management relay will protect 11kV feeders from all electrical and other faults along with reporting system, disturbance record for fault analysis. Manufacturer should comply with any special requirement or feature asked for

retrofitting the relays. Relay should be IEC 61850 compliant. Relay should have 4 CT input for O/C and E/F protection. There should be option for derivation of E/F internally.

Protection shall be selected from the approved coordination study. Minimum available functions shall include 50/51, 50N/51N, 46 trip-circuit supervision, 27/59, 67/67N and 50BF.

Breaker condition information, including operation count, trip-circuit health, operating-time supervision and accumulated interrupted current or contact-wear indication where supported, shall be available locally and to SCADA.

The numerical relays in general shall comply with the following requirements:

1. Relay should be flush mounted type. The module shall be either draw-out/Fixed type with withdrawable cards and there should be CT shorting facility. Galvanic isolation between field connection and relay hardware should be there. The relays should be housed in a robust case suitable for panel mounting conforming to IP 51 or higher (Front face). The relay shall have Secure local HMI and manufacturer engineering software shall be provided. Browser-based access may be offered but shall not be mandatory.

2. The relay should be suitable for operation in ambient temperature of +55 degrees Celsius and relative humidity of 93%.

3. The relay should conform to the IEC60255-5 or equivalent BS / ANSI for following:

    - Overload withstand test
    - Dielectric withstand: 2kV in common, 1 W in differential mode
    - Impulse Voltage: 5kV in common, 1kV in differential mode
    - Insulation resistance> 100 M-ohm.
    - Vibration: Shock and bump and Seismic
    - Storing and transportation
    - Radio Interference: IEC 61000 for high frequency disturbance, Transient disturbance, Electrostatic discharge
    - The offered model and firmware shall have IEC 61850 Edition 2 conformance evidence from an accredited laboratory.

    Relay shall meet the requirement for withstanding electromagnetic interference according to relevant parts of IEC 60255 / IEC 61850. Failure of single component within the equipment shall neither cause unwanted operation nor lead to a complete system breakdown.

4. The relay shall be rated for 50 Hz. +/- 5% system frequency.

5. The relay shall have options for CT input at site selectable 1 A or 5A

6. It shall be possible to energise the relay from auxiliary supply 110/220V with variation of - 25% to +10% (the aux. supply voltage will be specified during detailed engineering). The dc aux. supply will be 2 wire unearthed system. Necessary software shall be in-built for proper shutdown and restart in case of power failure. Auxiliary supply burden will be less than 20Watt.

7. The relay setting and programming should be stored in EEPROM so that during auxiliary supply failure the said data is not lost.

8. The relay should have facility to comprehensively monitor the healthiness of its circuits and components by own monitoring system. In case of any problem of hardware and software elements of the relay, the fault diagnosis information shall be displayed on the LCD and an alarm should be generated by one of the output contacts. The alarm as soft signal to be sent to SCADA system as well. Necessary support documentation explaining the self-diagnostic feature shall be furnished. Watch dog contact shall be provided

9. The relay shall have sufficient binary inputs and outputs for the approved SLD, with minimum 20% spare capacity after detailed engineering. Trip-circuit supervision inputs shall be additional. Binary I/O, LEDs and internal logic shall be freely assignable. The engineering tool shall support graphical logic, timers, latches and interlocks.

10. The relay shall provide a clear local HMI for measurements, breaker status, alarms, trip information, settings and events, with fixed and programmable LEDs, navigation keys and password-controlled setting changes. Display character count, LED colour arrangement or keypad style shall not be make-specific qualifying criteria.

11. The relay and engineering software shall support secure access control, password or role-based write protection, security logging, controlled firmware/configuration management and network segregation, aligned with the Employer SCADA cybersecurity policy.

12. The relay shall be provided with suitable security (Password protection) against unauthorised WRITE ACCESS for change in relay setting**.** However it should be possible to view metering, protection settings, status and event data as READ ONLY without password protection. The security should be available for change in relay settings locally from relay HMI as well as when relay is accessed remotely through manufacturer software / remote HMI.

13. All PCB used in relays should have harsh environmental coating as per standard IEC 60068 (HEC) to increase the particle repellence and thereby increasing the life of relay or it should be tested as per IEC60068 to operate under extreme harsh environmental conditions given in G3 classification. Test report needs to be submitted on request. IED shall be manufactured using lead-free components.

14. The relay should support IEC 61850 Edition 2 over Ethernet without an external converter dual-port managed Ethernet and a front service port shall be provided.

15. The Numerical relay for Incomer panel shall be provided with integral (no separate unit) arc flash protection system based on both current & light detection method. Relay should have provision of 3 nos. arc sensor, each for cable chamber, busbar chamber & circuit breaker chamber. Sensor shall cover any flash over occurring in the respective chambers.

16. The relay should have native IEC 61850 Communication Protocol on Ethernet. Relay should comply to Native IEC 61850 protocol without any external protocol converter. The relays shall generate GOOSE messages as per IEC 61850 standards for interlocking and also to ensure interoperability with third party relays. Goose signals shall be freely configurable for any kind of signals using graphic tool/user friendly software. The relay must support IEC 61850 GOOSE messaging with the performance requirements for tripping applications type 1A, Class P1 with GOOSE time <10ms as defined by the IEC 61850 standard so that any time critical interlocking can be built over communication.

17. The relay should have time synchronization through SNTP / IRIG-B

18. **Fault record**: The relay shall have the facility to store at least 8 last fault records with information on cause of trip, date, time, trip values of electrical parameters.

19. **Event record**: The relay shall have the facility to store at least 250 time stamped event records with 1 ms resolution.

20. The relay shall provide configurable disturbance recording with adequate analogue and binary channels, suitable sampling and storage for protection analysis. Minimum storage shall be 10 complete records at the configured length.

21. Event log, trip log and disturbance record should go in to history. The relay settings shall be provided with adequate password protection with 4 alternative setting groups.

22. Offered relay must be type tested as per IEC 60255 standard.

b) Annunciator

Windows, LED illumination, ABS plastic DIN-compliant enclosures, built-in watchdog, and RS-485 MODBUS communication

c) Voltmeter & Ammeter

Analogue Voltmeters and Analogue Ammeters with Selector Switches are to be provided in each cubicle

d) Panel Meter

multi-line three-phase digital panel meter, with four-line seven-digit display with quadrant identification section and bar graph for instantaneous power-level indication.
High accuracy: Class 0.2s, 0.5s, 1.0
Average THD measurement for voltage, current and power,
Modbus communication via RS-485 port/ethernet
True root-mean squared (RMS) metering, Scroll-lock and 'Favourites Page' display support, Password protection for setup mode
Ethernet gateway module for easy integration of multiple meters connected over RS485 network
Ingress protection: IP 54 (front fascia); IP20 (at terminals)
Insulation: 4 kV RMS 50 Hz, 1 minute;
Impulse withstand: 6 kV

e) Electronic Hooter

Hooter shall be provided in the Incomer Panel

f) Battery & Battery Charger

Battery shall be 24 V with 2 nos. of 48 AH Capacity. Charger shall be Panel mount type.

8.4Tests

8.4.1 Type Tests

Cubicles shall be type tested in accordance with latest IEC standards. The following type tests have been performed and available
Short time and peak withstand current test
Temperature rise tests

Dielectric tests
CB make break duty test
Ingress protection test (IP5X for metering chamber, IP4X for enclosure)
Internal Arc Test for IAC-AFLR 25 KA for 1 sec for all 3 HT compartments
HT panel, circuit breakers & vacuum interrupters are to be of manufacturer's own products to ensure strict quality control & safety standards are followed.

8.4.2 Routine Tests

Routine tests shall be carried out in accordance with IEC 62271-200 standards. These tests shall ensure the reliability of cubicle.
Below listed test shall be performed as final acceptance tests before the delivery of cubicles.
Withstand voltage at power frequency
Withstand voltage on the auxiliary circuits
Operation of functional locks, interlocks, signaling devices and auxiliary devices
Suitability and correct operation of protections, control instruments and electrical connections of the circuit breaker operating mechanism
Measurement of the resistance of the main circuit
Verification of wiring
Visual inspection

8.4.3 Name Plate and Diagram Plates:

All equipment shall have weather proof and non corrosive metal plates fixed in suitable
position with full particulars engraved thereon with white letters against black background.
The firm shall affix a name plate on each Switchgear panel having following information:
1. Manufacturer's name and trade mark.
2. Serial No.
3. Type of Panel.
4. CT Ratio.
5. Rated Voltage.
6. Rated Insulation Level
7. Rated Frequency
8. Rated Normal Current
9. Rated Short Circuit Breaking Current.
10. Weight
11. Specification No.
12. Order No. and Date
13. Year of supply.

9. INSTALLATION OF EQUIPMENTS – GENERAL STANDARDS

Erection, testing and commissioning of the equipments covered shall be done as per standard codes of practice and shall comply with requirements of following Indian Standards and other relevant standards, Indian Electricity Rules and acts and also to the regulations that are in force at the place of installation.

IS:1255 – Code of practice for installation and maintenance of power cables upto and including 33 Kv rating.

IS :5216 – Guide for safety procedures and practices in Electrical work.

IS :100118 – Code of practice for selection, installation and maintenance for Switchgear and control gear-Part-III Installation.

IS: 3043/87 – Code of practice for installation and maintenance of earthing of installation.

10. REFERENCE

Following documents shall be read in conjunction with this specification

i. Scope of work and special requirements
ii. Schedule of items of work
iii. Engineering Specification and Data sheet of General requirements of Electrical system.

11. GENERAL CONDITIONS FOR INSTALLATION OF EQUIPMENTS

i. The erection/installation, testing and commissioning shall be carried out in accordance with specification, data sheets, drawings, manufacturer's recommendations, and relevant standards or as directed by owner/Engineer-In-Charge. Requirements regarding erection/installation, testing and commissioning of Panel, cables, etc, are generally explained here in. It is the responsibility of the contractor to supply all equipment, items, accessories, materials, tools, tackles, transporting, and lifting vehicles, consumables etc. required for unpacking, checking, transportation, storage, safe custody, installation, erection, testing, commissioning, return of unused equipment/items which are supplied from owner's stores and handing over of the installation to the entire satisfaction of owner.

ii. The erection scope shall include supply of all hardwares and accessories such as bolts, nuts, washers, gaskets, cable termination accessories, lugs, paint, primer, sand etc. required for completeness of the work. All consumable materials such as insulation, tape, cleaning and paint brushes, welding electrodes, rust preventive materials, jute, cotton waste, hack saw blades, bolts, nuts, inhibitive grease, fuel, lubricants, etc, and any other material required in carrying out the work but not for incorporation in to the permanent work, shall also be included in the scope of contractor.

iii. The equipment/items to be erected shall be handled with care by experienced workers under the guidance of the competent supervisor. Proper handling and transporting equipments are to be used and dragging is to be avoided.

iv. The equipment/items supplied by the owner, shall normally be kept at their stores. The contractor shall inspect these items at the stores by unpacking the containers, if necessary. Responsibility of safe custody of materials after delivery and till handing over shall rest with the contractor. Unused materials and containers shall be returned to the stores. The items supplied by the owner shall be transported from the point of storage to the point of erection / installation using proper capacity transporting vehicles. The scope shall include unpacking the containers, assembling parts, fixing loose items, components, etc. Materials supplied by the contractor or issued by the owner shall be given suitable protection against weather, dust and vermin. In storage places, equipments shall be placed over wooden sleepers to keep them above ground. Before carrying out erection/installation works of any item, proper care regarding leveling, alignment, access to working parts, facilities for removing the items for repair, statutory clearance, etc. shall be taken.

v. Foundation bolts, nuts, lock nuts, washers, etc. will normally be supplied by the equipment supplier. Any further requirement of these items shall be under the scope of contractor. The equipment shall be installed on the foundation bolts firmly such that there will not be any vibration during operations. For mounting of equipment/items on the walls/ columns / supports, suitable MS/GI brackets shall be fixed / clamped / grouted.

vi. Electrical connections shall be done with great care using spring washers, bimetallic strips, conducting grease, etc. wherever required to ensure good contact without creating undue stresses. Copper bus bar joints shall be made after tinning the contact area. Supply of all required accessories or electrical connections shall be included in the contractor's scope. Discrepancies if any found between drawings/statutory requirements and actual conditions at the site, shall be immediately brought to the attention of owners representative. If any modification is found required in the writing or to suit site condition the same shall be carried out as per the instruction of the Engineer-In-Charge without any extra cost.

vii. All equipments under erection shall be kept properly cleaned and free of dust, vermin, moisture, etc. After erection, it shall be ensure that non-foreign materials, tools or tackles are left in the equipment. All unused cable entries, cutouts, etc. shall be sealed properly. For hazardous area, blanking plugs suitable for the area classification applicable shall be used.

viii. All tests shall be carried out in the presence of owner's representative and test shall be recorded on an approved proforma duly certified. The records of all tests shall be submitted to the purchaser's representatives. All interconnected wiring shall be checked thoroughly for correct connection with the wiring and schematic drawings of the manufacturer and the drawings supplied by owner before energizing.

ix. All power and bus bar connection shall also be thoroughly inspected and checked for connections, foreign materials, tightness, etc. before energizing the equipment. All components within the main equipment shall be tested for proper performance and correct operation before commissioning the equipment.

x. All labeling shall be checked for correctness. All nuts, bolts, clamps, joints, connections, etc. shall be checked for tightness and tightened wherever required. All moving parts shall be checked for its correct movement and proper lubrication. Apply lubrication wherever required. All equipment containing liquid shall be checked for correct quantity filling and all gaskets, walls, etc, shall be checked for leak proof. Oil filling, if found required, shall be done with dry and clean oil. Gaskets shall be replaced if found required. It shall be ensured that all CT leads are loaded or shorted prior to testing and commissioning. Insulation tests shall be carried on all electrical devices, whether specifically mentioned or not, as per this work after properly cleaning these devices.

xi. All the relays and its settings after commissioning shall be furnished to owner detailing relay type number, panel number etc. In case of any component of an equipment supplied by the owner is found to faulty/ unsuitable, the same shall be replaced by the new one issued by owner. All relays, before installation, the rating, range and auxiliary supply voltages for the relay should be checked against drawings/ schematic/ schedule.

12. CIVIL AND STRUCTURAL WORKS

i. Miscellaneous civil works associated with the erection/installation such as excavation, dewatering and refilling of earth work for earth pits and cable trench, chipping, grouting, small cutting, etc. on floors/ walls/ columns / structures and bringing back the same to original finish, grouting of supports, providing suitable fixing arrangements for cables, push button stations, DBs etc. shall be included in the rates quoted for erection of the respective items, unless specifically excluded in the "Schedule of Items of Work". All structural works associated with cabling, earthing, equipment erection and supporting arrangements shall be included in the scope of the contractor. All the welding and cutting works shall be carried out by certified welders. Painting shall be done on all MS materials provided, by the contractor such as base channels, frames, supports, pedestals, cable trays/racks/risers, enclosures, boxes, conduits, chequered plates etc. Before painting, the surface should be thoroughly scraped and cleaned to remove dust, grease, plaster or any other foreign materials. It is the responsibility of the contractor to supply and install all the required materials for painting including paint. Cement concrete footing shall be provided for, cable trays/racks/risers, pedestals, supports, etc. Footing shall be provided using 1:2:4 PCC with 20mm broken stone. It is responsibility of the contractor to supply and install all materials such as river sand, reinforcement rods, 20mm broken stone, etc. without any extra cost to owner. All concrete works and grouting shall be cured for a minimum period of 48 hours.

ii. Chipping, grouting, etc as recommended shall be done for completion and installation work on the finished floor, wall, roof, etc. It is the responsibility of the contractor to supply all necessary materials and to bring the disturbed surface to the original finish. Touch painting of scratches found on equipment, other painted metallic surfaces, galvanized etc. associated with this work is also included in the scope of contractor without any extra cost. Base steel structures shall be painted with 2 coats of epoxy primer and 2 coats of epoxy paint.

13. STANDARD REQUIREMENTS FOR TESTING AND COMMISSIONING

i. The standard requirements for testing and commissioning are furnished below.

ii. All tests shall be carried out in the presence of Owner's representative and tests shall be recorded on an approved format duly certified. The records of all tests shall be submitted to the purchaser's representative.

iii. All interconnected wiring shall be checked thoroughly for correct connections with the wiring and schematic drawings of the manufacturer before energizing. All Power and bus bar connections shall also be thoroughly inspected and checked for correctness, foreign materials, tightness, etc. before galvanized the equipment.

iv. All components within the main equipment shall be tested for proper performance and correct operation before commissioning the equipment. All labeling and nameplates shall be checked for correctness. All nuts, bolts, clamps, joints, connections, etc shall be checked for tightness and tightened wherever required.

14. DRAWING AND DOCUMENTATION

i. The manufacturer shall submit for approval a schedule of drawings which shall include the single line diagram, general arrangement of switch board & busduct, component list with all protective devices, their settings, rated current, foundation plan and control wiring along with terminal chart.

ii. The OEM/OM has to approve the drawings with seal and sign of OEM/OM. Only this drawing shall be submitted for approval.

iii. The approval of general arrangement should be obtained before the fabrication of cubicles is started. Approval of schematic drawings, single line and control wiring drawings shall be obtained before the manufacturer proceeds with the cubicle wiring.

iv. Manufacturer shall submit for approval the single line general arrangement drawings including component list, foundation drawings and control wiring. The approval of general arrangement drawing should be obtained before the fabrication of cubicles is started. Approval of schematic drawings, single line and control wiring drawings shall be obtained before the manufacturer proceeds with the cubicle wiring.

v. The approval of drawings shall not relieve the manufacturer of his responsibility of supplying equipment conforming to the relevant specifications and standards.

vi. Once manufacturer's schematic diagrams have been finally approved, the manufacturer shall prepare wiring connection diagram for each cubicle. These diagrams shall show all wiring inside the cubicle starting from the cubicle terminal strips. These diagrams which will be used for trouble shooting shall be submitted before delivering the equipment at site.

vii. A detailed B.O.Q with component specifications and recommended spares with unit rate there of shall be submitted one month before the delivery of the Panel.

viii. As a part of the contract, following documentation shall be furnished.

The successful tenderer shall submit 3 sets of complete drawings along with detailed bill of materials for approval. If any modifications are required on these, the same will be conveyed to the supplier who shall modify the drawings accordingly and furnish final drawings for approval. No delivery extension shall be granted for any delay in drawing submission.

List of drawings to be submitted along with the offer are as under:

i. GA of indoor 11 KV panel Switchgear.

ii. Typical single line diagram for 11 KV panel Switchgear.

iii. Sectional view of incomer, & Outgoing panels.

iv. GA of Circuit Breaker truck.

v. GA of Current Transformer

vi. GA of Potential Transformer.

vii. G. A. Drawing for Control Desk.

viii. Bill of material for complete switchgear.

ix. Technical particulars of Switchgears

x. Description With Tender For approval For records Prints Soft copy

xi. Switchboard-wise bill of quantity with detailed component specifications and makes.

xii. List of recommended spares

xiii. Test certificates for all bought out components like relays, meters, capacitors, ACBs etc.

xiv. Installation and maintenance instructions for ACBs, Relays and Electronic meters.

15. END TERMINATIONS AND STRAIGHT THROUGH JONTS FOR LT CABLES.

Supply and making of end terminations with brass glands, lugs etc complete suitable for cables as per schedule of work. the item shall be single compression type tinned/nickel plated (coating thickness not less than 20 microns in case of tin and 10 to 15 microns in case of nickel) brass cable glands shall be provided by the contractor for all power and control cables to provide dust and weather proof terminations. they shall comprise of heavy duty brass casting, machine finished and tinned to avoid corrosion and oxidation. rubber components used in cable gland shall be neoprene and of tested quality. required number of packing glands to close unused openings in gland plates shall also be provided. for copper cable the termination materials shall be copper materials.

Supplying and making straight through cable jointing with Heat Shrinkable Sleeves including ferrule and other jointing materials, for XLPE aluminium conductor cable of 11 KV grade as required.

General requirement for Cable Joints and Terminations

The installed joints and terminations must provide the following:

i. Complete external leakage insulation between the high voltage conductor and earth potential using anti-track heat shrink material.

ii. Electrical stress control using semi-conducting heat shrinkable tubing over the cores and by the insertion of high di-electric strength insulating material into the crutch of the termination such that electrical discharge activity does not occur in the termination after it has been energised at its rated voltage.

iii. Hermetic sealing of the interfaces between heat shrinkable materials and cable surfaces, bushings or cable lugs by use of track resistant hot melt adhesive which can accommodate the creep and relaxations that may occur with recovered heat shrink materials. This sealant shall be pre-coated inside the heat

shrinkable components and activated by the heat applied to shrink the components which shall be in excess of 125 Deg.C.

iv. Uniform adhesive flow from the adhered heat shrink component into the adjoining surfaces will be used as an indicator that shrinking is complete, and therefore, the adhesive must be suitable for this purpose.

v. Outdoor terminations shall incorporate a design feature to prevent flexing of the terminated cores under short circuit conditions.

vi. Joints and terminations must be insensitive to cable manufacturers tolerances allowed under BSS 6480-1969.

vii. The length of core insulation required is 450 mm per phase.

viii. Copper braid should be provided to connect the metal shield of XLPE cable and to make electrical contact with the outer screen of the joint for transition joints.

16. EARTHING

16.1 APPLICABLE STANDARDS

i. Earthing Materials shall conform to latest applicable standards
ii. IS: 2062 Grade A – Quality Specification for MS angles, MS channel & MS Flat
iii. IS:2062 – Chemical & Physical composition of materials.
iv. IS:1852 – Rolling & Cutting tolerances for Hot Rolled Steel products

16.2 PLATE EARTHING

Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including all accessories in complete and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.

Supplying and laying 6 mm X 40 mm G.I strip at 0.50 metre below ground etc. as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)

17. DISMANTLING AND SHIFTING OF EXISTING PANELS

Removal of Existing Panel including shifting of panels to scrape yard and giving temporary connections of cables with necessary items as required so as to restore power till commissioning of New Panel.

18. FOUNDATION OF PANELS

Foundation of panels shall be as per the site conditions and recommendation of the EIC.

19. TECHNICAL SPECIFICATION FOR INSTALLATION OF EQUIPMENTS

19.1 SCOPE

This specification covers the engineering requirements for erection/installation, testing, laying of cables and commissioning of equipment/items and its associated works.

19.2 STANDARDS

Erection, testing and commissioning of the equipments covered shall be done as per standard codes of practice and shall comply with requirements of following Indian Standards and other relevant standards, Indian Electricity Rules and acts and also to the regulations that are in force at the place of installation.

i. IS: 5216 : Guide for safety procedures and practices in Electrical work

ii. IS: 100118 : Code of practice for selection, installation and maintenance for Switchgear and control gear-Part-III Installation.

iii. IS: 13408 : Code of practice for the selection, installation and maintenance of electrical apparatus for use in potentially explosive atmospheres (other than mining application of explosives processing and manufacture).

iv. IS: 3043/87 : Code of practice for installation & maintenance of earthing of installation.

19.3 REFERNCE

Following documents shall be read in conjunction with this specification:

a) Scope of work and special requirements
b) Schedule of items of work
c) Engineering Specification and Data sheet of General requirements of Electrical system

19.4 INSTALLATION OF PANELS

The Equipments shall be erected at convenient locations as per the instruction from the Engineer in charge. All civil works, foundation including supply and laying of MS angles, channels and grouting fasteners for erection shall be responsibility of the Contractor. After installation of the equipments they shall be tested and commissioned in the presence of Engineer- in- charge in accordance with IE rules, relevant standards and as per requirements. All backfill of the site must be compacted before final site finish. The provision for the cable entry shall be from bottom and necessary space/ provision shall be made for drawing the cables conveniently into the Panel. The verticality of the panels shall be checked and ensured. Only appropriate foundation-hold-down bolts, nuts and check nuts

shall be used and all the necessary spring and flat washers shall be provided. Suitable packing shims shall be used wherever necessary under the bottom of the frame for adjustment and leveling and checked with a spirit level. All the units shall then be assembled at site if necessary.

20. GENERAL CONDITIONS FOR INSTALLATION OF EQUIPMENTS

a. The erection/installation, testing and commissioning shall be carried out in accordance with specification, data sheets, drawings, manufacturer's recommendations, and relevant standards or as directed by owner/Engineer-In-Charge. Requirements regarding erection/installation, testing and commissioning of switchboards, cables, etc, are generally explained here in. It is the responsibility of the contractor to supply all equipment, items, accessories, materials, tools, tackles, transporting, and lifting vehicles, consumables etc. required for unpacking, checking, transportation, storage, safe custody, installation, erection, testing, commissioning, return of unused equipment/items which are supplied from owner‟s stores and handing over of the installation to the entire satisfaction of owner. The erection scope shall include supply of all hardware and accessories such as bolts, nuts, washers, gaskets, cable termination accessories, lugs, paint, primer, sand, etc. required for completeness of the work. All consumable materials such as insulation, tape, cleaning and paint brushes, welding electrodes, rust preventive materials, jute, cotton waste, hack saw blades, bolts, nuts, inhibitive grease, fuel, lubricants, etc. and any other material required in carrying out the work, but not for incorporation in to the permanent work, shall also be included in the scope of contractor.
b. The equipment/items to be erected shall be handled with care by experienced workers under the guidance of the competent supervisor. Proper handling and transporting equipments are to be used and dragging is to be avoided.
c. The equipment/items supplied by the owner, shall normally be kept at their stores. The contractor shall inspect these items at the stores by unpacking the containers, if necessary. Responsibility of safe custody of materials after delivery and till handing over shall rest with the contractor. Unused materials and containers shall be returned to the stores. The items supplied by the owner shall be transported from the

point of storage to the point of erection/ installation using proper capacity transporting vehicles. The scope shall include unpacking the containers, assembling parts, fixing loose items, components, etc. Materials supplied by the contractor or issued by the owner shall be given suitable protection against weather, dust and vermin. In storage places, equipments shall be placed over wooden sleepers to keep them above ground. Before carrying out erection/installation works of any item, proper care regarding leveling, alignment, access to working parts, facilities for removing the items for repair, statutory clearance, etc. shall be taken.

d. Foundation bolts, nuts, lock nuts, washers, etc. will normally be supplied by the equipment supplier. Any further requirement of these items shall be under the scope of contractor. The equipment shall be installed on the foundation bolts firmly such that there will not be any vibration during operations. For mounting of equipment/items on the walls/ columns /supports, suitable MS/GI brackets shall be fixed/ grouted.
e. Electrical connections shall be done with great care using spring washers, bimetallic strips, conducting grease, etc. wherever required, to ensure good contact without creating undue stresses. Copper bus bar joints shall be made after tinning the contact area. Supply of all required accessories or electrical connections shall be included in the contractor‟s scope. Discrepancies if any found between drawings/ statutory requirements and actual conditions at the site, shall be immediately brought to the attention of owner's representative. If any modification is found required in the writing or to suit site condition the same shall be carried out as per the instruction of the Engineer-In-Charge without any extra cost.
f. All equipments under erection shall be kept properly cleaned and free of dust, vermin, moisture, etc. After erection, it shall be ensure that non-foreign materials, tools or tackles are left in the equipment. All unused cable entries, cutouts, etc. shall be sealed properly. For hazardous area, blanking plugs suitable for the area classification applicable shall be used.
g. All tests shall be carried out in the presence of owner's representative and test shall be recorded on an approved proforma duly certified. The records of all tests shall be submitted to the purchaser's representatives. All interconnected wiring shall be checked thoroughly for correct connection with the wiring and schematic drawings of the manufacturer and the drawings supplied by owner before energizing.
h. All power and bus bar connection shall also be thoroughly inspected and checked for connections, foreign materials, tightness, etc. before energizing the equipment All components within the main equipment shall be tested for proper performance and correct operation before commissioning the equipment.
i. All labeling shall be checked for correctness. All nuts, bolts, clamps, joints, connections etc. shall be checked for tightness and tightened wherever required. All moving parts shall be checked for its correct movement and proper lubrication. Apply lubrication wherever required. All equipment containing liquid shall be checked for correct quantity filling and all gaskets, walls, etc, shall be checked for leak proof. Oil filling, if found required, shall be done with dry and clean oil. Gaskets shall be replaced if found required. It shall be ensured that all CT leads are loaded or shorted prior to testing and commissioning. Insulation tests shall be carried on all electrical devices, whether specifically mentioned or not, as per this work after properly cleaning these devices.
j. All the relays and its settings after commissioning shall be furnished to the owner detailing relay type number, panel number etc. In case of any component of an equipment supplied by the owner is found to faulty/unsuitable, the same shall be replaced by the new one issued by owner. For all relays before installation, the rating, range and auxiliary supply voltages for the relay should be checked against drawings/ schematic/ schedule.

21. PERFORMANCE GUARANTEE

All equipment supplied against this specification shall be guaranteed for a period of 30 months from the date of receipt at the consignees stores centers or 24 months from the date of commissioning, whichever is earlier. During the gurantee period the firms shall supply and replace all the items free cost.

22. APPROVED MAKES

The equipment / installation materials to be supplied shall be selected from among the makes list provided. In case any make other than the ones specified below are to be procured, the Client/Consultants prior approval shall be essential.

Item Description	Make
Vacuum circuit breaker	ABB/SIEMENS/SCHNIEDER
Vacuum contactors	ABB /SIEMENS/SCHNIEDER
CTs	Pragati / ECS / Gemeni / NPT
PTs	Pragati / ECS / Gemeni / NPT
Numerical relays	ABB / SIEMENS/SCHNIEDER
Auxiliary relays	ABB / SIEMENS/SCHNIEDER/GE/ALSTOM
Electro mechanical relays	ABB / SIEMENS/SCHNIEDER /GE/ALSTOM
Conventional Indicating meters	ABB / L&T / Teknic
Digital Indicating meters	Rishabh / AE / Secure
Multi Function meters	Rishabh / Elmeasure / Secure
TVM	Secure / L&T
MCBs	ABB / Schineder / Indokopp/ Legrand/Siemens
Breaker Control Switch	Switron / Kaycee
Local Remote selector switch	Switron / Kaycee
Rotary / Toggle switch	Switron / Kaycee / Salzer
Fuse	Cooper Bushman / Eaton
Fuse base	Cooper Bushman / Eaton
Push Buttons	ABB / L&T / Teknic
Auxiliary / Power contactors	ABB / Jyoti / Tyco / Paramount / Schineder / C&S
Surge arrestors	Oblum / Raychem
Annunciators	Alan / Proton
TB	Connectwell / Elmex
Transducer	Secure / Rishabh
Wire	Phynolex / Havels / RR Cables / Polycab / Finolex / APAR
3 Pin socket	Anchor / ABB / Legrand
HT Terminations	Raychem/ 3M
HT Joint Kit	Raychem/ 3M
GI Strip	IS make
G.I Pipe	IS make

NOTE: For any items/Makes which is not mentioned above, same has to be get prior approval from EIC before purchasing the item.

Signature of the Tenderer

SECTION VI

1. PREAMBLE TO BILL OF QUANTITIES

1 General Instructions

General

a) This Bill of Quantities must be read with the Drawings, Conditions of Contract and the Specifications, and the Contractor shall be deemed to have examined the Drawings, Specifications, General Conditions of Contract and to have acquainted himself with the detailed descriptions of the Works to be done, and the way in which they are to be carried out.
b) Notwithstanding that the work has been sectionalized every part of it shall be deemed to be supplementary to and complementary of every other part and shall be read with it or into it so far as it may practicable to do so.
c) The detailed descriptions of work and materials given in the Specifications are not necessarily be repeated in the Bill of Quantities.
d) The Contractor shall be deemed to have visited the Site before preparing his tender and to have examined for himself the conditions under which the work will proceed and all other matters affecting the carrying out of the works and cost thereof.
e) The Tenderer will be held to have familiarized himself with all local conditions, in so far as they affect the work, means of access and the locality of existing services, in order to execute the Works measured and described hereinafter. No claims for want of knowledge in this respect will be reimbursed.

2 Rates and Prices to be Inclusive

2.1 Rates and prices set against items are to be the all-inclusive value of the finished work shown on the Drawings and/or described in the Specification or which can reasonably be inferred there from and are to cover the cost of provision of plant, labour, supervision, materials, test charges, freight, transportation, erection, installation, performance of work, care of works, insurance, maintenance, overheads and profits and every incidental and contingent cost and charges whatsoever including all taxes and duties such as turnover tax, excluding GST, and every kind of temporary work executed or used in connection therewith (except those items in respect of which provision has been separately made in the Bills of Quantities) and all the Contractor's obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.

2.2 The Specifications are intended to cover the supply of material and the execution of all work necessary to complete the works. Should there be any details of construction or material which have not been referred to in the Specifications or in the Bill of Quantities and Drawings, but the necessity for which may reasonably be implied or inferred there from, or which are usual or essential to the completion of all works in all trades, the same shall be deemed to be included in the rates and prices entered in the Bill of Quantities. The rates and prices are to cover the item as described in the Bill of Quantities and if there is inconsistency in the description between the Bill of Quantities, Specifications or Drawings, the interpretation will be done according to General Conditions of Contract.

2.3 The quantities given in the Bill are approximate and are given to provide a common basis for tendering. They are not to be taken as a guarantee that the quantities scheduled will be carried out or required or that they will not be exceeded. The Employer / Engineer reserves the right to delete any item and / or

increase / reduce quantities indicated in the Bills of Quantities at any time. Payment will be made according to the actual quantities of work ordered and carried out in the contract. However, the rates quoted shall be valid for any extent of variation in quantity of each individual item provided that the total contract value does not get altered by more than indicated in conditions of contract. No claim whatsoever for extra payment due to variation of quantities within the above said limit would be entertained.

2.4 The rates and prices shall include (except where separate items are given) for the provision and operation of the following items, for compliance with the Condition of Contracts, Special Conditions, the specifications and Tender drawings:

a) Supervision and labour for the Works;
b) All materials, installation/erection, handling and transportation;
c) All Contractor's Equipment;
d) All testing, commissioning, insurance, maintenance, security, welfare facilities, overheads and profit and every incidental and contingent costs and charges whatsoever including;
e) All temporary fencing, watching, lighting, sanitary accommodation, general security arrangements, welfare facilities and first aid provision;
f) Provision and maintenance of Contractor's Site offices, cabins, huts, maintenance and storage areas;
g) All taxes and duties including General Tax, Turn-Over tax, Duties etc.
h) All necessary temporary services including fresh water, compressed air lines, electrical cabling and switchgear, telephone, walkie-talkie and facsimile facilities
i) The maintenance of all Contractor's services;
j) All insurances for the Works;
k) Allow for complying with all environmental aspects as specified;
l) For carrying out hot work of any kind contractor should consider safety of vessel in adjoining berth;
m) Detail design of components of temporary works, wherever necessary as directed by Engineer.

3 Method of Measurement

Standard Method: The work included in Bill of Quantities once completed will be presented to the Engineer's representative for checking quality and quantity of work. The Engineer's representative after satisfying himself issue a certificate to that effect. Unless stated or billed otherwise quantities shall be measured in accordance with Indian Standard Code No.1200 for civil work and shall be not as they are provided in the works. The rates and prices shall include whatsoever allowance is considered to be necessary for wastage, working spaces, construction slopes and batters.

The mode of measurement and payment described in the relevant technical specifications shall apply for the relevant items.

4 Currency

All monetary reference herein and the Bill of Quantities shall be priced in Indian Rupee Currency.

SECTION VI
2. BILL OF QUANTITIES

Sl. No.	Item Description	Unit	Qty.	Supply		Installation	
				Rate (Rs.)	Amount (Rs.)	Rate (Rs.)	Amount (Rs.)
1	Supply, Installation, Testing & Commissioning of 12 KV, 800 A VCB Panels SCADA Compatible with 1 no. Incomer & 5 nos. Out goings as per As per IEC 62271 with Draw Out VCB s 800 A each, Copper Busbars, CT/PT, Numerical Relay, Battery with Charger etc.. Control Voltage: 24 V, DC; Motor Voltage: 240 V, A.C; Incomer-1 no.: With Numeric Relay, Lockout Relay, Annunciation Panel, Test Terminal Block, Voltmeter, Ammeter, selector Switches, Hooters etc. Outgoing - 5 nos. with CT's, Numerical Relay, Lockout Relay, MFM, Test Terminal Block, Ammeter with Selector Switch etc.	Nos.	1	55,68,437.00	55,68,437.00	30,000.00	30,000.00
2	Removal of Existing Panel including shifting of panels to scrap yard and giving temporary connections of cables with necessary items as required so as to restore power till commissioning of New Panel.	Nos.	1	-	-	41,666.67	41,666.67
3	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.	Nos.	2	10,359.51	20,719.02	4,439.79	8,879.58

Signature of the Tenderer

4	Supply & Laying of GI strip of Size 3 MMX 25 MM and connecting earth points to MV Panels etc. using suitable Bolts & Nuts	Mtrs.	50	200.26	10,013.00	85.83	4,291.50
5	Supplying and making end termination with cable support and aluminium lugs for XLPE aluminium 3C x 300 Sq.mm 11 kV cables.	Nos.	6	13,336.37	80,018.22	5,715.59	34,293.54
6	Supplying and making Cable Joint using suitable Heat Shrinkable Cable Joint Kits for 11 KV XLPE aluminium conductor cable of 3C X 300 Sq.mm	Nos.	1	49,118.37	49,118.37	14,735.51	14,735.51
7	Modification of Foundation for the installation of Panels	L.S	1	7,000.00	7,000.00	3,000.00	3,000.00
	Total				57,35,305.61		1,36,866.80
	TOTAL SUPPLY AMOUNT						57,35,305.61
	TOTAL INSTALLATION AMOUNT						1,36,866.80
	GRAND TOTAL WITHOUT GST						**58,72,172.41**

Signature of the Tenderer

SECTION VII
CONTRACT DATA

[To be filled up before issuing tender document as applicable for each tender]

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

Sl. No.	Description	Reference Clause.No. in GCC
1	The following documents are also part of the Contract	
	The Schedule of other Contractors	
	The Schedule of Key personnel	
2	The Employer is	
	The Board of Major Port Authority for the Cochin Port, Cochin -9	
	Name of Authorized Representative:	
	Name: **Dr. M. Angamuthu, IAS** **The Chairperson, Cochin Port Authority,** **Cochin -9**	
3	The Engineer is	
	Name: **Sri. Manas Mandal** **Chief Mechanical Engineer** **Cochin Port Authority,** **Cochin-9**	
	Name of Nominee is**: Will be notified in LoA/ LoI**	
	Name: **Shri……..** **Cochin Port Authority** **Cochin-9**	
4	Name of Contract: Replacement of old 11kV Panels in New Power House Substation with new 11kV VCB Panels.	
5	4 **copies** of Contract Agreement shall be furnished by the Contractor	
6	Tender document and other data are available at : e-tender portal**www.tenderwizard.com/COPT**, in the CoPA website www.cochinport.gov.in as well as in the Central Public Procurement Portal of Govt. of India, www.eprocure.gov.in	
7	The Intended completion Date for the whole of the Work is **120days** from date of issue of LoA with the following milestones:	
8	Milestone dates: **Physical works to be completed** — **120 days from the date of Issue of LoA**	
9	The following shall form part of the Contract Document: a. Agreement	

Signature of the Tenderer

Sl. No.	Description	Reference Clause.No. in GCC
	b. Letter of Acceptance c. Bill of quantities d. Contractor's Bid e. 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). f. Contract Data g. Conditions of Contract h. General Description and Special Conditions of Contract i. Technical Specifications j. Drawings and k. Any other documents listed in the Contract Data as forming part of the Contract.	
10	The Contractor shall submit a Program for the Works	
11	**The site possession date:** The site will be handed over immediately after issue of LoA/LoI and the site is free from encumbrances. Such possession will not be exclusive to the contractor. Refusal of the contractor to take over the possession, shall entitle CoPA to terminate the contract without payment of any compensation.	
12	The start date shall be 7 days after issue of LoA.	
13	The site is located in Willingdon Island.	
14	The Defects Liability Period is **one year from the date of completion of the work and handing over the site to CoPA.**	
15	The minimum insurance cover for physical property, injury and death is **Rs.7 lakh (Rupees Seven Lakh)** per occurrence with the number of occurrences unlimited. After each occurrence, Contractor will pay additional premium necessary to make insurance valid always.	
16	The language of the Contract documents is **English.**	
17	The law, which applies to the Contract, is the law of Union of India.	
18	The currency of the Contract is **Indian Rupees.**	
19	The maximum amount of liquidated damages for the whole of the works is **10%** of the contract price.	

Annexure-1

LETTER OF SUBMISSION - COVERING LETTER

(ON THE LETTER HEAD OF THE BIDDER)

Date:

To

The Chief Mechanical Engineer,

Cochin Port Authority.

Sir,

Sub: Tender for ……..……..*[Insert Title]*

Being duly authorized to represent and act on behalf of …… (Hereinafter referred to as "the Bidder") and having reviewed and fully understood all of the requirements of the bid document and information provided, the undersigned hereby apply for the project referred above.

We are submitting hard copy of the following, with the details as per the requirements of the Bid Document, prior to the bid opening date, for your evaluation.

(i) Letter of Submission – Covering Letter

(ii) Cost of Tender Document in the form of DD / Pay Order / Banker's Cheque bearing No ---------- dated -------, for Rs……. issued by …….. Bank

(iii) Bid Security/EMD in the form of Account Payee DD / Banker's Cheque/Insurance Surety Bond bearing No ----------dated -------, for Rs……. issued by ……..Bank / in the form of BG as per ***Annexure-18***.

(iv) Power-of-Attorney (***Annexure -2***) *(If applicable)*

We have also uploaded the following documents for online submission of Technical Bid:

(i) Tender Document along with Addendum / Corrigendum No……/ Addenda/Corrigenda Nos. ……, and General Conditions of Contract with Amendments, in PDF format.

(ii) Scanned copy of financial instruments towards the Cost of Tender Document and Bid Security/EMD

(iii) Self attested copy of Exemption Certificate towards the Cost of Tender Document & Bid Security/EMD / Udyam Certificate *(If applicable)*

(iv) Organization Details (***Annexure -3***)

(v) Details to fulfill the "Minimum Eligibility Criteria" and Certificates (***Annexure -4a/4b***)

(vi) Self attested copies of work order &Completion Certificates of similar Works

(vii) Details of past experience of contractors for similar works executed in private organizations

Signature of the Tenderer

(***Annexure -5a***) certified by chartered accountant

(viii) Average Annual Financial Turnover over the last three financial years (***Annexure -5***)

(ix) Scanned copies of Financial Statements for the last three years

(x) Scanned copies of EPF and ESI registration, if applicable/ Undertaking regarding EPF and ESI Registration (***Annexure -6***)

(xi) Details of Pending Litigation of the Tenderer (***Annexure -7***)

(xii) Details of Litigation History of the Tenderer (***Annexure -8***)

(xiii) Details of Barred Cases of the Tenderer (***Annexure -9***)

(xiv) Detailed Method Statement (Technical Note) (***Annexure -10***)

(xv) List of Plant and Equipment (***Annexure -11***)

(xvi) Make In India (MII) declaration as per ***Annexure*** **-12**

(xvii) Declaration (***Annexure -13)***

(xviii) Banker's Details (***Annexure -14& 15)***

(xix) Scanned copy of Tender document, duly signed and sealed

(xx) Scanned copy of Partnership Deed or Memorandum and Articles of Association of the Company and Registration Certificate of the Company, as the case may be.

(xxi) Scanned copies of GST and PAN registrations.

(xxii) Land Border sharing Declaration (***Annexure -19)***

We also certify that further Tender related communication can be sent to the following e-mail IDs by CoPA:

(i) …….
(ii) ……....

(F*urnish two nos. current active email addresses*)

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 2

PROFORMA OF POWER- OF-ATTORNEY/LETTER OF AUTHORITY
(To be submitted on Non-judicial Stamp Paper of appropriate value)

To
The Chief Mechanical 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 ……*[Insert Title]*(Tender No…….)

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

Signature of the Tenderer

Annexure - 3

ORGANIZATION DETAILS

CONTRACT No.:

NAME OF APPLICANT:

1. Name of the Owner:
2. Address:

   Telephone No.:

   e-mail id:

3. Description of Applicant
   (for e.g. A or B grade electrical contractor etc.)

4. Registration and Classification
   of Contractors

5. Name and address of bankers

6. Number of years of experience
   as a contractor :-

   In own Country:

   Internationally:

7. Name and Address of partners or
   associated companies to be involved
   in the project and whether Parent/
   Subsidiary/other

Signature of the Tenderer

8. Name and address of any associates knowledgeable in the procedures of customs, immigration and local experience in various aspect of the project etc.

9. Name and address of the companies/ Sub-contractors who will be involved in the execution of works, namely:

10. Name and address of companies who will be involved in the supply of bought out items

    a) Insert item …… :

    b) Insert item…… :

12. Attach organization chart showing the structure of the company including names of Directors/ Key Personnel at Head Office who would be responsible for the project and a separate chart showing proposed Site Construction Organisation.

.

Signature

(Authorised Signatory)

Tenderer shall furnish Details of "eligibility works experience" as per Minimum Qualification Criteria (MQC) and certificates in the following format (CoPA Certificates/work completion certificates or any other documentary evidences with respect to the eligibility work)

ELIGIBLE ASSIGNMENT DETAILS FOR MQC

Assignment Number:

Description	Bidder to fill up the details here
Name and Address of the firm	
Title of the Eligible Assignment	
Date of completion of the Eligible Assignment	
Project Completion Cost	
Reference No. of the enclosed firm Completion Certificate/ Documentary Evidence for having successfully completed the Eligible assignment	
Name, telephone no, telefax no and email address of the firm's representative	
Description and Scope of Work	

Instructions:

i) Bidders are expected to provide information in respect of Eligible Assignments in this Section. The assignments cited must comply with the Minimum eligibility criteria specified in Clause No.3 of NIT and Clause No.12 of the Instructions to Tenderers".
ii) A separate sheet should be filled for each of the eligible assignments.
iii) The details are to be supplemented by documentary proof from the respective form /owner for having carried out such assignment duly certified by firms/ owner.
iv) **The works indicated in this Annexure- 4a&4b will be only being considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments.**
v) Original or self-certified copy of completion certificates of each work issued by the owner/ the responsible officers of the owner under whom he has executed such contracts shall be attached. The certificate shall invariably contain the following among other things.
    a) Details of work involved specifying the nature of work
    b) The completion cost of the work and
    c) Date of commencement; and
    d) Date of completion of the work.

Signature of the Tenderer

vi) If the experience in similar works is as a subcontractor, self-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 shall be attached.

vii) If the experience in similar work is in works executed in Govt. organisations/ private sectors, the Annexure-5a along with self attested copy(s) work order and completion certificate.

viii) The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.

Signature

(Authorised Signatory)

Annexure – 4b

DETAILS OF PAST EXPERIENCE OF CONTRACTORS FOR SIMILAR WORKS

Sl. No.	Name & Location of Project	Owner's Complete address including TeleFax No. with contact Person	Value of Contract	Duration of Contract			Details of work including major items of work involved	Reference No. & Date of letter of intent & completion certificate enclosed
				Commen -cement date	Scheduled completion date	Actual completio n date		
1	2	3	4	5	6	7	8	9

Note: Bidder to enclose self certified copy of Completion Certificate issued by the client.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 5

FINANCIAL CAPABLITY

Average Annual Turnover of the Bidder

Turnover (Rs.)			
Year 1	**Year 2**	**Year 3**	**Average (3 years)**
2022-23	**2023-24**	**2024-25**	

Certified by Chartered Accountant

Signature

(Authorized Signatory)

Instructions:

(i). The Bidder shall provide audited Annual Reports / Financial statements such as balance sheets and profit & loss account statements Certified by Chartered Accountant as required under this Bid Document.

(ii). Annual turnover of the bidder shall be submitted duly verified by Charted Accountant

Signature of the Tenderer

Annexure – 5a

DETAILS OF PAST EXPERIENCE OF CONTRACTORS FOR SIMILAR WORKS EXECUTED IN GOVT./ PRIVATE ORGANISATIONS

Sl. No	Name & Location of Project	Owner's Complete address including Tele Fax No. with contact Person	Value of contract	Details of work including major items of work involved	Details of payment made
1	2	3	4	5	6

Note: Bidder to enclose completion certificate issued by owner, self certified

Signature
Certified by Chartered Accountant
(with UDIN (Unique Document Identification Number)
while certification with QR code if available.)

Signature

(Authorized Signatory)

Annexure - 6

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 the above and indemnify CoPA officials for any actions taken in this regard.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure – 7

DETAILS OF PENDING LITIGATION OF THE TENDERER

Details of Pending Litigation upto …….. [Insert Date and Year - last day of the month previous to the one in which Tenders are invited]are as follows:

No	Date, month & Year of Dispute	Amount in Dispute	Contract Identification	Total Contract Amount
			Contract Identification : [indicate complete contract name, number, date and any other identification] Name & Address of Employer: [insert full Name & Address] Matter in dispute: [indicate main issues in dispute] Party who initiated the dispute: [indicate "Employer" or "Contractor"] Status of dispute: [Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 8

DETAILS OF LITIGATION HISTORY OF THE TENDERER

Details of Litigation History till ……..*[Insert Date and Year - last day of the month previous to the one in which Tenders are invited]*are as follows:

Sl.N	Date, month & Year of Award	Amount in Award	Contract Identification	Total Contract Amount
			Contract Identification : [Indicate complete contract name, number, date and any other identification] Name & Address of Employer: [Insert full Name & Address] Matter in dispute: [Indicate main issues in dispute] Party who initiated the dispute: [Indicate "Employer" or "Contractor"] Status of dispute: [Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 9

DETAILS OF BARRED CASES OF THE TENDERER

Details of all barred cases by the Central/State Government, or any entity controlled by it, from participating in any Project till ……..*[Insert Date and Year - last day of the month previous to the one in which Tenders are invited]* are as follows:

Sl.No	Date, month & Year of Contract	Amount of Contract	Contract Identification	Remarks
			Contract Identification : [Indicate complete contract name, number, date and any other identification] Name & Address of Employer: [Insert full Name & Address] Matter in dispute: [Indicate main issues in dispute] Period of barring: [Indicate the date from which the Contractor is barred and the period for which he is barred]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 10

DETAILS OF PROPOSED APPROACH & METHODOLOGY

Bidder shall furnish a detailed method statement (Technical Note) for carrying out of the works, along with an implementation programme [Preferably in MS project / Primavera] showing sequence of operation and the time frame for various segments of temporary and permanent works.

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 11

PLANT AND EQUIPMENT PROPOSED FOR THE WORK

Please indicate the main plant and equipment considered to be necessary and proposed to be deployed for undertaking this Work and whether this plant is ready in ownership or will be purchased or hired.

Description of equipment	Requirement No. / Capacity	Owned / leased / to be procured	Nos / Capacity	Age / Condition	Remarks (From whom to be purchased)	At what Stage of contract period the Equipment will be available

Note:

The equipment indicated in the above statement will form part of Contract Agreement and as such, the Tenderers are requested to indicate the availability of the equipment at site and at what stage of the construction period, in a separate column

SIGNATURE OF TENDERER

Signature of the Tenderer

Annexure - 12

Format for Self-Certification under Preference to "MAKE IN INDIA" Policy

CERTIFICATE

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt.15.06.2017 and No.:P-45021/2/2017-PP(BE-II) dt.04.06.2020 *as amended from time to time along with clarifications/ amendments and other references as issued from time to time,* where by certify that we

M/s_____ (supplier name)

are supplier meeting the requirement of **Minimum Local content** as per below declaration.

(**Class-I Supplier (50%) or Class-II Supplier (20%) or Non-Local Supplier (Less than 20%)**)

as defined in above orders/ circulars/ clarifications/ amendments for the material against Tender No

_____

Details of Location (Complete Address) at which local value addition will be made is as follows:

We have also read the clarification issued vide Circular No.: P-45021/102/2019-BE-II-Part(1) (E-50310), Dtd.: 04.03.2021 and any other subsequent circular/ amendment/ order as issued by competent authority.

Total Value of local content addition/ manufacturing for offered material/ item(s)/ service is as per below declaration.

Accordingly, we declare to be: (Tick One)

a. **Class-I Supplier (50% or more local content)** ☐

b. **Class-II Supplier (20% to 50% local content)** ☐

c. **Non-Local Supplier (less than 20% local content)** ☐

We also understand, false declaration swill be in breach of the Code of Integrity under Rule 175(1) (i) (h) of the General Financial Rule for which a bidder or its successors can be debarred for up two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Note:-"Make in India" certificate must be in the letter head of OEM/ Manufacturers.

Seal and Signature of Authorized Signatory

Signature of the Tenderer

Annexure - 13

DECLARATION

We M/s (Name & address of the bidder) hereby declare that:-

1. No conditions are incorporated in the financial bid. In case any conditions are specified in the financial bid, the tender will be rejected summarily without making any further reference to the bidder.

2. We have not made any payment or illegal gratification to any persons/ authority connected with the bid process so as to influence the bid process and have not committed any offence under PC Act in connection with the bid.

3. We disclose with that we have ***** made / not made payments or propose to be made to any intermediaries (agents) etc in connection with the bid.

4. We do hereby confirm that no changes have been made in the tender document downloaded and submitted by us for the above bid. Port Tender document will be treated as authentic tender and if any discrepancy is noticed at any stage between the Port's tender document and the one submitted by the tenderer, the Port's document shall prevail.

Signature

(Authorized Signatory)

*** Note: Delete whichever is not applicable.**

Signature of the Tenderer

Annexure -14

DETAILS OF THE PARTY OPTING FOR
REFUND OF EMD THROUGH E-PAYMENT SYSTEM

Name of the Party :

Bank A/c No :

Account type : (Savings / Current / Overdraft)

Bank Name :

Branch :

IFSC Code Number : (11 digit code)

Centre (Location) :

FAX No. :

E-Mail ID : (For forwarding information of remittance)

Mobile No :

Signature of the Party

Signature of the Tenderer

Annexure - 15

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

(Authorised Signatory)

Signature of the Tenderer

Annexure -16

FORM OF AGREEMENT
TO BE EXECUTED ON KERALA STAMP PAPER (Rs.200/-)

AGREEMENT NO. ……. OF 2026

Sub: "……"

THIS agreement is made at Cochin on ……. day of ……. Two thousand and Twenty Six (….. - ...……-2026) between THE BOARD OF MAJOR PORT AUTHORITY FOR COCHIN PORT commonly known as COCHIN PORT AUTHORITY, a Body Corporate under the Major Port Authorities Act, 2021, with its Administrative Office at Willingdon Island, Cochin-682009, having PAN Card No. AAALC1134F, represented by its Chief Mechanical Engineer, …….. (hereinafter referred to as "The Employer" which expression shall include their successors, assignees and administrators in the office) of the one part AND M/s. ……. represented by Sri/Smt.. ---------- aged ----------years, son/daughter of Sri. ---------- residing at ---------- (House name and No.) ---------- District ---------- State ---------- (hereinafter referred to as "The Contractor" which expression shall include their successors, assignees and administrators) of the other part.

WHEREAS the "Employer" had called for the tenders for "……..." vide Tender Notice No. ……. Dt: ……. and the contractor had submitted a tender for the same giving the rates subject to the terms and conditions etc.

AND WHEREAS the said tender of the contractor has been accepted by the employer and a letter of acceptance No…… Dt: …… has been issued to the contractor accepting their tender subject to the "General Conditions of Contract", "Instructions to the Tenderers" and such other contract documents. And as per one of the terms of the above work order, an agreement has to be executed between the contractor and the employer.

NOW THESE PRESENT WITNESSES AS FOLLOWS:

1. The contractor hereby agrees to execute the work "……" as described in the schedule, its annexure etc. at the rates shown there under subject to the "General Conditions of Contract", 'Scope of work' and 'Technical Specifications' and all hereunto annexed within …….. from the date of issue of Letter of Acceptance or in default to forfeit and pay to the employer the sum of money mentioned in the said conditions.

   The contractor has furnished a Bank Guarantee for **Rs……** (Rupees ……..only)vide Bank Guarantee No. ---------- Dated---------- from ----------, in lieu of Security Deposit for the due and proper fulfillment of the contract. The contractor further agrees that the aforesaid Bank Guarantee will be kept valid until one month beyond the expiry of the Guarantee Period. The contractor also agrees that the Bank furnished in lieu of Security Deposit

for the due and proper fulfillment of the contract will be suitably enhanced so as to cover 10% cost of any additional items/works that may be required for the proper completion of the contract or otherwise the employer can deduct such additional amounts towards Security Deposit from the Contractor's bills.

2. The following documents shall be deemed to form and be read and construed as part of this agreement viz:
   a) Cochin Port Authority's Bid No. …….. Dt: …….
   b) Offer from M/s. ……No:….. dated……...
   c) Cochin Port Authority's LoA No……..Dt:……
   d) This office e-mail letter dated ……. and your reply through e-mail received on ……..

3. The Conditions given in the LoA dated **……** shall over-ride the general conditions given in the tender document, wherever they differ. Any of the counter terms and conditions of the contractor shall not be taken as terms and conditions of this contract/ agreement unless the CoPA in writing specifically agree to it.

IN WITNESS WHEREOF THE CONTRACTOR hereunto set his hand and seal on behalf of M/s…….And on behalf of the Board of Major Port Authority for Cochin Port, the Chief Mechanical Engineer has set his hand and seal and common seal of CoPA as has been hereunto affixed the day and year first written above.

Signed, sealed and delivered
by Shri. ----------
of M/s ---------- **CONTRACTOR**

(COMMON SEAL OF THE FIRM)

Signed and affixed seal in the presence of:

1) Signature with address:

2) Signature with address:

Signed, sealed and delivered by
The Chief Mechanical Engineer,
Cochin Port Authority on behalf of EMPLOYER
Board of Major Port Authority
For Cochin Port.

Signed and affixed the common
seal of Board of Major Port Authority
For Cochin Port in the presence of

1)

2)

PROFORMA OF BANK GUARANTEE FOR SECURITY DEPOSIT
(TO BE EXECUTED ON STAMP PAPER WORTH RS.200/-)

GUARANTEE BOND NO.

In consideration of the THE BOARD OF MAJOR PORT AUTHORITY FOR COCHIN PORT commonly known as COCHIN PORT AUTHORITY (hereafter called the "Port Authority" which expression shall include their successors and assignees) having accepted the tender No. …… dated ……. submitted by M/s……..(hereinafter called "the said tender") for name of work"……" as per the Chief Mechanical Engineer, Cochin Port Authority's order No…… dated ……..and having agreed to exempt M/s…… (hereinafter called as the "Contractor (s)" which expression shall include their successors and assignees) from the demand under the terms and conditions of the said tender and the agreement to be executed between the Port Authority and the said contractor and which shall include any amendments, alterations or additions made with the mutual consent between the parties (hereinafter called " the said agreement") of Security Deposit for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said tender and Agreement, on production of a Bank Guarantee for **Rs……..** (Rupees ……..).

1. We,……. (Name & address of Bank) (hereinafter referred to as "the Bank") do hereby undertake to pay to the Port Authority an amount not exceeding **Rs…….** (Rupees ……..only) against any loss or damage caused to or suffered by the or would be caused to or suffered by the port Authority by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the agreement.

2. We, …… Bank Ltd., do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Port Authority stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). 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 an amount not exceeding **Rs……..**(Rupees…….).

3. We,……. Bank Ltd., undertake to pay to the Port Authority any money so demanded not withstanding 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 …….. Bank ltd., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance

Signature of the Tenderer

of the said agreement and that it shall continue to be enforceable till all the dues of the Port Authority under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer – in – charge on behalf of the Port Authority certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We,…… Bank Ltd., further agree with the Port Authority that the Port Authority 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 Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Port Authority against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor (s) or for any forbearance act or omission on the part of the Port Authority or any indulgence by the Port Authority to the said contractor(s) 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. We, ……. Bank Ltd., lastly undertake not to revoke this guarantee except with the previous consent of the Port Authority in writing.

This guarantee shall be valid up to ---------- unless extended on demand by Port Authority. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to **Rs……..**(Rupees ……. only).and unless in claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Dated the ……day of …… …… … …… ……..

for …….. Bank Ltd

Signature of the Tenderer

PROFORMA OF IRREVOCABLE BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

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

B.G. No.……..dated……

This Deed of Guarantee executed at ……by ……. (Name of Bank) having its Head/Registered office at …….. (hereinafter referred to as " the Guarantor") which expression shall unless it be repugnant to the subject or context thereof include its executors, administrators, successors and assigns;

In favour of

The Board of Trustees of Cochin Port Authority (hereinafter called "the EMPLOYER"), having its office at Willingdon Island, Cochin – 682 009, which expression shall unless it be repugnant to the subject or context thereof include its executors, administrators, successors and assigns;

Whereas Sri…… / M/s. ……..…….. (Name of Tenderer) …….. (Composition and legal status of the Tenderer) (hereinafter called "the Tenderer"), which expression shall unless it be repugnant to the subject or context thereof include its executors administrators, successors and assigns, has Bid for the Work of "……" *[Insert Title],* ***AND TENDER No****……[Insert Tender No.]*(hereinafter referred to as "the Work").

Whereas in terms of the Tender Notice dated …….. (hereinafter referred to as "Tender Document") the Tenderer is required to furnish to the Port Authority an unconditional and irrevocable Bank Guarantee for an amount of Rs. …… (Rupees …… only) as Earnest Money Deposit (EMD) and the Guarantor has at the request of the Tenderer agreed to provide such Guarantee being these presents:

Now this deed witnesseth that in consideration of the premises, We, …… Bank hereby declare, undertake and agree as follows:

We as primary obligor shall, without demur, pay to the Port Authority an amount not exceeding Rs. ……. (Rupees ……..…….. only), within 5 days of receipt of a written demand from the Port Authority stating that the EMD has been forfeited in terms of Clause 15.2 of the Instruction of Tenderers of Tender Document. Any such demand made on us by the Port Authority shall be conclusive and absolute as regards the forfeiture of the EMD and the amount due and payable under this Guarantee.

The above payment shall be made by us without any reference to the Tenderer or any other person and irrespective of whether the claim of the Port Authority is disputed by the Tenderer or not.

This Guarantee shall remain in full force for a period of ….. days (45 days beyond the final bid validity period) from (date)*……. or for such extended period as may be mutually agreed between the Port Authority and the Tenderer and shall continue to be enforceable till all amounts which are demanded by the Port Authority under this Guarantee are paid.

Signature of the Tenderer

In order to give full effect to this Guarantee, the EMPLOYER shall be entitled to treat the Guarantor as the principal debtor and the obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Tender Document or other documents or by extension of time of performance of any obligations by the Tenderer or any postponement for any time of the powers exercisable by the EMPLOYER against the Tenderer or forebear or enforce any of the terms and conditions relating to non-compliance of the Tender Document by the Tenderer and we shall not be relieved from our obligations by reason of any variation or extension being granted to the Tenderer or forbearance or omission on the part of the EMPLOYER or any indulgence by the EMPLOYER to the Tenderer to give such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This Guarantee shall be irrevocable and shall remain in full force and effect until all our obligations under this Guarantee are duly discharged.

The Guarantor has power to issue this Guarantee and the undersigned is duly authorised to execute this Guarantee pursuant to the power granted under …….

In Witness whereof the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.

Signed and Delivered by ……..

Bank by the hand of Shri…….

its…….and authorised official

*Fill in the scheduled date of submission of Tender.

Signature of the Tenderer

Annexure – 19

LAND BORDER SHARING DECLARATION

(To be submitted in the bidder's letter head)

In-line with Department of Expenditure's (DoE) Public Procurement Division Order vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020

Tender no . …….

Job: ……..

I/ we have read the clauses pertaining to Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1, 2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We hereby certify that I / we the bidder ....is / are:

(select (a) or (b) below)

a) Not from such a country and eligible to be considered for this tender.

OR

b) From such country, has been registered with the competent authority and eligible to be considered for this tender. (Evidence of valid registration by the competent authority shall be attached)

For and behalf of _____ (Name of the bidder)

(Signature, date & seal of authorized representative of the bidder)

Signature of the Tenderer