



COCHIN PORT AUTHORITY

Tele:91-0484 -2666639/0484-258-2300

Telefax:91-0484-2666639

E-mail: cme@cochinport.gov.in

Website: www.cochinport.gov.in

TENDER DOCUMENT FOR

**“Providing Electrical facilities like lighting, wiring and fans
etc., at Ex- Forbes Building and MT Shed for GoI at
Willingdon Island”**

(TECHNICAL BID)

(e-Tendering Mode)

Website: www.gem.gov.in

TENDER NO.

Dt:03/10/2022

**OFFICE OF THE
CHIEF MECHANICAL ENGINEER
I FLOOR, NEW ADMINISTRATIVE BUILDING,
COCHIN PORT AUTHORITY,
WILLINGDON ISLAND,
COCHIN-682 009**

COCHIN PORT AUTHORITY

Providing Electrical facilities like lighting, wiring and fans etc., at Ex-Forbes Building and MT Shed for GoI at Willingdon Island

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COCHIN PORT AUTHORITY

Providing Electrical facilities like lighting, wiring and fans etc., at Ex-Forbes Building and MT Shed for GoI at Willingdon Island

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COCHIN PORT AUTHORITY

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COCHIN PORT AUTHORITY
SECTION I

Chief Mechanical Engineer's Office
Cochin Port Authority, Willingdon Island,
Cochin – 682009, KERALA
Tele: 91-0484-2666639/
0484-258-2300/2351/2305
e-mail id: cme@cochinport.gov.in
website: www.cochinport.gov.in

Tender No.

Dt:03/10/2022

I. NOTICE INVITING TENDER

1. Tenders are invited through Government e- Marketing Place (GeM portal) 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 reputed firms meeting the Minimum Qualification Criteria specified below for “**Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island**”. Tenderers, who fulfill the Minimum Qualification Criteria and Terms and Conditions given below, may register their tenders through GeM well in advance on or before the scheduled date of submission.
2. **MINIMUM QUALIFICATION CRITERIA (MQC)**

Tenderer must fulfill the following minimum qualifying criteria to prove the techno-commercial competence and submit the documents in support thereof:

i. **Experience**

The Bidder should have executed **Electrical works in Buildings/ Malls/ Offices of Govt. Organizations/ Private/ Commercial establishments etc.** of value as detailed below, to their clients during the last 7 (seven) years ending on **30/09/2022**;

- (a) One contract work costing not less than **Rs. 14,60,400/-**

OR

- (b) Two contract works, each costing not less than **Rs.9,12,750/-**

OR

- (c) Three contract works, each costing not less than **Rs.7,30,200/-**

This may be furnished in the Proforma in ‘Annexure-4’ of the tender document. Also submit copy of Purchase Order/ Work order and Completion Certificate issued by the Client for those previous experiences mentioned in ‘Annexure-4’. The previous experience carried out by the tenderer as subcontract to the main contractor will also be accepted.

ii. **Financial Turnover**

Average annual financial turnover should be at least **Rs.5,47,650/-** during the last three (3) years, ending 31st March 2022 [2019-'20, 2020-21, 2021-22]. This may be furnished in the Proforma in ‘Annexure-5’ of the tender document.

iii. **License**

The bidder should possess valid ‘**B Class or above**’ Electrical Contract License issued by any State/ Central Licensing Authority. Copy of the valid License shall be furnished.

Explanatory Notes:

Note 1: 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.

Table 1.1

Year before	Multiplying factor
One year [2021]	1.07
Two years [2020]	1.14
Three years [2019]	1.21
Four years [2018]	1.28
Five years [2017]	1.35
Six years [2016]	1.42

Note 2: **Experience certificates of works executed in private sectors/ organizations shall be considered for qualification, only on submission of TDS certificate along with work order and completion certificate.**

Note 3: **Performance/ completion certificate from the client shall be submitted in support of the assignments/ works performed and claimed by the tenderer to fulfill the eligibility criteria for qualification. The completion certificate/ performance certificate shall contain the work order no, work order value, completed cost of work and completion date and signature of issuing authority.**

Note 4: **A statement showing the Average Annual Financial Turnover during the last three financial years and financial statements (balance sheet/ profit & Loss Statements) for the last three years ending 31/03/2022, duly certified by the Chartered Accountant shall be submitted.**

3. Eventhough the tenderers meet the above qualifying criteria, they will be disqualified if they have:

- (i) Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/ or
- (ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

4. Pertinent information to the tender is given in the following tables:

- (i) Schedule of different activities till submission of the tender are detailed as under:

Table 1.2

Sl. No.	Particulars	Date and Time
1.	Tender e-publication date	03/10/2022
2.	Download period of tender documents	17.00 hrs. on 03/10/2022 to 14.00hrs. on 26/10/2022
3.	Last date and time of submission of bid	26/10/2022 at 15.00 hrs.
4.	Date and time of opening the techno-commercial bid	26/10/2022 at 15.30hrs.

(ii) Bid information:

Table 1.3

i)	Estimated Amount put to tender	Rs. 18,25,492/- including GST @18% (Rupees Eighteen lakh twenty five thousand four hundred and Ninety two only)
ii)	Earnest Money Deposit. (Exemption shall be given as per Clause 9 below)	Rs.18,300/- (Rupees Eighteen thousand three hundred only) EMD shall be furnished in the form of Account Payee Demand Draft/ Banker's Cheque/ Fixed Deposit Receipt /Bank Guarantee from a Commercial Bank 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)
iii)	Cost of Tender document / Processing Fee	Not Applicable
iv)	Validity period of tender	60 days from the last date for receipt of tenders
v)	Period of Contract	75days from the date of LOA

5. The **scope of work** includes providing Electrical facilities like MV panel, DBs, office wiring, lighting, electrical fixtures etc ., as per the Bill of Quantities (BoQ) attached.

The bidder shall visit the site, ascertain the site conditions and scope before bidding.

6. Tender documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. are available in the GeM portal(<https://gem.gov.in/>), 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) . Interested bidders have to necessarily register themselves in the GeM portal to participate in the tender and shall download the tender documents from these portals as per the provisions available therein on the dates specified in the above table.

7. A Single Stage Two Cover Bidding Procedure with Earnest Money Deposit (EMD) will be adopted and will proceed as detailed in the tender documents.

8. Bank details of Cochin Port Authority are as follows for online payment of EMD: State Bank of India, Cochin Port Trust Branch, IFSC Code: SBIN0006367, Account No. 10601197375.

9. Exemption from the payment of EMD and Cost of Tender document 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 as provided in GFR 2017.

10. Bidders should submit their bid proposal online, complete in all aspects including EMD or MSME / UAM registration certificate, in the Portal of GeM (<https://gem.gov.in/>) on or before last date and time of Bid Submission as mentioned in the tender strictly in accordance with the instructions to bidders (ITB), terms and conditions of the tender document.

11. Any amendment(s)/ corrigendum(s)/ clarification(s) with respect to this tender shall be uploaded on the above mentioned websites only and no intimation will be sent to the individual bidders. The Bidder should regularly check for any Amendment(s)/ Corrigendum(s)/ Clarification(s) on the above mentioned websites.

12. The bidders shall agree to all the terms and conditions of the tender document.
13. On the due date of bid opening, the Techno-Commercial bids will be opened online in the GeM Portal. Bid proposals received without the prescribed Earnest Money Deposit (EMD) or Documents for exemption of EMD will be considered as non-responsive. **In the event of any date indicated is a declared Holiday, the tender will be opened on the next working day.**
14. For proper uploading of the bids on the portal namely <https://gem.gov.in/> (referred to as the 'portal'), it shall be the sole responsibility of the bidders to appraise themselves adequately regarding all the relevant procedures and provisions as detailed in the portal as well as by contacting GeM, through e-mail to: helpdesk-gem@gov.in or call on Toll Free Numbers (Inbound): 1-1800-419-3436/ 1-1800-102-3436 (9:00am-6:00pm Mon to Sat) Help Desk Out bound No's: +911244875125 & +917556685120, as and when required.
15. Cochin Port Authority will not be held responsible for any technical snag or network 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 GeM Portal. Under any circumstances, Cochin Port Authority shall not be liable to the bidders for any direct/indirect loss or damages incurred by them, arising out of incorrect use of the GeM Portal or internet connectivity failures.
16. 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.
17. The undersigned reserves the right to reject/cancel/postpone/annul the tenders at any stage of the tender, which will be binding on all bidders
18. This tender notice shall form part of the tender document and are to be signed and uploaded along with the technical bid.

**CHIEF MECHANICAL ENGINEER
COCHIN PORT AUTHORITY**

COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island
SECTION -I

2. INSTRUCTIONS TO TENDERERS

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COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island

SECTION I

2. INSTRUCTIONS TO TENDERERS

Introduction

1.1 The proposal is for Rewiring and providing new electrical fixtures in the Ex Forbes building for using as office space and MT Shed (Ex A-Tosh building). The **scope of work** includes providing Electrical facilities like wiring, lighting, electrical fixtures etc., as per the Bill of Quantities (BoQ) attached.

1.2 Scope of work:-

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

- (a) SITC of M V panel 200 A
- (b) Supply, Installation Testing and Commissioning (SITC) of 415 Volts, 63/40Amps. Distribution Board.
- (c) Supply and laying of Al, Armoured UG Cable 3.5CX95 Sqmm and LT Al UG cable of 3.5Cx25sqmm
- (d) Supply and laying of LT Copper UG, 3C X 1.5sqmm cable by clamping along the wall, above false ceiling, ground etc.
- (e) Electrical supply wiring with various sizes of FRLSH copper wires, concealed Conduit / Capping & casing etc, for various applications such as Computer points, power points etc. and 12 SWG bare Cu conductor for earthing
- (f) SITC of ceiling fans, with suitable rods, modification etc., wall mounting fans and exhaust fans
- (g) SITC of LED light fittings, LED tube light fittings, bulk head etc.
- (h) SITC of 12 way, 40 A, SPN, double door, MCB DB
- (i) SITC of 160A, FP MCCB, 50KA with enclosure and connecting to the existing MV panel at OLA substation for tapping supply to the Ex-Forbes building.
- (j) Providing Pipe earthing with GI pipe B class
- (k) SITC of outdoor 70W LED street light IP 65 fittings
- (l) SITC of Poly carbonate meter box with, 125A 4P isolator and 3phase TOD Smart energy meter with CT
- (m) Dismantling the old wiring materials, switch boards, switches and fans etc. and handing over to CoPT.
- (n) Make good the wall/ ceiling surface etc. after doing the wiring work etc..

The bidder shall visit the site, ascertain the site conditions and scope before bidding.

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 and drawings 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, drawings etc. supplied herewith. 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 Trust 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 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.
- 2.4 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 finalisation 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.
- 2.5 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.
- 2.6 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).
- 2.7 Telex/E-mail offers will not be considered. Bidders should prepare their bid themselves. Bids submitted by agents will not be recognized.
- 2.8 Bids received after the due date and time and any change in bid after the specified date will be rejected. EMPLOYER will not be responsible for the loss of the bid document or for the delay in postal transit.
- 2.9 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.
- 2.10 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.
- 2.11 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.
- 2.12 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.
- 2.13 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
- 2.14 All the Bank Guarantees (BGs) to be furnished by the contractors in connection with the tender shall be 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 Trust by the issuing bank.

2.15 The contractor shall comply with all the provisions of the Indian Workmen'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.

2.16 The contractor shall be registered under EPF and ESI Act and the employees employed under them shall be covered in the EPF and ESI scheme. Work Order shall be issued only to the contractors who are registered under EPF organisation 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.

2.17 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 eligibility criteria.

4 Purchase of Tender Documents:

Tender documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. are available in the GeM portal (<https://gem.gov.in/>), 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). Interested bidders have to necessarily register themselves in the GeM portal to participate in the tender and shall download the tender documents for submission from these portals as per the provisions available therein on the dates specified in the Tender documents. Demand Draft/Banker's cheque towards EMD, drawn in favour of the Financial Adviser & Chief Accounts Officer (FA & CAO), CoPT from any Scheduled / Nationalised Bank having its branch at Cochin shall be submitted at the time of submission of bids and scanned copy of the same shall be attached with the e-tender.

5 One Bid per Bidder:

Each bidder shall submit only one bid. A bidder who submits or participates in more than one Bid will cause all the proposals with the Bidder's participation to be disqualified.

6 The Bidder

The Bidder shall be a single entity / Consortium.

7 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.

8 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.

9 Clarification of the Bidding Documents:

9.1 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 at week before the date fixed for the bid opening. It is to be noted that no queries, clarifications will be answered after the pre-bid conference.

THE CHIEF MECHANICAL ENGINEER,
CHIEF MECHANICAL ENGINEER'S OFFICE,
FIRST FLOOR, NEW ADMINISTRATIVE BUILDING,
COCHIN PORT AUTHORITY, WILLINGDON ISLAND,
KOCHI-9,KERALA, INDIA.

Ph:- 91-0484-2666639/2582300.

Fax:-91-0484-2666639.

Email: cme@cochinport.gov.in

9.2 Pre-Bid Meeting:

A prospective tenderer requiring any clarification of the tender shall submit their queries in writing/e-mail in advance before the pre-bid meeting, to be held on 13/10/2022. The Pre-Bid meeting will be held through Video Conference and the link will be shared to the bidders on their request. The bidders who wish to attend the Pre-bid Meeting may send clarifications well in advance by email to the Chief Mechanical Engineer so as to share the link for attending the meeting through Video Conference.

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 only be hosted in the e-tender portal as well as in the website of the Cochin Port. It is the responsibility of the Bidders to download such addendum/ corrigendum hosted in the website and submit the same duly signed along with the Bid. In order to afford the Bidders with reasonable time to take addendum into account, or for any other reason, the Port Trust may, at its discretion, extend the due date for submission of 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 12.1 Minimum Qualifying Criteria: (MQC)

Tenderer must fulfill the following minimum qualifying criteria to prove the techno-commercial competence and submit the documents in support thereof:

i. Experience

The Bidder should have executed **Electrical works in Buildings/ Malls/ Offices of Govt. Organizations/ Private/ Commercial establishments etc.** of value as detailed below, to their clients during the last 7 (seven) years ending on **30/09/2022**;

(a) One contract work costing not less than **Rs. 14,60,400/-**

OR

(b) Two contract works, each costing not less than **Rs.9,12,750/-**

OR

(c) Three contract works, each costing not less than **Rs.7,30,200/-**

This may be furnished in the Proforma in 'Annexure-4' of the tender document. Also submit copy of Purchase Order/ Work order and Completion Certificate issued by the Client for those previous experiences mentioned in 'Annexure-4'. The previous experience carried out by the tenderer as subcontract to the main contractor will also be accepted.

(d) Financial Turnover

Average annual financial turnover should be at least **Rs.5,47,650/-** during the last three (3) years, ending 31st March 2022 [2019-'20, 2020-21, 2021-22]. This may be furnished in the Proforma in 'Annexure-5' of the tender document.

(e) **License**

The bidder should possess valid ‘**B Class or above**’ Electrical Contract License issued by any State/ Central Licensing Authority. Copy of the valid License shall be furnished.

Explanatory Notes:

Note 1: 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.

Table 1.1

Year before	Multiplying factor
One year [2021]	1.07
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Note 2: **Experience certificates of works executed in private sectors/ organizations shall be considered for qualification, only on submission of TDS certificate along with work order and completion certificate.**

Note 3: **Performance/ completion certificate from the client shall be submitted in support of the assignments/ works performed and claimed by the tenderer to fulfill the eligibility criteria for qualification. The completion certificate/ performance certificate shall contain the work order no, work order value, completed cost of work and completion date and signature of issuing authority.**

Note 4: **A statement showing the Average Annual Financial Turnover during the last three financial years and financial statements (balance sheet/ profit & Loss Statements) for the last three years ending 31/03/2022, duly certified by the Chartered Accountant shall be submitted.**

12.2 Eventhough the tenderers meet the above qualifying criteria, they will be disqualified if they have:

- (i) Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/ or
- (ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

13 Bid Prices:

13.1 Item Rate basis contracts

The Bidder shall fill the rates against items for the work noted in the Bill of Quantities (As per the instructions given in BOQ). 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 amount 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, including Goods and Service Tax (GST). GST as applicable from time to time shall be shown separately in the invoice.

13.2 Currencies of Bid and Payment:

The unit rates and the prices shall be quoted by the bidder entirely in Indian National Rupees (INR).

14 **Bid Validity:**

Bids shall remain valid for a period not less than 60 (sixty) days after the deadline date for bid submission. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. Should any tenderer withdraw his tender before these periods, or make any modification in the terms and conditions of the tender which are not acceptable to the department, action will be taken as per Clause 15 below.

15 **Bid Security / EMD:**

15.1 Each tender should be accompanied by an Earnest Money amounting to **Rs.18,300/-** (Rupees Eighteen thousand three hundred only). The EMD shall be furnished in the form of Account Payee Demand Draft/ Banker's Cheque/ Fixed Deposit Receipt /Bank Guarantee from a Commercial Bank 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) The Bidder does not accept the correction of the Bid Price pursuant to any arithmetical errors.

(c) In 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 shall be typed or written in indelible ink and 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 upload 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. 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 k) as detailed in clause 18.1 below need to be submitted through e-Tendering mode on <https://gem.gov.in> . Price bid (Schedule-II) in the provided format shall be submitted only through e-tendering mode on <https://gem.gov.in> before 15.30 Hrs on **the date notified in NIT**.

18. Information Required In The Bid

18.1 Part I -Technical Bid shall contain the following:

- a) Financial instrument towards EMD or relevant certificate for exemption of EMD
- b) Letter of Submission (vide **Annexure-1**)
- c) Power of Attorney (in original) in favour of signatory/s to the Tender, duly authenticated by Notary Public. (vide **Annexure-2**).
- d) Organization Details (vide **Annexure-3**)
- e) Details of experience as per **Annexure-4** and Certificates in proof of experience in similar works as detailed under clause 12 of Instruction to bidders.

Explanatory notes:

- (1) Original or notary 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 and work order 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.
 - (2) If the experience in similar works is as a member of joint venture, notary attested copy of joint venture agreement in this respect shall be attached.
 - (3) The works indicated in **Annexure-4** will only be considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments
- f) Financial documents in support of MQC. Statement duly certified by Chartered Accountant showing Average Financial turnover of the tenderer over the last three financial years [2019-'20, 2020-21, 2021-22] (vide **Annexure-5**) supported by Financial statements such as Balance sheets, Profit & Loss statements for the last 3 years.
 - g) Partnership deed or Memorandum and Articles of Association of the company and Registration certificate of the company as the case may be.
 - h) Copies of PAN, GST, EPF and ESI registration
 - i) "B Class or above" grade Electrical Contractor's license.
 - j) Declaration as per **Annexure-8** that
 - (i) No conditions shall be 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.
 - (ii) 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.
 - (iii) 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.
 - (iv) 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.

k) Bank information for e- Payment system as per **Annexure-10**.

18.2 Part II : "Price Bid"

The Bidder shall fill in the rates and prices for all items of the works in the Bill of Quantities (BOQ) and shall submit the BoQ / Price Bid in GeM portal <https://gem.gov.in>. The quoted amount shall include all taxes and duties, including GST.

19. Deadline for Submission of the Bids:

- a. Tenders attaching all documents shall be submitted through GeM portal strictly in accordance with the instructions to the tenderers, terms and conditions of tender document before **the time and the day notified** in NIT.
- b. A Tenderer may modify or substitute or withdraw its Tender after it has been submitted, provided that modification, including substitution or withdrawal of the Tender, is materialized prior to the deadline prescribed for submission of Tenders notified in the NIT.
- c. No Tender may be withdrawn, replaced or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity. Withdrawal of a Tender between the deadline for submission of Tenders and the expiration of the period of Tender validity specified in the **Tender** shall result in the forfeiture of Bid Security/EMD, pursuant to the ITT sub-Clause:16.3

20. Bid Opening

The Chief Mechanical Engineer or his representative will open the tenders in the GeM portal <https://gem.gov.in> . The technical bids of the tenders received will be opened on the due date of submission.

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

21. 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 be communicated about the date and time of opening of the price bid.

22. Clarification of Bids:

22.1 To assist in the examination and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdown of unit rates. 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.

22.2 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.

22.3 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.

23. Examination of Bids and Determination of Responsiveness:

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

- (a) meets the minimum eligibility criteria defined in Clause 12.
- (b) has been properly signed by an authorised signatory (accredited representative) holding Power of Attorney in his favour. The Power of Attorney shall inter alia include a provision to bind the Bidder to settlement of disputes clause;
- (c) is accompanied by the required Bid security (EMD) or MSME/UAM regn. certificate
- (d) is responsive to the requirements of the Bidding documents.

- 23.1 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.**

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.

24 Evaluation and Comparison of Bids:

The Employer will evaluate and compare only the Bids determined to be responsive in accordance with Clause 23.

24.1 Evaluation of Price Bid

- 24.1.1. The tenderers shall quote their total cost for all the items as per schedule, including GST, in the GeM portal.
- 24.1.2. 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.
- 24.1.3. In order to determine the lowest evaluated bid, Cochin Port Authority will consider overall lowest of all the items together.

25 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.

26 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.

27 Award of Contract:

27.1 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

- (a) Eligible in accordance with the provisions of Clause 12, and
- (b) Qualified in accordance with the provisions of Clause 12.

27.2 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.

28 Performance Security:

- 28.1 Within not later than 21 days for domestic bids and 28 days for international bids of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in the form of Account Payee Demand Draft, Fixed Deposit Receipt from a commercial Bank or Bank Guarantee from a Commercial Bank or payment online in an acceptable form safeguarding the purchaser's interest in all respects, for an amount equivalent to **3%** of the Contract price rounded off to the nearest Rs. 1,000/-.
- 28.2 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued by a Nationalised /Scheduled Indian bank having its branch at Cochin acceptable by **Cochin Port Authority**. The BG shall be issued in favor of **Cochin Port Authority** in the Format enclosed in **Annexure-A of GCC**.
- 28.3 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 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 conditions mentioned in Clause 15.2.

29 Signing of Agreement

The successful tenderer will be required to execute an Agreement at his expense within 28 (twenty eight) days from the date of work order, on proper value Kerala State Stamp Paper 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.

30 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.

31 Fraud and Corrupt Practices:

- 31.1 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.

31.2 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) “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; and

(e) “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.

32 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.

32.1 Conditions for bid submission by JV

32.2 Companies/Contractors may jointly undertake contract/contracts. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of the Lead member to be indicated by bidders, however JV has to designate in their MOU. The firms with at least 26% equity holding each be allowed to jointly meet the legibility criteria.

32.3 Bid submitted by an unincorporated Joint Venture of companies (JV) /Consortium of companies (Consortium), shall comply with the following requirements:

- a) There shall be a Joint Venture Agreement between the constituent firms specific for the contract package for which the bids are submitted. The JV Agreement shall include among other things, the joint venture’s objectives, the proposed management structures, the proposed distribution of responsibilities both financial as well as technical for execution of the work, the contribution of each partner to

joint venture operation, the commitment of all partners to jointly and severally liable for due performance, recourse/ sanctions within the joint venture in the event of default or withdrawal of any partner and arrangements for providing the required indemnities.

- b) The most experienced partner will be nominated as the Lead Partner and his nomination shall be evidenced by submitting power of attorney signed by the legally authorised signatories of all the partners.
- c) The Lead Partner of the joint venture will provide suitable experienced personnel for at least 3 (three) positions in the assignment during the whole period of contract execution and a statement to this effect should be included in the Joint Venture Agreement.
- d) The bid and in the case of the successful bidder, the Agreement, shall be signed and / or executed in such a manner for making it legally binding on all partners (including operative parts of the ensuing Contract in respect of Agreement of Arbitration, etc.). The Contract shall be signed by legally authorised signatories of all partners.
- e) The Lead Partner shall be authorised to incur liabilities and to receive instructions for and on behalf of the partners of the Joint venture and entire execution of the Contract including payment shall be carried out exclusively through the Lead Partner. A Statement to this effect should be included in the Joint Venture Agreement.
- f) All partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a Statement to this effect should be included in the Joint Venture Agreement.
- g) Bid Security as required can be furnished by any partner but it shall be in the name of Joint venture.
- h) Performance Guarantee, as required, will be furnished by all partner(s), out of their accounts, in proportion of their participation in joint venture.
- i) Joint Venture Agreement shall contain a clause to the effect that there shall be a separate JV Bank Account (distinct from the Bank Account of the individual partners) to which the individual partners shall contribute their share capital and/or working capital.
- j) Joint Venture Agreement shall also contain a clause to the effect that the financial obligation of the JV shall be discharged through the said JV Bank Account only and also all payment received by JV from the Employer shall be through that account only.
- k) Participation by a firm in more than one JV /Consortium is not permissible. A firm who submits bid on individual capacity is not eligible to be a partner of a JV /Consortium. In case a firm's name appears in more than one bid then both application may be rejected.
- l) Each partner must submit the complete documentation, or portions applicable thereto, required to qualify the firm for bidding.
- m) All the partners of the JV/Consortium shall be jointly and severally liable for due performance, recourse/sanctions within the joint venture in the event of default of any partner and arrangements for providing the required indemnities.
- n) Notwithstanding demarcation or allotment of work among the partners, each partner shall be liable for non performance of the whole contract irrespective of their demarcation or share of work.
- o) The Lead Partner shall be authorized to act on behalf of the JV/Consortium.
- p) All the correspondences between the Employer and the contractor shall be routed through the Lead Partner.
- q) In the event of default by the Lead Partner, it shall be construed as default of the Contractor; and Employer will take action under relevant clause(s) of the Bid

Document and/or General Terms and Conditions of Contract.

- r) A legally binding Joint Venture/Consortium Agreement signed by authorised signatories of all the partners of the JV/Consortium, as per the proforma at **Annexure-13** shall be enclosed with the bid.
- s) In case, the Joint Venture/Consortium Agreement enclosed with the bid is not acceptable to the Employer, the JV /Consortium will modify the agreement so as to be acceptable to the Employer.
- t) Power of attorney duly executed and signed by legally authorized signatories of all the partners, authorizing the Lead Partner (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment, exclusively through Lead Partner, as per the proforma at **Annexure-14**, which shall be duly authenticated by a notary public or equivalent certifying authority, shall be enclosed with the bid.
- u) An undertaking that all the partners are jointly and severally liable to the Employer for the performance of the contract shall be enclosed with the bid.
- v) In the event of any partner leaving the JV, it shall be intimated to the Employer within 30 days by other partner(s). Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract
- w) The contractor shall not alter its composition or legal status without the prior written permission of the Employer. Failure to do so shall be construed as default of the contractor and the Employer may take action under relevant clause(s) of the Bid Document and/or General Terms and Conditions of Contract.
- x) One of the partners of JV/Consortium should have downloaded the bid documents.
- y) Number of partners in JV/Consortium shall be limited to maximum of three.

SIGNATURE OF BIDDER

SECTION -I
COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
PROVIDING ELECTRICAL FACILITIES LIKE LIGHTING, WIRING AND FANS
ETC., AT EX- FORBES BUILDING AND MT SHED FOR GOI AT W/ISLAND

3. FORM OF BID

To

The Board of Trustees,
Cochin Port Authority

Through

The Chief Mechanical Engineer
Cochin Port Authority, Cochin -9

Tender for the work of “Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island”

I/We have read and examined the Notice inviting tenders, Instructions to tenderers, Form of Agreement, Contract Data, General Conditions of Contract, General description of work, Special conditions of Contract, Technical Specifications, Drawings, Preamble, Bill of Quantities, & other documents and rules referred to in the General Conditions of Contract and all other contents in the tender document for the work.

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

M E M O R A N D U M

- | | | |
|--|---|---|
| a) General description of work | : | Providing Electrical facilities like lighting, wiring and fans etc., at Ex-Forbes Building and MT Shed for GoI at Willingdon Island |
| b) Estimated cost | : | Rs. 18,25,492/- |
| c) Earnest Money | : | Rs.18,300/- |
| d) Security Deposit | : | 3% of the value of the contract awarded or the value of the work done whichever is higher. |
| e) Percentage, if any, to be deducted from the bills | : | Nil |

- f) Time allowed for commencement of work from the date of receipt of work order : **On the same day of LoA**
- g) Time allowed for the work from the date of commencement of work. : 75 days from the date of LoA.
- h) Schedule, specifications, conditions, drawings etc. as per contents sheet attached. : As per “Contents” sheet attached.

I/ We agree to keep the tender open for 60 days from the due date of submission and not to make any modifications in its terms and conditions

Should this tender be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed here to so far as applicable or in default thereof forfeit and pay to the Board the sum of money mentioned in the said conditions and to execute an agreement with the Board in the prescribed form or in default thereof to forfeit the earnest money deposited by me/us.

The sum of Rs..... is hereby forwarded in the form of ----- in favour of Financial Adviser and Chief Accounts Officer of the Port Trust as earnest money/ MSME registration certificate is hereby submitted in lieu of Bid Security/ Earnest Money Deposit for the tender, thereby fully accepting that I/We will be suspended and shall not be eligible to participate in the tenders invited by Cochin Port Authority, for a period of two years from the date of such suspension order, without prejudice to any other rights or remedies of the said Board in office should I/We fail to commence the work specified in the Contract data or should I/We not deposit the full amount of Performance Security specified in the above Memorandum in accordance with clause 52 of the said conditions of contract otherwise the said sum of Rs. shall be retained by the Board as on account of such security deposit as aforesaid or (b) the full value of which shall be retained by the Board on account of the security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Clause 40.1 of General Conditions of Contract and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 40.3 of the General Conditions of Contract.

Dated the day of 20 .

Signature of the Tenderer

Address :

Witness :

Address :

Occupation :

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Board of Trustees for a sum of Rs.....
..... (Rupees

The letters referred to below shall form part of this contract Agreement

- a) ..
- b) ..
- c)

Dated.....

**Chief Mechanical Engineer
Cochin Port Authority**

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

4. FORM OF AGREEMENT

AGREEMENT No. ... of

AGREEMENT FOR THE WORK OF Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island.

THIS agreement is made at Cochin on day of August Two thousand and Twenty two (..... --2022) *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, Shri..... S/o aged years residing at Village Taluk District (hereinafter referred to as the Employer which expression shall include his successors, assignees and administrators in the office) of the one part and M/s. represented by Shri. aged S/o residing at Village Taluk District (hereinafter referred as “Contractors” which expression shall include their successors, assignees and administrators) of the other part.

WHEREAS the Employer invited tenders for vide Tender Notice Date and the Contractor submitted a tender for the same giving rates subject to the terms and conditions etc. of the tender document.

AND WHEREAS the said tender submitted by the Contractor has been accepted by the Employer vide work order No dated, issued to the Contractor while accepting their tender.

NOW THESE PRESENTS WITNESSETH and the parties hereby agree as follows.

1. The tender submitted by the Contractor for execution for the Board, of the work specified in the underwritten memorandum within the time specified in such memorandum at the rates specified in the schedule attached hereto and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Clause 16 of the “General Conditions of Contract” and with such materials as are provided for, by and in all other respects in accordance with such conditions is accepted.
2. It is mutually understood and agreed that, notwithstanding that the works has been sectioned, 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.
3. The Contractor agreed to abide by and fulfill all the terms and provisions of the said Conditions of Contract or in default thereof forfeit and pay to the Board the sum of money mentioned in the said conditions.

4. The sum of Rs...../- [Rupees.....only) has been deposited by the Contractor with Financial Adviser and Chief Accounts Officer of the Port Authority as Performance Security (a) the full value of which is to be absolutely forfeited to the Board in office without prejudice to any other rights or remedies of the said Board in office should the Contractor fail to commence the work specified in underwritten memorandum or should the Contractor not deposit the full amount of security deposit specified in under written memorandum otherwise the said sum of Rs...../- shall be retained by the Board as on account of such security deposit as aforesaid or (b) the full value of which shall be retained by the Board on account of the security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Clause 40.1 of the Conditions of Contract and those in excess of that limit at the rates to be determined in accordance with the provisions contained in Clause 40.3 of the Conditions of Contract.
5. It is mutually agreed that the tender submitted in its entirety shall form part of this agreement. Apart from the tender the following shall also form part of the agreement
 - a) The Letter of Acceptance ;
 - b) Bill of Quantities and
 - c) Letters exchanged between the Employer and the Tenderer upto the issue of Letter of Acceptance as separately listed and annexed here to.
 - d) Replies to Prebid queries and amendments issued, if any.

M E M O R A N D U M

- | | |
|--|--|
| a) General description of work | : Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island |
| b) Estimated cost | : Rs. 18,25,492/- |
| c) Tender processing fee | : Nil |
| d) Earnest Money | : Rs.18,300/- |
| e) Security Deposit | : 3% of the value of the contract awarded or the value of the work done whichever is higher. |
| f) Percentage, if any, to be deducted from the bills | : NIL |
| g) Time allowed for commencement of work from the date of issue of LoA | : Same day of issue of LoA |
| h) Time allowed for the work from the date of commencement of work. | : 75 days from date of issue of LoA. |
| i) Schedule, specifications, conditions, drawings etc. | : as per contents sheet attached. |

IN WITNESS WHEREOF THE CONTRACTOR hereunto set his hand and seal on behalf of M/s..... and on behalf of the Board of Trustees of COCHIN PORT AUTHORITY, the CHIEF MECHANICAL ENGINEER has set his hand and seal and common seal of Trustees has been hereunto affixed the day and year first written above.

CONTRACTOR

Signed, sealed and delivered
By Shri.....
Of M/s.....
(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 Board of
Trustees of Port of Cochin.

EMPLOYER

Signed and affixed the common seal of
Board of Trustees of the Port of Cochin

In the presence of

1)

2)

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

4. 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 (Will be informed in due course)	(8.2)																
	The Schedule of Key personnel	(9)																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Qualification of Staff</th> <th style="text-align: center;">No.</th> <th style="text-align: center;">Min. Experience (Years)</th> <th style="text-align: center;">Rate of recovery in case of non compliance</th> </tr> </thead> <tbody> <tr> <td>i) Project Manager (Principal Technical Representative) with Electrical Engg: Degree</td> <td style="text-align: center;">1</td> <td style="text-align: center;">10</td> <td style="text-align: center;">Rs.30,000/- p.m.</td> </tr> <tr> <td>ii) Technical Representative with Electrical Engg. degree</td> <td style="text-align: center;">1</td> <td style="text-align: center;">5</td> <td style="text-align: center;">Rs.25,000/- p.m.</td> </tr> <tr> <td>iii) Project/ Site Engineer Graduate Engineer or Diploma Engineer</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2 5</td> <td style="text-align: center;">Rs.15,000/- p.m.</td> </tr> </tbody> </table>	Qualification of Staff	No.	Min. Experience (Years)	Rate of recovery in case of non compliance	i) Project Manager (Principal Technical Representative) with Electrical Engg: Degree	1	10	Rs.30,000/- p.m.	ii) Technical Representative with Electrical Engg. degree	1	5	Rs.25,000/- p.m.	iii) Project/ Site Engineer Graduate Engineer or Diploma Engineer	2	2 5	Rs.15,000/- p.m.	
Qualification of Staff	No.	Min. Experience (Years)	Rate of recovery in case of non compliance															
i) Project Manager (Principal Technical Representative) with Electrical Engg: Degree	1	10	Rs.30,000/- p.m.															
ii) Technical Representative with Electrical Engg. degree	1	5	Rs.25,000/- p.m.															
iii) Project/ Site Engineer Graduate Engineer or Diploma Engineer	2	2 5	Rs.15,000/- p.m.															
2	The Employer is	(1)																
	The Board of Trustees, Cochin Port Authority, Cochin -9																	
	Name of Authorized Representative:																	
	Name : Dr. (Smt.) M.Beena, IAS Chairman, Cochin Port Authority, Cochin -9																	
3	The Engineer is																	
	Name : Shri. V,Thuraipandian Chief Mechanical Engineer Cochin Port Authority, Cochin-9																	
	Name of Nominee is : Will be notified in LoA/ LoI																	

Sl. No.	Description	Reference Clause .No. in GCC
	Name : Shri..... Cochin Port Authority Cochin-9	
4	Name of Contract Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island	(1)
5	5 copies of Contract Agreement shall be furnished by the Contractor	[7.1]
6	Tender document and other data are available at : GeM portal https://gem.gov.in/ , 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	(7.2)
7	The Intended completion Date for the whole of the Work is 75 days from date of issue of LoA with the following milestones:	(17,28)
8	Milestone dates:	
	Physical works to be completed	75 days from the date of Issue of LoA
9	The following shall form part of the Contract Document: (1) Agreement (2) Letter of Acceptance (3) Bill of quantities (4) Contractor's Bid (5) Correspondence exchanged after the opening of the Bid and before the issue of Letter of Acceptance by which the Condition of Contract are amended, varied or modified in any way by mutual consent (to be enumerated). (6) Contract Data (7) Conditions of Contract (8) General Description and Special Conditions of Contract (9) Technical Specifications (10) Drawings and (11) Any other documents listed in the Contract Data as forming part of the Contract.	(2.3)
10	The Contractor shall submit a Program for the Works	(27)
11	The site possession date The site will be handed over within immediately after issue of LoA/LoI and the site is free from encumbrances.	(21)
12	The start date shall be same date of issue of the Letter of Acceptance (LoA)/LoI by the Contractor.	(1)
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 CoPT	(35)

Sl. No.	Description	Reference Clause .No. in GCC	
15	The minimum insurance cover for physical property, injury and death is Rs.15 lakhs (Rupees Fifteen Lakhs) per occurrence with the number of occurrences unlimited. After each occurrence, Contractor will pay additional premium necessary to make insurance valid always.	(13)	
16	The following events shall also be Compensation Events: (Add the events as applicable to the Contractor) 1. (Nil)	(44)	
17	The period between Programme updates shall be 30 days.	(27)	
18	The amount to be withheld for late submission of an updated Programme shall be Rs.10,000/- .	(27)	
19	The language of the Contract documents is English .	(3)	
20	The law, which applies to the Contract, is the law of Union of India.	(3)	
21	The currency of the Contract is Indian Rupees .	(46)	
22	The maximum amount of liquidated damages for the whole of the works is 10% of the contract price.	[49]	
23	The amounts of the advance payments : Nil	[51]	
	The advance payments as applicable to the contract are:		
	Nature of Advance	Amount (Rs)	Conditions to be fulfilled
	1. Mobilization	Nil	NA
	2. Equipment (Plant and Machinery)	Nil	Nil
24	The date by which “as-built” drawings are required is within 60 days of issue of certificate of completion of whole or section of the work, as the case may be.	(58)	

SECTION -I
COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

5. ANNEXURES

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4	4a	Eligible Assignment Details for MEC	44-45
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8	7	Plant and Equipment Proposed for the Work	49
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11	10	Format for Furnishing Bank information for e-payment	52
12	11	Proforma of Pre Contract Integrity Pact	53-59
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COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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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 Contract Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and MT Shed for GoI at Willingdon Island

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 our Bid enclosing the following, with the details as per the requirements of the Bid Document, for your evaluation.

1. EMD/ MSME registration certificate
2. Power of attorney

Signature
(Authorised Signatory)

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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 Contract “Providing Electrical facilities like lighting, wiring and fans etc., at Ex-
Forbes Building and MT Shed for GoI at Willingdon Island”.

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

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

ORGANIZATION DETAILS

CONTRACT No.:

NAME OF APPLICANT:

1. Name of the Owner:
2. Address:
Telephone No. :

Fax 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
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

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)

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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Tenderer shall furnish Details of “eligibility works experience” as per Clause 12 of Minimum Eligible Criteria (MEC) of Instruction to Tenderer and certificates in the following format (Client 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 Client	
Title of the Eligible Assignment	
Date of completion of the Eligible Assignment	
Project Completion Cost	
Reference No. of the enclosed Client Completion Certificate/ Documentary Evidence for having successfully completed the Eligible assignment	
Name, telephone no, telefax no and email address of the client’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 criteria specified Clause No. 12(a) Minimum eligibility 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 client /owner for having carried out such assignment duly certified by clients/ owner.
- iv) **The works indicated in this Annexure- 4 will be only being considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments.**
- v) Original or notary 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.
- vi) If the experience in similar works is as a member of joint venture, notary attested copy of joint venture agreement in this respect shall be attached.
- vii) If the experience in similar works is as a subcontractor, notary 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.
- viii) If the experience in similar work is in works executed in private sectors/organisations, the TDS certificate along with notary attested copy(s) work order and completion certificate.
- ix) The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.

Signature
(Authorised Signatory)

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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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
				Commencement date	Scheduled completion date	Actual completion date		
1	2	3	4	5	6	7	8	9

Note: Bidder to enclose completion certificate issued by owner, certified by a Notary public or equivalent certifying authority.

SIGNATURE OF TENDERER

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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FINANCIAL CAPABILITY

(A) Average Annual Turnover of the Bidder

Turnover (Rs.)			
Year 1	Year 2	Year 3	Average
2019-20	2020-21	2021-22	

Instructions:

- (i). The Bidder shall provide audited Annual Reports / Audited financial statements such as balance sheets and profit & loss account statements as required under this Bid Document.
- (ii). Annual turnover of the bidder shall be submitted duly verified by Chartered Accountant

Certified by Chartered Accountant

Signature
(Authorised Signatory)

SECTION -I
COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

DETAILS OF PROPOSED APPROACH & METHODOLOGY

Bidder shall furnish a detailed method statement (Technical Note) for carrying out of the works, along with a construction programme [Preferably in MS project / Primavera] showing sequence of operation and the time frame for various segments of temporary and permanent works.

Signature
(Authorised Signatory)

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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PLANT AND EQUIPMENT PROPOSED FOR THE WORK

Not Applicable

Signature
(Authorised Signatory)

SECTION -I
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We M/s (Name & address of the bidder) hereby declare that:-

1. All details regarding construction plant, temporary work and personnel for site organisation considered necessary and sufficient for the work have been furnished in the Annexure 7 and that such plant, temporary works and personnel for site organisation will be available at the site till the completion of the respective work.
2. 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.
3. 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.
4. 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.
5. 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
(Authorised Signatory)

*** Note: Delete whichever is not applicable.**

SECTION -I
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Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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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

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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)

SECTION -I
COCHIN PORT AUTHORITY
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PROFORMA OF PRE CONTRACT INTEGRITY PACT

Deleted

SECTION -I
COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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PROFORMA OF IRREVOCABLE BANK GUARANTEE
FOR EARNEST MONEY DEPOSIT

Not applicable

SECTION -I
COCHIN PORT AUTHORITY

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PROFORMA OF JOINT VENTURE/CONSORTIUM AGREEMENT

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

This Joint Venture /Consortium Agreement is made and entered into on this day of2022 by and between (i) M/s. ...**(Name of the firm to be filled in)**....., (ii) M/s.....**(Name of the firm to be filled in)**.....,, primarily for the work under the Cochin Port Authority.

All the partners of the Joint Venture /Consortium hereinafter individually referred to as the parties and collectively as the ‘Joint Venture/Consortium’.

1.0 Formation of Joint Venture/Consortium

1.1. (i) M/s.....**(Name of the firm to be filled in)** is engaged in**(Details of the works undertaken by the party)**

(ii) M/s..... **(Name of the firm to be filled in)** is engaged in**(Details of the works undertaken by the party)**

(iii)

1.2. On behalf of Board of Trustees of Port of Cochin (hereinafter referred to as “Employer”), the Chief Mechanical Engineer, Cochin Port Authority has invited bids from the experienced, resourceful and bonafide Developers with proven technical and financial capabilities of executing the work of (herein after referred as “the project”).

1.3. The parties have been exploring together the ways and means of collaboration for the purpose of an offer to be made for the said project of the Cochin Port Authority and have mutually agreed to enter into a Joint Venture/Consortium Agreement to submit a common bid for the project and to carry out the project works in the event of award of the contract, in association with each other and (**.....Name of Partner to be filled in.....**) shall be the Lead Partner and (i) (**.....Name of Partner to be filled in.....**), (ii) (**.....Name of Partner to be filled in.....**),..... shall be the other partner(s).

NOW THEREFORE IT HAS BEEN AGREED TO BETWEEN THE PARTIES AS FOLLOWS

1.4. The Joint Venture/Consortium will be known as...(**.....Name of JV to be filled in.....**)and shall consist of (i) (**.....Name of the firm to be filled in.....**), (ii) (**.....Name of the firm to be filled in.....**),, parties to the present agreement.

1.5. The recitals are true and correct and form an integral part of this agreement and are representations of the parties to which they relate and have been relied upon by the parties to enter into the present agreement.

1.6. Notwithstanding the date of signature of this agreement, its effective date will be the date of submission of bid.

1.7. All costs incurred by the parties before the date of award of contract will be borne by the parties concerned. All costs in implementation of this Joint Venture/Consortium

Agreement after award of contract till the expiry of this agreement will be borne by the parties as hereinafter provided.

- 1.8. The Joint Venture/Consortium will be dissolved and this agreement will cease to have effect on completion of this project, maintenance and fulfilment of all other conditions under the contract, upon receipt of payment of all amounts from the Employer and on settlement of accounts between the parties as hereinafter provided.
- 1.9. The contract, if awarded by the Employer, Letter of Acceptance shall be issued in the name of (...**Name of JV/Consortium to be filled in**....) and the Contract shall be signed by legally authorised signatories of all the parties.
- 1.10. All the parties of the JV/Consortium shall be jointly and severally liable during the bidding process and the bid document shall be signed by legally authorised signatory of all the parties.
- 1.11. The financial contribution of each partner to the JV/Consortium operation shall be:
 - (i) M/s..... (**Name of the partner to be filled in**) -
 - (ii) M/s..... (**Name of the partner to be filled in**) -
 - (iii)
- 1.12. All the parties of the JV/Consortium shall be jointly and severally liable for the execution of the project in accordance with the Contract terms, in the event of award of contract. The delineation of duties, responsibilities and scope of work shall be:
 - a) The Lead Partner, shall provide suitable experienced personnel at site, for general planning, site management and equipment operations, during entire period of contract execution.
 - b) (...**Name of Partner to be filled in**.....) shall carry out the following works

 - c) (...**Name of Partner to be filled in**.....) shall carry out the following works
 - d)
- 1.13. The parties hereto agreed that each of them shall duly and properly perform all the functions and all costs related to their respective works.
- 1.14. The parties hereto shall be at liberty to enter into liaison work/correspondence with statutory and local authorities as the circumstances warrant individually or collectively.
- 1.15. It is hereby agreed and undertaken that, all the parties are jointly and severally liable to the “Board” of Port of Cochin for the performance of the contract.
- 1.16. Notwithstanding demarcation or allotment of work between JV/Consortium partners, JV/Consortium each partner shall be liable for non performance of the whole contract irrespective of their demarcation or share of work.
- 1.16. The Lead Partner shall be authorised to act on behalf of the JV/Consortium.
- 1.17. All the correspondences between the Employer and the JV /Consortium shall be routed through the Lead Partner.

- 1.18. The Lead Partner is authorized: (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment, exclusively through Lead Partner.
- 1.19. In the event of default of the Lead Partner, it shall be construed as default of the Developer/Contractor; and Employer shall be entitled to take action under relevant clause(s) of the Department Bid Document and/or Conditions of Contract.
- 1.20. All the parties of the JV/Consortium shall be jointly and severally liable for due performance, recourse/sanctions within the joint venture in the event of default of any partner and arrangements for providing the required indemnities.
- 1.21 The JV/ Consortium shall have a separate JV/Consortium Bank account (distinct from the Bank account of the individual partners) to which individual partners shall contribute their share capital / or working capital. The financial obligation of the consortium shall be discharged through the said JV/ Consortium Bank account only and also all payment received by consortium from the Cochin Port Authority shall be through that account only.

The parties hereto have mutually agreed to the terms and conditions set forth herein above and have assured each other to duly perform the reciprocal promises and obligations on either side for effective implementation of the JV/Consortium for proper and due completion of the works envisaged, in the event of award of contract to the JV/Consortium and have affixed their signature in this indenture on this theday of20...

(i) Signature
 Name
 Designation seal
 &
 Common seal of the firm

(ii) Signature
 Name
 Designation seal
 &
 Common seal of the firm

Witness 1
 Witness 2

**PROFORMA OF POWER- OF-ATTORNEY FOR LEAD MEMBER OF JV/
CONSORTIUM (NA)**

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

By this Power- of-Attorney executed on thisday of(month) of 2021, we,

(i) (.....Name of legally authorized signatory of first partner to be filled in.....), (ii) (.....Name of legally authorized signatory of second partner to be filled in.....),
..... hereby jointly authorize and agree the Lead Partner, M/s (.....Name of the lead partner to be filled in.....), (a) to submit bid, negotiate and conclude contract and incur all liabilities therewith on behalf of the partner(s) of the JV /Consortium during the bidding process; and (b) in the event of a successful bid, to incur liabilities and receive instructions for and on behalf of the partner(s) of the JV /Consortium and to carry out the entire execution of the contract including payment for the work of “ exclusively through Lead Partner.

(i) Signature
Name
Designation seal
&
Common seal of the firm

(ii) Signature
Name
Designation seal
&
Common seal of the firm

.....
.....

Signature, name and seal of the certifying authority/Notary Public

SECTION -I
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

PROFORMA OF IRREVOCABLE BANK GUARANTEE FOR PERFORMANCE
OF GUARANTEE

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

Ref: Bank Guarantee No _____

Date _____

To
 Cochin Port Authority
 W/Island,
 Cochin 682009.

Dear Sirs,

In consideration of Board of Major Port Authority for Cochin Port (hereinafter referred to as the 'Port Authority' which expression unless repugnant to the context or meaning thereof includes its successors, administrators and assigns) having awarded to M/s _____ with its Registered / Head Office at _____ (hereinafter referred to as the "CONTRACTOR" which expression shall unless repugnant to the context or meaning thereof, include its successor, administrators, executors and assigns), a "CONTRACT" by issue of Port Trust's work order dated _____ the same having been unequivocally accepted by the Contractor resulting in a "CONTRACT" bearing No. _____ dated _____ value at _____ for _____ and the CONTRACTOR having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire Contract equivalent to _____, to Port Trust under the terms and conditions of an agreement between Board of Trustees of Port of Cochin and For the execution of the work (hereinafter called "the said agreement") .

3. 2. We _____
 having _____ its _____ Head _____ office
 at _____ (hereinafter referred to as
 the "Bank", which expression shall unless repugnant to the context or meaning thereof,
 include its successors, administrators, executors and assigns) do hereby guarantee and
 undertake to pay the Port Trust on demand any and all money payable by the Contractor to
 the extent of _____ as aforesaid at any time
 upto _____ without any demur, reservation,
 contest, recourse or protest and/or without any reference to the CONTRACTOR. Any such
 demand made by the Port Trust on the Bank shall be conclusive and binding
 notwithstanding any difference between Port Trust and CONTRACTOR. We,
 _____ Bank Ltd., do hereby undertake to pay to the

Port Trust any money without demur so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. We, _____ 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 of the said Agreement and that it shall continue to be enforceable till all the dues of the Port Trust under or by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till Engineer-in-charge on behalf of the Port Trust 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 agrees with the Port Trust that the Port Trust 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 Trust against the said contractor(s) and to forebear 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 by any such matter or things 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 Trust in writing and further agrees that the guarantee herein contained shall continue to be in endorseable till the Port Trust discharges its guarantee.

8. We, _____ Bank Ltd. also agrees that Port Trust at its option shall be entitled to enforce this Guarantee against the Bank as principal debtor, in the first instance without proceeding against CONTRACTOR and notwithstanding any security or other guarantee that Port Trust may have in relation to the CONTRACTOR's liabilities.

9. This guarantee shall be valid upto _____ unless extended on demand by Port Trust. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs _____ (Rupees _____ only) and unless a claim in writing is lodged with us within six months of the date of expiry of or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the _____ day of _____ 20 _____ .

WITNESSES

(Signature)

(Name)

(Signature)

(Name)

Bank's Rubber Stamp

(Name)

(Name)

(Official address)

(Designation with Bank Stamp)

Attorney as per Power of Attorney

No. _____

Dated _____

SECTION II

SECTION -II
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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SECTION -II
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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GENERAL CONDITIONS OF CONTRACT

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GENERAL GUIDELINES

1. This book of “General Conditions of Contract (GCC)“ is applicable to both types of tenders i.e. “ Percentage rate tenders and item rate tenders”.
2. This GCC is applicable to Civil, Electrical and Mechanical works, except dredging work.
3. All blanks are confined to Contract Data. The blanks provided therein shall be filled up carefully for each tender as applicable.
4. Authority approving the Notice Inviting Tenders(NIT) shall fill up all the blanks in Contract Data before issue of tender document.
5. Additional clauses or modifications to the clauses in the GCC, as applicable specifically to the work shall be incorporated under Special Conditions of Contract.

SECTION II
COCHIN PORT AUTHORITY
PROVIDING BASIC ELECTRICAL FACILITIES LIKE LIGHTING, WIRING
AND FANS ETC., AT EX- FORBES BUILDING AND MT SHED OF COCHIN
PORT AUTHORITY

1. GENERAL CONDITIONS OF CONTRACT

A. General

1 Definitions

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.

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

Compensation Events are those defined in Clause 44

The **Completion Date** is the date of completion of the Works as certified by the Engineer or his nominee in accordance with Sub Clause 55.1

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 2.3 below.

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

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

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

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

Days are calendar days, **months** are calendar months.

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

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

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

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

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

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.

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 10% to cover all overheads and profits.

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

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.

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

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.

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

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.

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.

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.

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.

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

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

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:

- (1) Agreement
- (2) Letter of Acceptance and notice to proceed with works
- (3) Contractor's Bid
- (4) Contract Data
- (5) Conditions of Contract including Special Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of quantities and
- (9) Any other documents listed in the Contract Data as forming part of the Contract.

3 Language and Law

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

4 Engineer or his nominee's Decisions

- 4.1 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

- 5.1 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

- 6.1 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 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 ~~of~~ 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.

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

11.1 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 so far 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 effect the 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**
- 1.1 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**
- 15.1 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.
- 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.
- 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.

20 Discoveries

20.1 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

21.1 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.

23 Instructions

23.1 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

24.1 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 General

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:-

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 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 a period of one month from the receipt of the Contractor's letter.

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 Chairman 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 Chairman shall give his decision within 30 days of receipt of Contractor's appeal. If the Contractor is dissatisfied with this decision then:

- a) The Dispute in respect of contract of value upto Rs. 1crore shall not be referred for adjudication through arbitration and
- b) If the value of the contract is exceeding Rs. 1 crore and upto Rs.5 crores,
 - (i) The Dispute shall be resolved through arbitration by a sole arbitrator appointed by the Chairman of Cochin Port Authority :
 - (ii) The Contractor shall within a period of 30 days from receipt of the decision of the Chairman, give notice to the Chairman for appointment of arbitrator, failing which, the said decision shall be final, binding and conclusive and not referable to adjudication by the arbitrator.

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 in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

- c) If the value of the Contract is above Rs. 5 crores, the Contractor shall within 30 days of receipt of the decision of the Chairman, appoint an arbitrator and give notice to the Chairman and the dispute shall be resolved through Arbitral Tribunal as detailed below:

The Arbitral Tribunal shall be a panel of three arbitrators, one to be appointed by each Party and the third to be appointed by the two Arbitrators appointed by the Parties. A Party requiring Arbitration shall appoint an Arbitrator in writing, inform the other Party about such appointment and call upon the other Party to appoint its Arbitrator. If the other Party fails to appoint its Arbitrator, the Party appointing Arbitrator shall take steps in accordance with Arbitration and Conciliation Act, 1996 or any statutory modifications or reenactment thereof

- d) In case of the dispute or difference is relating to interpretation and application of the provisions of commercial contract between Central Public Sector Enterprises (CPSE), Port Trust inter se or CPSE and Government Department shall be referred by either party for arbitration to the Permanent Machinery of Arbitrators in the Department of Public Enterprises through the Secretary to the Government of Public Enterprises as per the guidelines issued by Department of Public Enterprises OM No.4 (1) 2011- DPE (PMA) – GL dtd. 12.06.2013 or any statutory amendment thereof.

25.2.1 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 Chairman of the appeal.

25.2.2 It is also a term of this contract that no person other than person / persons

appointed as aforesaid should act as arbitrator / arbitrators and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

- 25.2.3 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, the claim of the Contractor shall be deemed to have been waived 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.
- 25.2.4 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.
- 25.2.5 It is also a term of this contract that the Arbitrator / Arbitral Tribunal shall adjudicate only on such disputes as are referred to him/them and give separate award against each dispute and claim referred and in all cases where the total amount of the claims by any party exceeds Rs. 1,00,000/- the arbitrator shall give reasons for the award.
- 25.2.6 It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties.

It is also a term of the contract that the arbitrator/arbitrators 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. The venue of the arbitration shall be at Cochin. 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 and fix or settle the amount of costs to be so paid.”

26. Computerised Measurement Book

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

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.

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.

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.

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 two 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.

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

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

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

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.

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 Within the time stated in the Contract Data the Contractor shall submit to the Engineer or his nominee for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the works along with monthly cash flow forecast.

27.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

27.3 The Contractor shall submit to the Engineer on the first day of each week or such longer period as the Engineer may from time to time direct, a progress report in an approved form showing up-to-date total progress, progress achieved against planned progress, during the previous week and progress forecast for the following week for all important items in each section or portion of the Works, in relation with the approved Program.

27.4 The Contractor shall submit to the Engineer or his nominee, for approval an updated Program at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Engineer or his nominee may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.

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.

30. Delays Ordered by the Engineer or his nominee

30.1 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 36.2 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 rate of similar items in Contract.
- ii) Rates and prices in the Schedule of Rates applicable to the Contract plus Ruling percentage.
- iii) Market rates of materials and labor, hire charges of plant and machinery used, plus 10% 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 Quantity 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
- ii) Market rates of material and labor, hire charges of plant and machinery used plus 10% 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

41.1 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:

1) **For supply portion :** 75% of the value, as certified by the Engineer or his nominee, of the materials from time to time delivered on the site.

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.

2) **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.
- 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 orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
 - (d) The Engineer or his nominee instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
 - (e) Ground conditions are substantially more adverse than could reasonably have

been assumed before issuance of Letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the site.

- (f) The Engineer or his nominee gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety.
- (g) 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.
- (h) The effect on the Contractor of any of the Employer's Risks.
- (i) Any other Compensation Events listed in the Contract Data or mentioned in the contract.

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

44.2 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.

44.3 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.

45. Rates for items to be inclusive of Taxes

45.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales tax and other taxes, but excluding service tax that the Contractor will have to pay for the performance of this Contract. 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.

Service Tax shall be claimed by the Contractor in the invoice except for those services which are covered under Negative list of Services under section 66D of the Finance Act and Mega Exemption Notification No 25/2012-ST dated 20.06.2012. The rate of Service Tax shall be as per the provisions of Point of Taxation Rules, 2011 and value on which service tax to be applied shall be as per the provisions of Service Tax (Determination of Valuation Rules), 2006. Where the contractor is an individual, HUF, Partnership firm or Association of Person, Service Tax shall be claimed under Reverse Charge Mechanism.

46. Currencies

46.1 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.A herein under and clause 47.2 for any subsequent change in legislation.

47.1.A 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 For civil works, 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 amounts to 5% of the contract value or the value of the work done whichever is higher. Retention money shall be refunded to the Contractor within 14days from the date of payment of final bill.

48.3 No retention money shall be deducted for Electrical and Mechanical works.

49 Liquidated Damages

49A 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.

- 49A(i) 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 49 A.
- 49A(ii) 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.
- 49A(iii) 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.
- 49A(iv) In the event of such termination of the contract as described in clauses 49A(ii) or 49A(iii) or both the Employer shall be entitled to recover L.D. 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.

49B 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.

50 Nominated Sub Contractors

- 50.1 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 upto 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 Mobilisation Advance and Construction Equipment Advance shall be paid at 14% interest rate and against Bank Guarantee for Mobilisation 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:

- a) Performance Security to be submitted at award of the work
- b) Retention Money to be recovered from Running Bills as detailed in Clause 48 above.

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 : 5% of the Contract value
- b) For all Electrical and Mechanical works : 10% of the Contract value

52.3 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) Banker's Cheque/Demand Draft/Pay Order of a Scheduled Bank.
- ii) An irrevocable Bank Guarantee(BG) enforceable and encashable at Cochin, drawn from any scheduled bank operating in India as per the proforma.

52.4 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.

52.5 Unless performance Security is furnished within the period as specified in clause 52.3 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.

52.6 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

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.

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'.

55.2 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.

55.3 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

57.1 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'

58.1 "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 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

59.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) The Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorised by the Engineer or his nominee:
- (b) The Engineer or his nominee instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days.
- (c) The Employer or the Contractor becomes bankrupt or goes into liquidation other than for a reconstruction restructure or amalgamation.
- (d) A payment certified by the Engineer or his nominee is not paid by the Employer to the Contractor within 50 days of the date of the Engineer or his nominee's certificate:
- (e) The Engineer or his nominee gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer or his nominee.
- (f) The Contractor does not maintain a security which is required.
- (g) The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data and
- (h) If the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract.
- (i) The Contractor threatens or misbehaves with or physical attack on any of the employee / officer of the Port

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice. Bidders (prior to or after bid submission) designed to establish

bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.”

- 59.3 When either party to the Contract gives notice of a breach of contract to the Employer for a cause other than those listed under Sub Clause 59.2 above, the Employer shall decide whether the breach is fundamental or not.
- 59.4 Notwithstanding the above, the Employer may terminate the Contract for convenience subject to payment of compensation to the Contractor including loss of profit on uncompleted works. Loss of profit shall be calculated on the same basis as adopted for calculation of extra/additional items.
- 59.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

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.

61 Property

- 61.1 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

- 62.1 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.

64.1 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.

64.2 The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

65 Safety, Security and Protection of the Environment.

65.1 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

- 66.1 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

- 67.1 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 sub contractors 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 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.

71.13 Observance by Sub-Contractors

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

71.14 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.

71.15 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

72.1 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

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 specification in Bureau of Indian Standards, the work shall be carried out as per manufacturer's 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

75.1 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.

(i) 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.

(ii) 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

76.1 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 or 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

78.1 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 Contractor shall pay Sales Tax, Excise Duty and other levies as applicable from time to time in respect of all materials, equipment and other items purchased for the work.

80.2 Sales / Turnover Tax on Works Contract

Deduction of Sales/Turnover tax on works Contract shall be made by the Employer from each certificate of payment to the Contractor at the rate applicable for such Contractors, as TDS or such other rates as may be specified by the State Government from time to time. TDS certificates will be issued to the Contractor which he may produce before the Tax Authority for adjustment against his tax liability as per assessment.

80.3 Income Tax

The Contractor and his staff shall be responsible for payment of all personal income taxes to the concerned authorities as per the law in force from time to time. Deduction of Income Tax shall be made by the Employer from each certificate of payment to the Contractor at the rate of 2% plus surcharge or such other rates as may be specified by the Central Government from time to time, on the gross amount of the Contractor's bill for payment.

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 Trust 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 Trust 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

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

87 Reports

The following reports shall be submitted for review as an 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.

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:
 - (i) Commencement of manufacture,
 - (ii) Contractor's/ Engineer's inspections,
 - (iii) Tests,
 - (iv) Shipment and arrival at the Site;
- d) Copies of quality assurance documents, test results and certificates of Materials;

- e) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
- f) 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

- 88.1 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:
- i) The Technical documents according to which the work was carried out.
 - ii) The set of construction drawings showing therein the modifications and corrections made during the course of execution signed by the Engineer.
 - iii) Certificates of final levels and dimensions as set out for various works.
 - iv) Certificates of tests performed for various works.
 - v) "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:
 - (i) 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
 - (ii) 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.

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 Trust 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 1951:-The Act 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.

(1) 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.15,000/- 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. 15,000/-per month employed either directly by Port Trust 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 4.75% plus employees' share of 1.75% which is payable on or before 21st 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 4.75% and Employees contribution of 1.75 % (recovered from employees), totally 6.5% to be paid as contribution to ESI in their Code on or before 21st of following month to which the salary relates and acknowledgment 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.
- (iii). 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 Trust. The contribution of ESI amount, both Employers share of 4.75% and Employees of 1.75% (recovered from Employees salary), totally 6.5% shall be paid by the contractor in the Cochin Port Authority Code on or before 21st 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.
- (iv). 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.

CONTRACT DATA

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

Sl. No.	Description	Reference Cl. No.
1	The following documents are also part of the Contract	
	The Schedule of other Contractors i) ii)	(8.2)
	The Schedule of Key personnel i) ii)	(9)
2	The Employer is	(1)
	The Board of Trustees, Cochin Port Authority, Cochin -9	
	Name of Authorized Representative:	
	Name : Shri / Smt..... [INSERT NAME] The Chairman, Cochin Port Authority Cochin -9	
3	The Engineer is	
	Name : Shri [INSERT NAME] Chief Mechanical Engineer/Chief Mechanical Engineer Cochin Port Authority, Cochin-9	
	Name of Nominee is	
	Name : Shri..... [INSERT NAME] [INSERT DESIGNATION OF THE OFFICER] Cochin Port Authority Cochin-9	
4	Name of Contract :- Tender no: [INSERT TENDER NO.]	(1)
5 [INSERT NUMBER] copies of Contract Agreement shall be furnished by the Contractor	[7.1]
6	Tender document and other data are available at [INSERT ADDRESS OF OFFICE]	(7.2)
7	The Intended completion Date for the whole of the Work is [INSERT CONTRACT PERIOD] Months / Days with the following milestones:	(17,28)

Sl. No.	Description	Reference Cl. No.								
8	Milestone dates: <table border="1" data-bbox="363 309 1209 533"> <tr> <td data-bbox="363 309 791 421">Physical works to be completed</td> <td data-bbox="791 309 1209 421">Period from the date of receipt of LoA to proceed with the work</td> </tr> <tr> <td data-bbox="363 421 791 454"></td> <td data-bbox="791 421 1209 454"></td> </tr> <tr> <td data-bbox="363 454 791 488"></td> <td data-bbox="791 454 1209 488"></td> </tr> <tr> <td data-bbox="363 488 791 533"></td> <td data-bbox="791 488 1209 533"></td> </tr> </table>	Physical works to be completed	Period from the date of receipt of LoA to proceed with the work							
Physical works to be completed	Period from the date of receipt of LoA to proceed with the work									
9	The following shall form part of the Contract Document: (1) Form of Agreement (2) Letter of Acceptance (3) Contractor's Bid (4) Contract Data (5) Conditions of Contract including Special Conditions of Contract (6) Specifications (7) Drawings (8) Bill of quantities and (9) Any other documents listed in the Contract Data as forming part of the Contract. (10) 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).	(2.3)								
10	The Contractor shall submit a Program for the Works within ---- days [INSERT PERIOD] of date of the Letter of Acceptance.	(27)								
11	The site possession date The site will be handed over withindays [INSERT PERIOD] after issue of LoA and the site is free from encumbrances.	(21)								
12	The start date shall be days [INSERT PERIOD] from the date of receipt of the Letter of Acceptance (LoA) by the Contractor.	(1)								
13	The site is located at									
14	The Defects Liability Period is [INSERT PERIOD AS APPLICABLE]	(35)								
15	The minimum insurance cover for physical property, injury and death is Rs.lakhs (Rupeeslakhs) [INSERT AMOUNT] per occurrence with the number of occurrences unlimited. After each occurrence, Contractor will pay additional premium necessary to make insurance valid always.	(13)								

Sl. No.	Description	Reference Cl. No.
16	The following events shall also be Compensation Events: (Add the events as applicable to the Contractor) 1.	(44)
17	The period between Programme updates shall be 30 days.	(27)
18	The amount to be withheld for late submission of an updated Programme shall be Rs. [INDICATE THE AMOUNT]	(27)
19	The language of the Contract documents is English.	(3)
20	The law, which applies to the Contract, is the law of Union of India.	(3)
21	The currency of the Contract is Indian Rupees.	(46)
22	The proportion of payments retained (retention money) shall be 5% from each bill subject to a maximum of 5% of the contract price or value of work done whichever is higher.	(48)
23	The maximum amount of liquidated damages for the whole of the works is 10% of the contract price.	[49]
24	The amounts of the advance payments :	[51]
	The advance payments as applicable to the contract are: [INSERT AS APPLICABLE] 1. 2. 3.	
25	Repayment of advance payment for mobilization : [INSERT ANY SPECIAL CONDITIONS]	[51]
26	Repayment of advance payment for Construction and equipment: [INSERT ANY SPECIAL CONDITIONS]	[51]
27	Repayment of secured advance: [INSERT ANY SPECIAL CONDITIONS]	
28	The date by which “as-built” drawings are required is within 60 days of issue of certificate of completion of whole or section of the work, as the case may be.	(58)
29	The amount to be withheld for failing to supply “as built” drawings and/or operating and maintenance manuals by the date required is Rs..... [INDICATE THE AMOUNT]	(58)
30	Schedule of Rates Applicable: DSR..... +%	

SECTION II
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

2. FORM OF SECURITIES (ANNEXURE A & B)

Sl. No.	Annexures	Description	Page No.
1	A	Proforma of Bank Guarantee for Performance Guarantee/ Security Deposit	113-114
2	B	Proforma of Bank Guarantee for Advance	115-116

SECTION -II
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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

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

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

In consideration of the Board of Trustees of the Port of **[insert name of Port]** incorporated by the Major Port Trusts Act, 1963 as amended by Major Port Trust (Amendment) Act 1974 (hereinafter called "The Board" which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include the Board of Trustees of the Port of **[insert name of Port]**, its successors and assigns) having agreed to exempt _____ (hereinafter called the "Contractor")'

(Name of the Contractor/s)

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

(Name of the Department)

date _____ made between the Contractors and the Board for execution of _____ covered under Tender No. _____ dated _____ (hereinafter called "the said contract") for the payment of Security Deposit in cash or Lodgement of Government Promissory Loan Notes for the due fulfilment by the said Contractors of the terms and conditions of the said Contract, on production of a Bank Guarantee for Rs. _____ (Rupees _____) only we, the (Name of the Bank and Address) _____ (hereinafter referred to as "the Bank") at the request of the Contractors do hereby undertake to pay to the Board an amount not exceeding Rs. _____ (Rupees _____) only against any loss or damage caused to or suffered or which would be caused to or suffered by the Board by reason of any breach by the Contractors of any of the terms and conditions of the said contract.

2. We, _____, _____, do hereby
(Name of Bank) (Name of Branch)

undertake to pay the amounts due and payable under this guarantee without any demur merely on a demand from the Board stating that the amount claimed is due by way of loss or damage caused to or which would be caused to or suffered by the Board by reason of any breach by the Contractors of any of the terms and conditions of the said contract or by reason of the Contractors failure to perform the said contract. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to any amount not exceeding Rs. _____ (Rupees _____) only.

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

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

4. We, _____(Name of Bank and Branch) further agree with the Board that the guarantee herein contained shall remain in full force and effect during the period that would

be taken for performance of the said contract and that it shall continue to be enforceable till all the dues of the Board under or by virtue of the said contract have been fully paid and its claims satisfied or discharged or till the _____

(Name of the user department)

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

5. We, _____ further agree with the Board

(Name of Bank and Branch)

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

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

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

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

9. Notwithstanding anything contained herein :

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

(Rupees _____ only);

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

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

Date _____ day of _____ 20

For (Name of Bank)

(Name)

Signature

* The date will be thirty (30)days after the end of the period of Defect Liability as specified in the Contract.

SECTION -II
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

PROFORMA OF BANK GUARANTEE FOR ADVANCE
(To be submitted on Non-Judicial Stamp Paper of appropriate value)

(Not Applicable)

Bank Guarantee No _____ dated _____

Amount of Guarantee Rs. _____

Guarantee cover from _____ to _____

Last date of lodgment of claim

In consideration of Board of Trustees of Cochin Port Authority (hereinafter called "Port Trust") which expression shall include all their successors and assignees having agreed to pay advance of Rs. _____ (Rupees _____ only) repayable with interest @ _____ % per annum to _____ (Name & Address of contractor) (hereinafter called the "CONTRACTOR") which expression shall include their successors and assignees for the contract for the work of _____ (Name of work) evidenced by the offer of the Contractor dated..... and accepted by the Port Trust forming the contract and the work order No..... dated,..... for the work of (name of work) issued by the Port Trust and the formal stamped agreement to be entered into between parties in the above, the said amount and interest being recoverable from the running bills of the contractor on pro-rata basis as per terms of agreement, we (Name of Bank) having our Head office at (hereinafter referred to as "the Bank") do hereby undertake to pay The Cochin Port Authority an amount of Rs.....(Rupees.....only) with interest against any loss or damage caused to or would be caused to or suffered by the Port Trust by reason of any breach by the said contractor of any of the terms or conditions contained in the said agreement, making it impossible or difficult to recover the said mobilisation advance of Rs.....(Rupees.....only) or part thereof or interest thereon we (Name of the Bank)do hereby undertake to pay the amounts due and payable under the guarantee without any demur, merely on demand of The Cochin Port Authority by reason of any breach by the said contractor of any of the terms and conditions contained in the said agreement or by the reason of contractor's failure to perform the said agreement. Any such demand made on the Bank shall be conclusive not only as regards to contractor's failure but also as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee will be restricted to an amount of Rs.....(Rupees..... only) with interest as per the agreement.

We, (Name of the Bank) further agree the guarantee herein contained will remain in full force and affect during the period that would be taken for the recovery of the loan and that it shall continue to be live and enforceable till all the amounts due with

interest thereon have been fully recovered and its claims satisfied or discharged or till The Cochin Port Authority certifies that the amount outstanding under the advance has been fully recovered from the contractor and accordingly discharged the guarantees. Unless a demand or claim under this guarantee is made on us in writing on or before (date of the expiry) we shall be discharged from all liability under this guarantee thereafter.

We, (Name of the Bank) further agree with the Port Trust that the Port Trust shall have the fullest liberty without or consent and without affecting in any manner or obligation hereunder to vary any of the terms and conditions regarding the recovery or repayment and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or any forbearance, act or omission on the part of Cochin Port Authority or any indulgence by the Port Trust to the contractor or in such matter or things whatsoever which under the law relating to sureties would but for this provision have the effect of so relieving us.

Notwithstanding anything contained herein:

- (i) Our liability under this bank guarantee shall not exceed Rs.....(Rupees.....)
- (ii) This bank guarantee shall be valid upto.....
- (iii) Our liability to make payment shall arise and we are liable to pay the guaranteed amount or any part thereof under this guarantee, only if you serve upon us a written claim or demand in terms of this guarantee on or before.....

We, (Name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Port Trust in writing.

Dated this the.....day of.....(year)

For (Name of Bank)

(Signature)

SECTION III

SECTION III
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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1. GENERAL DESCRIPTION OF WORK

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**SECTION III
COCHIN PORT AUTHORITY**

**Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island**

1. GENERAL DESCRIPTION OF WORK

1. General

Where it is mentioned in the Specifications that the Contractor shall perform certain Work or provide certain facilities, it is understood that the Contractor shall do so at his own Cost.

The materials, design and workmanship shall satisfy the relevant Indian Standard, the Specification and conditioned herein referred to. Where the Specifications stipulate requirement in addition to those contained in the Standard codes and Specifications, these additional requirements shall also be satisfied.

2. Scope of work

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

- (a) SITC of M V panel 200 A
- (b) Supply, Installation Testing and Commissioning (SITC) of 415 Volts, 63/40Amps. Distribution Board.
- (c) Supply and laying of Al, Armoured UG Cable 3.5CX95 Sqmm and LT Al UG cable of 3.5Cx25sqmm
- (d) Supply and laying of LT Copper UG, 3C X 1.5sqmm cable by clamping along the wall, above false ceiling, ground etc.
- (e) Electrical supply wiring with various sizes of FRLSH copper wires, concealed Conduit / Capping & casing etc, for various applications such as Computer points, power points etc. and 12 SWG bare Cu conductor for earthing
- (f) SITC of ceiling fans, with suitable rods, modification etc., wall mounting fans and exhaust fans
- (g) SITC of LED light fittings, LED tube light fittings, bulk head etc.
- (h) SITC of 12 way, 40 A, SPN, double door, MCB DB
- (i) SITC of 160A, FP MCCB, 50KA with enclosure and connecting to the existing MV panel at OLA substation for tapping supply to the Ex-Forbes building.
- (j) Providing Pipe earthing with GI pipe B class
- (k) SITC of outdoor 70W LED street light IP 65 fittings
- (l) SITC of Poly carbonate meter box with, 125A 4P isolator and 3phase TOD Smart energy meter with CT
- (m) Dismantling the old wiring materials, switch boards, switches and fans etc. and handing over to CoPT.
- (n) Make good the wall/ ceiling surface etc. after doing the wiring work etc.

The bidder shall visit the site, ascertain the site conditions and scope before bidding..

3. Site conditions

3.1 Location

The project area is at Willingdon Island, Ernakulam Dist.

3.2 Tide and Flood Levels

The various tidal levels in the area as per Naval Hydrographic Chart No.2004 are as indicated below for the general guidance to the tenderer.

<u>Tide</u>	<u>Levels with reference to Port Chart datum (in metres)</u>
Highest High Water Level	: +1.20m

Mean High Water Spring (MHWS)	:	+0.92m
Mean Low Water Spring (MLWS)	:	+0.80m
Mean Sea Level (MSL)	:	+0.582m
Mean High Water Neap (MHWN)	:	+0.60m
Mean Low Water Neap (MLWN)	:	+0.30m
Lowest Low Water Level	:	+0.20m

3.3 **Waves**

The work site is in the inner harbour area where generally calm conditions prevail throughout the year

3.4 **Wind**

Wind at Cochin is highly influenced by the land and sea breezes. Wind direction changes from north-east during morning hours to west during evening for the period of October to May. During peak of south-west monsoon, especially from June to September, predominant wind direction remains south-west both during morning and evening hours. Due to strong monsoon winds, effect of land winds is not dominant during south-west monsoon. During the non-monsoon periods, the predominant wind direction is from north east during the morning and west during the evening which shows influence of land breeze.

3.5 **Rainfall**

The climate is characterized by dry and wet seasons. The wet seasons starts in late May and ends in November. During this period, two monsoons pass by one after another. The major monsoon is south-west monsoon which lasts from June to September. This is followed by north-east monsoon during October and November. The average annual rainfall is about 3000mm; and the major portion is during south-west monsoon.

3.6 **Temperature**

Cochin experiences moderate temperatures throughout the year. The temperature varies from 22°C to 34°C. The low temperature occurs during the southwest monsoon, December and January. Daytime temperature goes upto 30°C even during this period. The hot months are from March to May.

4. **Drawings**

~~The drawings enclosed with the tender document are to provide some idea of the job only and are preliminary and for tender purpose and are by no means complete and final and do not show the full range of the work under the scope of the contract. Work shall be carried out only on the basis of drawings marked "Issued for Construction" with addition, alteration, modifications, if any made to aforesaid drawings as required from time to time and also according to other drawings that would be supplied to the contractor from time to time~~

5. **Time Schedule and monitoring of progress**

5.1 Tenderer shall prepare and attach with the tender a detailed work schedule [preferably in MS Project / Primavera] indicating key activities and critical items for completing the work within the stipulated contract period. This time schedule forms the basis for monitoring the progress of work. Issue of working drawings by the department will be regulated as per the time schedule approved by the department.

5.2 The contractor shall furnish to the Engineer monthly progress reports of the work during execution in the approved proforma indicating delay, if any, its reason and proposal to cover up the delay.

6. **Facilities to be provided by the Port**

6.1 **Contractor's work area:**

An area at Willingdon Island will be made available to the Contractor for carrying out the work.

6.2 Power

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

7. Contractor's responsibility

- 7.1 All materials for use on the works shall be supplied and provided by the contractor at his own cost and shall conform to relevant BIS Specification unless otherwise specified.
- 7.2 Samples of all materials including fixtures, if any, to be incorporated in the work shall be got approved by the Engineer-in-Charge before procurement.
- 7.3 The contractor shall thoroughly study the specifications and drawings and errors/omissions/modifications if any shall be brought to the notice of the Engineer-in-Charge well in advance so that a final decision in the matter could be given in time.
- 7.4 All labour, skilled or unskilled shall be provided by the contractor. Settling any dispute with the labour will be contractor's responsibility.
- 7.5 The contractor shall be solely responsible for any damage or injury to the persons or things caused or suffered during the execution of the work and these shall be made good or compensated at his risk & cost.
- 7.6 The contractor shall take all care and precautionary measures for avoiding any kind of damage/accident in the work site on any account. The department shall not entertain any claim from the contractor whatsoever towards compensation for any damage/accidents at the site due to negligence from his part, during the execution of work.
- 7.7 The contractor shall prior to commencement of the work insure in the joint names of the Employer and the contractor against all loss or damage from whatever cause arising for which he is responsible under the terms of contract.
- 7.8 The work shall be arranged by the contractor without causing any damage to Port's/ any other structures. Any damage caused by the contractor's operation shall be compensated/ made good at contractor's risk and cost to the satisfaction of the Engineer-in-Charge of the works, failing which department will do the rectification work and the cost incurred will be recovered from any sum due to him from the Port.
- 7.9 All plants and equipments and consumables required for the whole work shall be provided by the contractor at his own cost.
- 7.10 The contractor shall not construct any structure, even of temporary nature, for any purpose at site, except with the written permission of the Engineer-in-Charge of the work and any construction so put up shall be removed by the contractor whenever the Engineer-in-Charge calls upon the contractor to do so.
- 7.11 Qualified Engineers with sufficient experience in works of similar nature shall be available at site throughout the contract period during working hours in order to receive instructions from department and to implement them properly and in time.
- 7.12 The contractor shall take all care and precautionary measures for avoiding damage or accidents to the work from ship or other water crafts movements or other

- operations in the area. The department will not entertain any claim from the contractor whatsoever, towards compensation for any such damage or accident occurring during the execution of the contract.
- 7.13 The contractor shall observe all safety regulations during the execution of the work. Safety measures, precautions, warning signals etc. shall be done at the contractor's cost as directed by the Engineer-in-charge of the work. The contractor shall provide all necessary personnel protection equipments such as helmet, lifeguard, goggles, boots etc. to the workmen at his own risk and cost.
- 7.14 The work shall be arranged by the contractor without causing any hindrance to the ship and other water craft operating in the area. No damage shall be caused to the structures in the area, water crafts operating in the area or otherwise by the contractor's operations. Any damage or accident caused by the contractor's operations shall be compensated / made good at the contractor's risk and cost.
- 7.15 The contractor shall supply at his own cost monthly or at intervals as directed by the Engineer-in-charge, well executed photographs in standard size (approximately 24x18 cm) showing the progress of the work and also such other particular item of the work.
- 7.16 No information or photograph concerning the works shall be published without the prior permission of the Chief Mechanical Engineer and drafts of all such proposal/ publication shall be submitted for approval.
- 7.17 The information and data shown in the drawing and detailed elsewhere in the tender document are furnished for general information and guidance only and the Port Trust in no case will be held responsible for the strict accuracy thereof or any deduction, interpretation or conclusion drawn by the tenderer.
- 7.18 The contractor shall observe the conservancy rules relating to the Port and shall always take necessary steps to keep the Port water free of noxious or unhygienic matter due to the work, as are required by the Engineer-in-Charge. Under no circumstances, inflammable materials be allowed to spill into Port area.
- 7.19 The Cochin Port is an International Ship & Port Facility Security (ISPS) code compliant Port and the contractor is obliged to comply with the provisions of the code in force and as amended from time to time. The site for the proposed work is a protected area and hence security rules and regulations including obtaining entry / exit passes including photo passes if any for vehicles, men and materials etc. for entering the area shall be observed by the contractor at his cost.
- 7.20 The contractor shall provide necessary arrangements as desired by the Engineer-in-Charge for inspection of work without any extra cost from commencement till completion of work.
- 7.21 The Contractor shall ensure that no labourers with criminal background are engaged for the work.
- 7.22 All fossils, coins, articles of value or antiques and structures and other remains or things of geological or archaeological interest discovered in the site of work shall be deemed to be the absolute property of the Port Trust and the contractor shall take responsible precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal, acquaint the departmental officers of such recovery and carry out at the expense of the department, the Engineer-in-Charge's orders as to the disposal of the same.
- 7.23 The contractor shall remove any plant (floating or otherwise) belonging to him or to any person employed by him which might have sunk in the course of work or otherwise deal with the same as directed by the Engineer-in-Charge and until the

- same is raised and removed, the contractor shall set on such buoys and display at night such lights for avoiding any mishaps.
- 7.24 **Water required for the construction works including curing work shall be arranged by the contractor on his own cost.**
- 7.25 The contractor shall take all precautions for not to damage any cables/pipes etc. passing through the area of work.
- 7.26 While carrying out hot works such as welding, cutting, chipping the concrete etc. the following conditions shall be strictly observed by the contractor:
- (i) Hot work shall be carried out with the approval of the Dy. Conservator's department and the work shall be done as per the instruction of the fire service personnel.
 - (ii) Welding /gas cutting work shall be carried out only with the prior permission of the Marine Dept. and only when vessel carrying inflammable materials is not berthed at the existing berths near to it.
- 7.27 The contractor shall remove all materials brought to work site / stacked at the work site or anywhere else within the Port area and clear the site at his cost to the full satisfaction of the Engineer-in-Charge before the site is returned to the Port Trust. All such materials including debris, tools & plants etc. shall be disposed off to any place as pointed out by the Engineer-in-Charge or be taken away from the location and shall be cleared in every respect and to reinstate to its original condition at no extra cost to the Port Trust immediately after completion of the work. In case, any such material is found left in the work site or anywhere in the Port area, rent for the storage space occupied by the contractor, either for stacking the materials /debris or for areas used for such purpose but not cleared thereafter, will be recovered as per the prevailing Scale of Rate of Cochin Port Authority, for the rent applicable for open storage space for commercial purpose, for the period for which the area had been occupied by the contractor. In addition to the above, in case the Port requires the area immediately for its use, Port will repossess the land after restoring it to its original condition, material will be confiscated and disposed off at the risk and cost of the contractor, after issuing two notices giving 15 days' time each for removing the material. All expenses incurred on this shall be recovered by disposing off the material if any confiscated. If any balance amount still remains to be realized that will be recovered from the contractor by appropriate means.
- 7.28 **The contractor shall extend all the facilitations and cooperation for other contractors for simultaneous execution of other works in the area entrusted by Cochin Port Authority.**
- 7.29 The contractor shall comply with all the provisions of the Indian Workmen'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."
- 7.30 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 organisation 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.
- 7.31 The contractor shall provide, at every work place, at which 20 or more women workers are ordinarily employed, crèches of reasonable size and with adequate

facility for the use of their children under at the age of six years at his risk and cost.

8. Workmanship

8.1 All the works shall be done strictly according to relevant B.I.S. specifications unless otherwise specified.

8.2 The whole work shall be completed in a diligent manner within the contract period and defect or imperfection if any, observed during the defect liability period/ guarantee period, shall be rectified at contractor's cost to the full satisfaction of the Engineer-in-Charge within the time allowed.

~~8.3 The work shall be arranged in the order of preference as directed by the Engineer-in-Charge of work. In addition to above, contractor shall submit a Quality Assurance Plan (QAP) for the work and it shall be approved by the Engineer-in-Charge before commencing the work and shall be ensured strict compliance of the same. The QAP shall contain the details of tests to be conducted for each material to be used in the work and work.~~

9. Temporary works

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

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

10. Time For Completion

10.1 The time allowed for carrying out the work as mentioned in the Memorandum shall be strictly observed by the contractor. The work shall throughout the time period be proceeded with diligence, time being deemed to be the essence of the contract.

10.2 The completion of work may entail working in monsoon period/rainy season without any extra cost. The contractor shall take such an eventuality into consideration while quoting for the work. Normally, no extension of time will be admissible for work in monsoon.

10.3 The whole work shall be completed in the stipulated time, accordance with the provisions under Memorandum included under "Form of Tender" or such extended time as may be allowed under clause 29 of Conditions of Contract included in the GCC.

11. Working time

The normal working time of the Port Trust is from 8 a.m. to 4.00 p.m. on all working days with no interval in between. If the Contractor wishes to carry out the work beyond normal working hours and or on holidays, he should get specific approval from the Engineer-in-Charge for the same. Necessary supervision will be arranged by the department and the expenditure to be incurred in this connection

will be borne by the department.

12. Method of Execution

The contractor shall clearly indicate in their tender the method proposed by them for executing the various items of works. During the actual execution of the works if modifications or changes in the method of execution of work is found necessary the contractor shall obtain approval from the Engineer-in-charge of work for such modifications or changes in the method. No claim from the contractor for additional payment shall be entertained by the department on the above account.

The detailed list of equipment/machineries/tools & plants proposed to be mobilized for the deployment in the work as furnished as per **Annexure-7** of Section- I and method of execution furnished under clause above, are considered only for the technical appreciation of the proposal of the contractors and it shall not relieve the contractor of his responsibility of executing the work with the quality specified in the tender and any discrepancy occurs, the construction procedures detailed/specified in the tender will prevail. In case, any additional equipment are required to be mobilised than those listed in the tender for deployment in the work, it shall be arranged and the work executed as per the tender specifications without any extra cost to the Department.

The electrical work shall be executed in accordance with the civil work, without any delay as per the tender conditions.

13. Alterations and Additions

The Employer shall have power and authority from time to time and at all times to make amendments or additions or alternations or changes in the scope of the work, and specifications, drawings and bill of quantities and give such further instructions and directions as may appear to the Employer necessary and proper for the guidance of the Contractor and the good and efficient execution of the works and the contractor shall receive, obey and be bound by the same according to the true intent and meaning thereof as if the same had been mentioned or referred to in the scope of the work, specifications, Bill of Quantities and Schedules and drawings. The Employer may also vary or alter the lines, levels or positions of any of the works contemplated or may order any of the works contemplated thereby to be omitted, with or without the substitution of any other works in lieu thereof, or may order any work or any portion of works executed or partially executed to be removed, changed or altered, if required, and may order that other work shall be substituted in lieu thereof and any difference in the cost occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the Contract Price based on rates available in the contract or where the rates are not specified a suitable rate backed up by rate analysis shall be submitted by the contractor and agreed upon between the contractor and the Employer. In the event of disagreement, the Employer shall fix such rates or prices as shall in their opinion, be reasonable and proper having regard to the circumstances. The contractor shall give to the Employer before the tenth day of every month, a statement in writing of any extra work which he may have performed during the preceding month, failing which any claim for which he may afterwards make for payment on account of any such extra work will not be allowed.

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SECTION III
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

2. SPECIAL CONDITIONS OF CONTRACT

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SECTION III
COCHIN PORT AUTHORITY

**Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island**

2. 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 Clause-26 of GCC- 'Computerised Measurement Book', measurement of the work can also be done as detailed below.
 - 2.1 Executive 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 CLIENT 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. STRUCTURAL ALTERATIONS TO BUILDINGS

4.1. No structural member in the building shall be damaged/altered, without prior approval from CLIENT.

4.2. Structural provisions like openings, pipes if any, provided by CLIENT for the work, shall be used. Where these require modifications, such contingent or works shall be carried out by the contractor, at his cost after the prior approval of CLIENT.

4.3. All cut out openings in floors provided by CLIENT shall be closed, after installing the cables/pipes/ducts in accordance with the item therefore in the schedule of work.

4.4. All cuttings made by the contractor in connection with the works shall be filled by him at his cost to the original finish.

5. SAMPLES

The Contractor shall require to provide to CLIENT samples of all the materials sufficiently in advance free of cost to obtain approval of CLIENT. Approved samples shall be retained by CLIENT 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 CLIENT.

6. SCHEDULE OF QUANTITIES (SOQ)

The quantities given in the tender SOQ are tentative and shall vary as per the site/ CLIENT 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 CLIENT Engineer in charge with regard to deviations in the existing items and requirement of additional / extra items, if any, for taking necessary action.

7. GENERAL REQUIREMENTS OF COMPONENTS

7.1. 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.

7.2. 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 CLIENT 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.

7.3. 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.

8. RESTRICTIONS IN WORKING HOURS

The number of hours working in the area might be restricted due to operational reasons and contractor will not have any claim for extra payment on this account. The contractor's staff working in the operational area will obey the instructions of authorities in clearing the site. Also prior permission has to be obtained before stacking of materials in the premises.

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 CLIENT.

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.

9. LIQUIDATED DAMAGES

For levying LD as per Clause-49 of 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.

10. CONTRACTOR TO SUBMIT PROGRAMME

After the acceptance of his Tender, the Contractor shall 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.

11. PROGRESS REPORTS AND SCHEDULES

The Contractor shall submit to the Engineer-in-Charge by the third day of every fortnight, six (6) copies of a report in a duly approved format showing the progress made in construction of the works, mobilisation of resources etc. during the previous fortnight.

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 six (6) copies in an approved proforma to the Engineer-in-Charge.

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.

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.

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.

12. TAXES & DUTIES

12.1 All duties, taxes including Goods and Services Tax (GST)] 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.

12.2 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.

- 12.3 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.
- 12.4 The item wise rate quoted by bidder shall be inclusive of all taxes, duties & levies but excluding GST. The payment of GST by service availer (i.e. HCSL) to bidder/contractor (if GST payable by bidder/contractor) would be made only on the latter submitting a Bill/invoice in accordance with the provision of relevant GST Act and the rules made thereunder and after online filing of valid return on GST portal. Payment of GST is responsibility of bidder/contractor.
- 12.5 However, in case contractor is GST unregistered bidder/dealer in compliance with GST rules, the bidder/dealer shall not charge any GST on the bill/invoice. In such case, applicable GST will be deposited by CIL/Subsidiary directly to concerned authorities.

Input tax credit is to be availed by Paying Authority as per rule.

If the Input Tax Credit (ITC) claimed is disallowed due to failure on the part of supplier / vendor of goods and services in incorporating the tax invoice issued to HCSL in its relevant returns under GST, payment of CGST & SGST or IGST, GST (Compensation to State) shown in tax invoice to the tax authorities, issue of proper tax invoice or any other reason whatsoever, the applicable taxes paid based on such Tax invoice shall be recovered from the current bills or any other dues of the supplier / vendor along with interest, if any.

- 12.6 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.

13. 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, CLIENT 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.

14. 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.

15. 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.

16. 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 CLIENT without any charges to CLIENT.

17. 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.

18. CONTRACTOR'S STAFF AND LABOUR

- 20.1. 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.
- 20.2. 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

misconducted 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.

- 20.3. 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.

19. 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 work 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) Contractor has to obtain necessary scheme approval (NOC) for various facilities, if any, from the Electrical Inspectorate/CEA immediately after the award of work. Electrical works are included in different packages. However the scheme approval and final approval from KSEI shall be obtained by the electrical contractor having A Grade license issued by KSEI.
- 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 CLIENT
- d) On completion of work, the contractor has to obtain necessary safety / energisation certificate from Electrical Inspectorate / CEA by submitting necessary completion certificates, drawings, equipment details, load details, test results, etc. before energisation.
- e) 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.
- f) 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.
- g) Obtaining approval from authorities 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. before commencement of work, shall be the sole responsibility of the contractor.
- 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.

20. PERFORMANCE TESTING

22.1. At Manufacturers works

Before dispatching the equipment to site, the equipment will be inspected at the discretion of the CLIENT and tested for various parameters as detailed in the Technical Specifications, by the officials of CLIENT/Consultants at the manufacturer's works and then cleared for shipment. The tenderer shall give adequate notice to enable CLIENT 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.

22.2. 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 has 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 CLIENT's Engineer in charge.

21. COMMISSIONING AND HANDING OVER OF EQUIPMENTS

23.1. 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.

23.2. 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.

23.3. 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.

24. 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.

25. 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.

26. 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.

26.1. COMPLETION CERTIFICATE

For all works completion certificate shall be submitted to CLIENT, 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 CLIENT. 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 CLIENT including customs duty.

27. PAYMENT TERMS

27.1. 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.

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

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

- a) **For supply portion :** 75% of the value, as certified by the Engineer or his nominee, of the materials from time to time delivered on the site.
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.
 - b) **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.
- 27.2.2.** 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.
- 27.2.3.** Running Bills shall be paid as per contract condition within 21 days of date of submission of bills in full shape by the Contractor on the jointly agreed quantities. However 50 % of the bill amount shall be paid within 10 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.
- 27.2.4.** For final bill: The Final Bill shall be paid within 2 months on submission of CEA approval for energizing the installation if required, commissioning and taking over the installation. The Contractor shall submit final Bill within 10 days of issue of Taking over Certificate. Engineer or his nominee shall check the bill within 20 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 15 days of its receipt.
- 27.3.** 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.
- 27.4.** 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.
- 27.5.** 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.

- 27.6. 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.
- 27.7. 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.
- 27.8. 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.

28. MEASUREMENTS

The quantities set out in the Schedule of quantities (Price Bid) are the estimated quantities of the work, but they are not to be taken as the actual and exact quantities of the Work to be executed by the Contractor in fulfillment of his obligations under the Contract. The payment shall be made for actual measured quantity both for supply and installation. In this case the quantity shall be taken after installation, i.e. only installed portion of the work after completing the work would be measured. Scrap and balance materials would not be measured and hence no payment would be made for the same. It may be noted that payment against the supply of items, in any case shall not exceed the final measured quantity. However Electrical works related to mechanical works is treated as a package and the amount is on lump sum basis for the successful completion of the work. Additional payment, if any released during the supply of items more than the final measured quantity, corresponding payment shall be adjusted later, while processing subsequent bills after the final measurement.

29. PARTIAL TAKING OVER

CLIENT reserves the right to take over a portion of the work which is completed in all respects before the handing over of the entire work if the remaining portion of the work is getting delayed. The operation of such completed works taken over by CLIENT, during the defect liability period, shall be under the scope of the contractor.

30. ACCOMMODATION/SITE OFFICE

CLIENT will not provide any quarters for the accommodation of contractor's personnel. The contractor shall make his own arrangements at his cost for accommodation/medical aid/treatment for staff and workers engaged by him on this project, and the contractor should ensure water supply, sanitation, access roads, electrification and general cleanliness of his camps, as required by labour laws in force. All arrangements regarding sanitation, water supply, electric supply and cleanliness shall be tidy and workman like and shall be got approved by the Engineer-in-Charge prior to the construction of the camps.

Warehouse, shed, shop and office facilities as required by the contractor shall be provided by him at his own expense, and shall be approved by the CLIENT. After the work is over, all these temporary facilities shall be removed by the contractor at his own expense to the satisfaction of Engineer-in-Charge/CLIENT within 30 days from the date of completion of work.

31. WATER AND ELECTRIC SUPPLY

Electric power required for the work can be supplied by the department from the nearest existing line of the Port Trust at prevailing rates as per the prevailing term and conditions of Cochin Port which may be amended time to time. If electric power is supplied by the department, the Contractor shall make payment of monthly electricity bills. The cost of drawing temporary lines/ cables/ providing switches and making connection and metering arrangements etc, shall be borne by the Contractor. If there is

any disruption in the power supply due to supply failure/ restrictions imposed by the Kerala State Electricity Board, the department shall not be held responsible and the Contractor has to make suitable alternative arrangements at their cost.

The CLIENT will not be responsible for the supply of water to the Contractor.

32. PRICES

The rate quoted for all items (Imported and Indigenous) shall be in Indian Rupees only. Price shall be Inclusive of all taxes & duties, labour, tools & plants, packing, freight/ transportation & insurance up to the site, loading, unloading, fee (s) for testing, inspection, documents etc. excluding GST .

Fee(s) payable for obtaining statutory license/approval etc from concerned department shall be reimbursed by CLIENT on actual basis on production of original receipt from concerned department.

CLIENT does not give any concessional forms/ certificates/ permits towards any taxes, duties & other levies likeroad taxes/ permits, etc.

All items shall be fully insured by the contractor. **The cost of Insurance and Freight & handling charges shall be paid by the contractor. The documents in support of insurance policy shall be submitted to CLIENT as well as the supplier before shipment.**

The contractor shall send the goods to consignee i.e., CLIENT in a fully packed condition as per requirement of component/equipment and fully insured.

The contractor shall be solely responsible to ensure the following:

- a. Sound packing of equipment / components.
- b. Shipment of the items by the due date as per schedule.
- c. Insurance.
- d. Forwarding and transshipment of equipment/components up to the destination.
- e. Insurance of Inland transshipment.
- f. Receipt of equipment at site and safe custody till they are installed, tested and commissioned & taken over by CLIENT.
- g. Execution, installation, testing and commissioning of the installation as specified in the tender.
- h. Handing over of installation to the authorized representative of CLIENT.

33. 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.

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 CLIENT.

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, CLIENT 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 CLIENT 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 CLIENT which is proved to be damaged or destroyed as a result of defective workmanship by the Contractor.

34. 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.

35. 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 CLIENT free of cost. The store should have double lock arrangement with one key with the CLIENT Engineer-in-charge and the other with the Contractor. **All materials supplied by the contractor should be covered under storage insurance.**

36. 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.

37. BYE-LAWS

- a) 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 CLIENT 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, licence fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.

- b) 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.

- c) 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.
- d) 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.
- e) The work shall be carried out without infringing on any of the local Municipal Bye-Laws.

38. SUBCONTRACTS

The Contractor shall be fully responsible to CLIENT for the acts and omissions of his subcontractors and of persons directly or indirectly employed by them, as he is for the acts and omissions of persons employed by him.

Nothing contained in the contractual documents shall create any contractual relation between any subcontractor and the CLIENT.

In case of specialized nature of work requiring very high quality stipulations, such works shall not be subcontracted unless:-

- a) The subcontractor firm has sufficient expertise, equipment/plant back up and experience in the similar nature of work.
- b) The subcontractor firm has sufficient financial background. The firm should have atleast 20% of the value of work to be sublet as net assets.
- c) The subcontractor firm has a track record of completing the works on time and to the quality stipulations.
- d) The subcontractor firm has not run into litigation/ arbitration in the past three years with the clients.

In no event can any delay or unsatisfactory work conducted by the subcontractor can either be accepted or can be contractor adduce such delay or unsatisfactory work attributable to subletting of work. The main contractor shall be fully responsible for the contract and Management of subcontractors.

39. CONFORMITY TO RULES AND REGULATIONS

39.1. 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.

39.2. 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 upto 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.

40. CONTRACT DOCUMENTS

The Contract document is confidential and must strictly confined to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers, if necessary) and to the purpose of the contract.

41. PLAN OF OPERATION AND CO-ORDINATION

For execution of the work under the contract the contractor shall be required to co-ordinate his work with that of other contractors performing works at the site and also in the same areas. So far as practicable all contractors shall have equal rights to use all roads, ground and facilities made available for the joint use of the contractors. The contractor shall permit such works to be carried out without any hindrance and fully co-ordinate his activities with other agencies. No compensation or claim for such contingencies shall be entertained.

42. 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 works during 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 CLIENT. The contractor shall be fully liable to compensate CLIENT for any loss or damage to works till the time of taking over of the work by CLIENT.

43. ASSISTANCE FOR TAKING MEASUREMENTS

The contractor shall provide necessary labour and assistance to the Engineer-in-charge for checking layout, alignments, levels and other survey works connected with the execution of work and also for taking measurement for finalised works at no extra cost.

44. SCHEDULE OF QUANTITIES AND RATES

The schedule of quantities to be read in conjunction with these Particular Specifications, special conditions, general conditions of contract, specifications, drawings documents forming part of this contract. All corrections in the tender schedule shall be duly attested by the dated initials of the tenderer. Corrections which are not attested may entail the rejection of the tender. The tender document should be signed and returned without detaching any part of the document. Rates shall include labour, materials, tools, plants, appliances, transport, equipment, taxes, duties, water and power supply, metering and consumption charges, temporary plumbing, cost of cistern sheds for materials, contractor's supervision, overheads, profits, general risks or liabilities and all that is necessary for the satisfactory completion of the job. The rates shall be firm and shall not be subject to exchange variations, labour conditions or any conditions whatsoever other than what is approved in the contract.

45. SITE INVESTIGATION

The contractor acknowledges that he has satisfied himself as to the nature and location

of the work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labour, water, electric power, roads and uncertainties of weather, or similar physical conditions of the site, the conformation and conditions of the ground, the character, the quality and quantities of surface and sub-surface materials to be encountered, including the subsoil water levels, the character of equipment facilities needed preliminary to and during the progress of the work, and all other matters upon which information is reasonably obtainable and which can in any way affect the work or his cost thereof under this contract. Any failure of the contractor to acquaint himself with all the available information concerning these conditions will not relieve him from responsibility for not estimating properly the difficulty or cost of successfully performing the work. Non-familiarity with the site conditions will not be considered a reason either for extra claims or for not carrying out the work in strict conformity with drawings and specifications. The contractor shall note that if any clarifications regarding specifications, conditions of contract, schedule of quantities, scope of work, etc. are required, he should contact the Engineer-in-Charge, CLIENT. No claim on account of ambiguity in any respect will be entertained.

46. DRAINAGE ARRANGEMENTS

The contractor shall control the grading in the vicinity of the buildings and trenches, so that surface water is prevented from running into excavated areas. The contractor shall also be responsible to see that no area around his works becomes flooded during the rainy season because of his piled up material, etc. and subsequently flood other buildings. At the discretion of the Engineer-in-charge the contractor shall take steps to prevent flooding. It shall be the contractor's responsibility to keep areas around his work dry. The cost of repairing flood damage shall be the sole responsibility of the contractor.

47. 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 CLIENT. Equipment for measurement shall be made available at site for use of Engineer-in- Charge and shall be periodically calibrated.

48. 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 CLIENT 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, signages shall be provided as per directions of Engineer-in-charge.

SECTION IV

SECTION IV
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island
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SECTION IV
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

TECHNICAL SPECIFICATION

1. SCOPE OF WORK

1.1 The proposal is for Rewiring and providing new electrical fixtures in the Ex Forbes building for using as office space and MT Shed (Ex A-Tosh building). The **scope of work** includes providing Electrical facilities like wiring, lighting, electrical fixtures etc., as per the Bill of Quantities (BoQ) attached.

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

- (a) SITC of M V panel 200 A
- (b) Supply, Installation Testing and Commissioning (SITC) of 415 Volts, 63/40Amps. Distribution Board.
- (c) Supply and laying of Al, Armoured UG Cable 3.5CX95 Sqmm and LT Al UG cable of 3.5Cx25sqmm
- (d) Supply and laying of LT Copper UG, 3C X 1.5sqmm cable by clamping along the wall, above false ceiling, ground etc.
- (e) Electrical supply wiring with various sizes of FRLSH copper wires, concealed Conduit / Capping & casing etc, for various applications such as Computer points, power points etc. and 12 SWG bare Cu conductor for earthing
- (f) SITC of ceiling fans, with suitable rods, modification etc., wall mounting fans and exhaust fans
- (g) SITC of LED light fittings, LED tube light fittings, bulk head etc.
- (h) SITC of 12 way, 40 A, SPN, double door, MCB DB
- (i) SITC of 160A, FP MCCB, 50KA with enclosure and connecting to the existing MV panel at OLA substation for tapping supply to the Ex-Forbes building.
- (j) Providing Pipe earthing with GI pipe B class
- (k) SITC of outdoor 70W LED street light IP 65 fittings
- (l) SITC of Poly carbonate meter box with, 125A 4P isolator and 3phase TOD Smart energy meter with CT
- (m) Dismantling the old wiring materials, switch boards, switches and fans etc. and handing over to CoPT.
- (n) Make good the wall/ ceiling surface etc. after doing the wiring work etc.

The bidder shall visit the site, ascertain the site conditions and scope before bidding.

2. GENERAL TECHNICAL SPECIFICATION -SUPPLY OF MATERIALS

All materials required to complete the work as per given specifications etc, must be manufactured and supplied using fresh raw materials. Re-moulded, re-circulated 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.

TECHNICAL SPECIFICATION OF BoQ ITEMS

Sl. No.	Description of Items
	<u>I. Providing basic electrical facilities at Ex- Forbes Building</u>
1	M V panel 200 A as per annexure
2	Supply, fixing, testing and commissioning of 4-way surface/ recess mounting, vertical type, 415V, 40 A DB with 4P MCB + RCCB as incomer and 3PMCB and SP MCB as per requirements for Outgoings, enclosure made of sheet steel, dust protected, duly powder painted, inclusive of copper bus bar, common neutral link, earth bar, din bar for mounting MCBs outlets as required. (PDB)
3	Supply, fixing, testing and commissioning of 4-way surface/ recess mounting, vertical type, 415 V, 63A DB with 4P MCB + RCCB as incomer and 3PMCB and SP MCB as per requirements for Outgoings, enclosure made of sheet steel, dust protected, duly powder painted, inclusive of copper bus bar, common neutral link, earth bar, din bar for mounting MCBs outlets as required.
4	Supply, fixing and commissioning of 2X2feet/ 1X4feet 28W, 120Lum/W LED fittings , recessed fitting with suitable clamps by cutting the ceiling as required. etc. (2 nos. Light fittings have to be controlled by one switch).
5	Supply and fixing the 20W LED tube light fittings
6	Supply and fixing of 9/10W LED bulk head lamp for bathroom fittings etc.
7	SITC of Ceiling mounted LED 9W by cutting the ceiling etc. and making good the ceiling.
8	SITC of Mirror lamp LED 9W
9	Supply and fixing the outdoor 70W LED street light fittings IP 66 with bracket / GI pipe for fixing the same in the outside building wall etc. as required.
10	Supply and fixing of poly carbonate Junction Box of size 180mmX 150mmX 100mm with terminations etc.
11	Supply and providing end termination materials for 2.5/4 Sqmm Cucable with brass gland, sockets etc, as per requirements.
12	Supply, fixing and commissioning of 48 inch ceiling fan with rod , hook etc. as per requirements, BLDC motor, BEE 5 Star with regulator/remote.
13	Supply, fixing and commissioning of 18 inch wall mounted fan with metal leaf, clamp etc. as per requirements.

14	Supply and laying of Al, Armoured XLPE UG Cable 3.5CX95 Sqmm
15	SITC of 160A FP MCCB , 50KA , with enclosure, handle, spreader etc. with LSIG protection.
16	Supply and Laying of LT Al UG XLPE cable of 3.5Cx25sqmm , by clamping along the wall , above false ceiling, ground etc. as required.
17	Supply and Laying of LT Cu UG cable PVC insulated cable of 3Cx2.5sqmm by clamping along the wall, above false ceiling, ground etc. as required, for taking supply to gate lights etc.
18	Supply and providing end termination materials for 25 Sqmm Al/Cu cable with brass gland, sockets etc, as per requirements.
19	Supply and providing end termination materials for 95 Sqmm Al/CU cable with brass gland, sockets etc, as per requirements.
20	Supply and providing modular type 6A switch and 3pin socket including box, plate etc. and giving connections as required.
21	Supply and providing modular type 16A switch and 3pin socket including box, plate etc. and giving connections as required.
22	Supply of all materials and wiring for light/ fan point/ exhaust fan point/ wall fan point/ call bell point, with 1.5sq.mm FRLHS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit, with Modular type switch, Box, cover etc., complete, as required. (2 nos. tube light fittings have to be controlled by one switch and will be considered as one point)
23	Supply and fixing the modular switch/ socket with 3nos. 6A plug and 3 nos. switch with modular plate, switch and box including connections as required for giving supply to computer points etc..
24	Supply of all wiring materials and Wiring for circuit/ submain wiring alongwith earth wire with 2x1.5sqmm+1x1.5 qsmm (P+N+E) sizes of FRLSH PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit, capping and casing as required, for computer, wall fan , sockets etc.
25	Supplying and fixing 20-32 A, 240 V, SPN Industrial type socket outlet , with earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.
26	Supply of all materials and Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLHS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2x4Sqmm+ 1x4sqmm (P+N+E)
27	Supply of all wiring materials and Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLHS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2x2.5Sqmm+ 1x2.5sqmm(P+N+E) .
28	Providing Pipe earthing with B class GI pipe as per IS 3043, with cable pit and cover etc.

29	Supply and providing 12 SWG bare Cu conductor for earthing
30	12 way, 40 A, SPN, double door, MCB DB with DP MCB as incomer and out going as required
31	Water level Controller with wiring, sensors etc., complete.
32	Supply, fixing and commissioning of PVC 10/11inch Exhaust fan with shutter as required.
33	Supply, fixing and commissioning of Poly carbonate meter box with, 125A 4P isolator with provision for fixing 3 phase Energy meter etc. as per requirements.
34	SITC of 3phase TOD Smart energy meter with CT arrangements
35	Dismantling and handing over the old wiring materials, fans etc.
<u>II. Providing basic electrical facilities at MT Shed</u>	
1	Supply, fixing, testing and commissioning of 4-way surface/ recess mounting, vertical type, 415 V, 63 A DB with 4P MCB + RCCB as incomer and 3PMCB and SP MCB as per requirements for Outgoings, enclosure made of sheet steel, dust protected, duly powder painted, inclusive of copper bus bar, common neutral link, earth bar, din bar for mounting MCBs outlets as required.
2	Supply, fixing and commissioning of 4Feet 20W LED Tube light fitting with suitable clamps etc.
3	Supply and fixing of 20 W LED out door type IP 65 Tube light fittings
4	Supply and fixing of 9/10W LED bulk head lamp for bathroom fittings /mirror lights etc.
5	Supply and fixing the ceiling mounted 40W LED well glass fitting in the ceiling etc. as required.
6	Supply, fixing and commissioning of wall Mounting fan with metal leaf , 18 inch. With Supports etc.
7	Supply, fixing and commissioning of 48 inch ceiling fan BEE 5 Star rated with rod, hook etc. BLDC motor, as per requirements with Regulator/remote .
8	Supply and laying of Cu wheather proof service cable 4CX10Sqmm
9	Supply and Laying of LT AL cable 3.5C x 25 sqmm cable by clamping along the wall , above false ceiling, ground etc. as required .
10	Supply and providing end termination materials for 25 Sqmm Al cable with brass gland, sockets etc, as per requirements
11	Supply and fixing the modular switch/ socket with 3nos. 6A plug and 3 nos. switch with modular plate, switch and box including connections as required for giving supply to computer points etc..
12	Supply and providing modular type 6A switch and 3pin socket including box, plate etc. and giving connections as required.
13	Supply and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 A "C" curve, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.
14	Wiring Point for light/ fan / exhaust fan/ wall fan/ call bell point with 1.5 sq.mm FRLHS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit, with Modular type switch, Box , cover etc. complete etc. as required. (2

	nos. tube light fittings have to be controlled by one switch and will be considered as one point)
15	Supply of all materials and Wiring for circuit/ submain wiring alongwith earth wire with 2x1.5sqmm+1x1.5 qsmm (P+N+E) sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC capping and casing (Min 32 mm) as required for computer etc.
16	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLHS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2x2.5Sqmm+ 1x2.5sqmm(P+N+E).
17	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLHS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2x4Sqmm+ 1x4sqmm (P+N+E)
18	Providing Pipe earthing with GI pipe B class as per IS 3043 with cable pit, cover etc.
19	Supply and providing 12 SWG bare Cu conductor for earthing
20	12 way, 40 A, SPN, double door, MCB DB with DB MCB as incomer and out going as required
21	Supply,fixing and commissioning of good quality (ISI) 10/11 Inch Exhaust fan with shutter as required.
22	Supply,fixing and commissioning of meter box Polycarbonate with 63A 4P isolator etc. as per requirements
23	SITC of 3phase TOD Smart energy meter with CT arrangements
24	Dismantling and handing over the old wiring materials, fans etc.
25	Supply and fixing the out door 70W LED street light IP 65 fittings with bracket / GI pipe for fixing the same in the outside building wall etc. as required.

2.1 200A MV panel (item no.I(1) of BoQ)

2.1.1. General Specification

Normal voltage - 415 V, +/- 5%

Frequency - 50 cycles/sec

Bus bars - Copper with current carrying capacity of 1.2A /Sq mm for phase and for neutral half of main bus, Earth as per standards

- (i) The outgoing cables shall be connected to the bus bars directly and hence sufficient working space shall be provided between each phase and to body.
- (ii) The panels shall be type tested as per CPRI for the current rating specified. The panel manufactures shall be ISO 9001-2008 certified and CPRI approved.
- (iii) The material shall be CRCA sheet panels
- (iv) The cable entry shall be through from top or bottom as per the site location of panels, this has to be considered while making of drawing of panels. Sufficient knock outs to be provided.
- (v) The panel shall accommodate 1.1KV XLPE cable ranging from 3.5 C x 95 Sq. mm to 3.5C x 16 Sq. mm. Hence the size of the MSB shall be fabricated accordingly.
- (vi) The bus bar shall be supported with FRP/SMC support. The panel shall be in single front execution only.
- (vii) The general arrangement drawing and SLD of the panels shall be got approved by engineer in charge before its fabrication.

- (viii) The size of panels shall be uniform, which accommodate maximum number of cable termination shall be treated as standard one.
- (ix) The Panel shall be made of CRCA sheet steel clad with the frame fabricated out of 14SWG cold rolled sheet steel and single/double door entry shall be provided depends on the convenience. For the Load bearing membrane the angle supports shall be provided with suitable size
- (x) All metal sheets shall undergo 7 tank metal treatment process. The finish of panel board shall be epoxy grey. All joints and connections of the panel members shall be made of galvanized. Zinc passivated or cadmium plated high quality steel bolts, nuts and washers secured against loosening.
- (xi) The decision of Engineer in charge shall be final regarding the dimensions of the DB and the SLD, GA diagram etc of DB shall be got approved before its fabrication.

(1) 200A MV Panel (to be installed at Ex-Forbes building)

	Item	Description	QTY
A	Incomer	200 A, 3P MCCB, 35 KA, 415V, 3 Phase with Micro-Pro., LSIG trip, with spreader links. Voltmeter & ammeter with selector switch, Indication lamps etc, shall also be provided as per the details attached.	1
B.	Out Goings		
	1	100A, 35 KA 4P MCCB, Thermal/magnetic trip O/C + E/F shunt trip, with spreader links as per the details attached	2
	2	63 A, 25 KA 3P MCCB, Thermal/magnetic trip O/C + E/F shunt trip with spreader links as per the details attached	3

(1) Physical Layout

Individual MCCBs, horizontal and bus bars shall be separated from each other by required spacing, sleeves etc. The panel shall be done under/up entry of cables as per site requirements. The panel shall be in single front execution only. The general arrangement drawing and SLD of the feeder pillars shall be got approved by engineer in charge before its fabrication.

(2) Busbars

The bus bars shall be of high conductivity copper strip of specified capacity (1.2 Ampere/Sqmm) having uniform current rating throughout its length. Only SMC or FRP supports shall be used for bus supports. All bus bars shall be colour-coded using PVC sleeves and designed to withstand specified short circuit current for 1 second.

(3) Earth Bus

Earth bus shall be provided through out the length of the switchboard and panel with provision for interconnection to earthing grid. Earth bus shall be connected to

the proposed earth pits. All non-current carrying metallic parts of the mounted equipment shall be earthed. Doors and movable parts shall be earthed using braded tinned copper connection.

2.2 MAIN & SUB DISTRIBUTION BOARDS

Supply, fixing, testing and commissioning of 4-way surface/ recess mounting, vertical type, 415 V, 63 A DB with 4P MCB + RCCB as incomer and 3PMCB and SP MCB as per requirements for Outgoings, enclosure made of sheet steel, dust protected, duly powder painted, inclusive of copper bus bar, common neutral link, earth bar, din bar for mounting MCBs outlets as required.

SPEC: IP43, IK09, surface/ recess mounting, double door, CRCA SS, RAL9003, Powder coated, conforms to IS 8623-1, IEC 61439-1&3

A) 63 A TPN 4 way MCB DB (item no.I(3) &II(1) of BoQ)

Incomer – 3 phase, 63 A 3 phase, 4 pole MCB, 25KA with RCCB.

Outgoing – 1) 32A 3p MCB- 3no.

2) 20A/16A SP MCB- 2nos.

3) 10A SP MCB-2nos.

4) 32-6A SP MCB-remaining as per requirements.

B) 40A TPN 4 way MCB DB (item no.I(2) of BoQ)

Incomer – 40 A 3 phase, 4 pole TPN, 25KA with RCCB.

Out going – 1) 32A 3p MCB- 3no.

2) 20A/16A SP MCB- 2nos.

3) 10A SP MCB-2nos.

4) 6A SP MCB-remaining as per requirement.

C) 12WAY SP MCB DB (item no.I(30) & II (20) of BoQ)

Incomer – DP, 40A MCB, 15KA with 1no.40A RCCB.

Out Going – 32 A/20A/16A/6A SP MCB- as per requirement.

The double door DBs are to be suitable for flush/surface mounting, with double doors and to be provided with inbuilt additional compartment for looping of loose wires/adaptor boxes for entry of armoured cables with IP 42 category of protection and conform to IS: 8623-1 &3 , IEC 61439-1&3. The exact location of DB shall be finalized in consultation with the engineer-in-charge.

2.4 LED Fittings

1) 2X2 FEET AND 1X4 FEET CEILING MOUNTED LUMINARY (item no.I(4) of BoQ)

Supply, fixing and commissioning of 28 W, 120lumens per Watt, LED ceiling luminaries, 2X2 feet/ 1X4feet, in the gypsum board/equivalent ceiling by cutting the same, giving connection, providing supports etc. and making good the surface if required. The luminaries shall be Single Sheet Deep drawn CRCA sheet steel housing comprising of LED's. Opal diffuser/ PMMA. Luminaries should have Short Circuit, Reverse polarity protection & Open Load protection and inbuilt surge protection of 4 KV. THD <10%, PF >0.95, Life class of L70@50K Burning hours, 5700K. (2 nos. Light fittings have to be controlled by one switch).

- 2) **20W LED TUBE LIGHT FITTINGS (item no.I(5) & II(2)of BoQ)**
- 3) **Bulk head (Item no.I(6))**
Supply and fixing of 9/10W LED bulk head lamp for bathroom fittings etc
- 4) **Ceiling mounted LED (Item no.I(7))**
SITC of Ceiling mounted. 9W Slim design LED recessed round/ square polycarbonate housing down lighter with integral drive, 100 lum/watt. by cutting the ceiling etc. and making good the ceiling
- 5) **SITC of Mirror lamp (Item no.I(8))**
LED 9W Mirror lamp
- 6) **Junction box ((Item no.I(10))**
The Polycarbonate Junction box for taking the supply to the high mast shall be out door type of Size 180mmX 150mmX 100mm, with terminations etc. Make: Hensel or equivalent
- 7) **20W LED OUTDOOR TUBE LIGHT FITTINGS (item no.II(3) of BoQ)**
Supply and fixing of 20 W LED out door type IP 65 Tube light fittings.
The item shall be PC Housing, PC Diffuser, weather proof, LED batten, industrial luminaire with 110 lum/watt, 4kV surge protection, IP 65.
- 8) **40W LED WELLGLASS FITTINGS (item no.II(5) of BoQ)**
Al. PDC Housing, Wellglass luminaires with open diffuser equipped with 4kV built-in surge protection IP65 protection rating with Eye bolt & cradle for fixing.
- 9) **Fans**
- (a) **Ceiling fans (Item no.I(12) & II(7) of BoQ)**
Supply, fixing and commissioning of 48 inch ceiling fan with rod , hook etc. as per requirements, BLDC motor, BEE 5 Star with regulator/remote.
- (b) **Wall mounting fan (Item no.I(13) & II(6))**
Supply, fixing and commissioning of 18 inch wall mounted fan with metal leaf, clamp etc. as per requirements, with supports.
- (c) **Exhaust fan (item no.I(32) &II(21))**
Supply, fixing and commissioning of good quality (ISI) 10/11 inch Exhaust fan with shutter as required.
- 10) **LT UG Cables (Item nos.I(14), (16) &II(9))**
- a. **Scope**
This specification provides for manufacture, testing at works before dispatch and delivery of 1.1 KV grade **XLPE insulated, FR** cables as required.
- 10.2 Application**
The 1.1 KV cable is intended for use on Distribution network, lighting purpose etc. for outdoor application.
- 10.3 Codes & standards as applicable in schedule**
All standards, specifications and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions as on date of opening of bid. In case of conflict between this specification and those (IS: codes, standards, etc.) referred to herein, the former shall prevail. All the cables shall conform to the requirements of the following standards and codes for 1.1KV grades if any applicable.
The cables shall comply with the latest edition of the following standards:
- (i) IS:1554 - PVC insulated heavy duty cables

- (ii) IS:7098 (Part –I) - XLPE Cables – LT
- (iii) IS:7098 (Part -II) - Cross-linked polyethylene insulated PVC sheathed cables for working voltages from 3.3 kV up to and including 33 kV.
- (iv) IS:1255 – 1983 - Code of practice for installation and maintenance of power cables.
- (v) IS:8130 - Conductors for insulated electric cables and flexible cords.
- (vi) IS:5831 - PVC insulation and sheath of electric cables
- (vii) IS:5819-1970 - Recommended short circuit rating of high voltage PVC cables
- (viii) IS:3961-1987 - Recommended current rating
- (ix) IS:3975 - Mild steel wires, strips and tapes for armouring of cables.
- (x) IS:2633 - Methods of testing weight, thickness and uniformity of coating on hot dipped galvanized articles.
- (xi) IS:209 - Specification of zinc.
- (xii) IS:3961 (Part-II) - Recommended current ratings for PVC insulated and PVC sheathed heavy duty cables
- (xiii) IS:10418 - Wooden drums for electric cables.
- (xiv) IEC:540 & 540A - Test methods for insulation and sheaths of electric cables and cords
- (xv) IS:10462 (Part-I) - Fictitious calculation methods for determination of dimensions of protective covering of electrometric and thermoplastic insulated cables.
- (xvi) IS:10810 (Part 58) - Oxygen Index test
- (xvii) BS 7655 LTS2 - Flammability Characteristics of Cables
- (xviii) IEC 60092-SHF-1 - Flammability Characteristics of Cables
- (xix) IEC-332 - Flammability Characteristics of Cables
- (xx) SS4241475 class F3- Flammability Characteristics of Cables
- (xxi) ASTM-D-2843 - Determination of smoke generation of outer sheath under fire.

10.4 Technical particulars of LT cables

- (i) Size of Cable As per schedule of works
- (ii) Voltage Rating 1100 V
- (iii) Conductor Material Plain Aluminium /copper as per Specification
- (iv) Insulation - XLPE
 - Inner sheath thickness As per IS
- (v) Outer sheath -Process of application Extrusion
 - Thickness-As per IS.

10.5 Technical requirements

The cables shall be suitable for laying on racks, in ducts, trenches, conduits and underground (buried) installation with chances of flooding by water. Cables shall be Fire retardant as required and specified if any and designed to withstand all mechanical, electrical and thermal stresses developed under steady state and transient operating conditions as specified elsewhere in this specification. XLPE insulation shall be suitable for continuous conductor temperature of 90°C and short circuit conductor temperature of 250°C. Outer sheath shall be of PVC black in colour.

Cores of cables shall be identified by colouring of insulation or by providing coloured tapes helically over the cores, with Red, Yellow, Blue & black colours. In addition to manufacturer's identification on cables as per IS, following marking shall also be provided over outer sheath:

- (i) Cable size and voltage grade-To be embossed.
- (ii) Sequential marking of length of the cable in meters at every one meter to be embossed/ printed.

The embossing / printing shall be progressive, automatic, in line and marking shall be legible. Allowable tolerances on the overall diameter of the cables shall be +/-2 mm maximum over the declared value in the technical data sheets. In plant repairs to the cables shall not be accepted. Pimples, fish eye, blow holes etc. are not acceptable. The cross-sectional area of the metallic screen strip/tape/wires shall be considered in sizing calculations.

11) MOULDED CASE CIRCUIT BREAKERS (MCCBS) (item no.I(15))

SITC of 160A FP MCCB, 50KA , with enclosure, handle, spreader etc. with LSIG protection.

Moulded case circuit breaker shall be of current limiting type and preferably double break. MCCB shall conform to IS 13947-1/IEC 947-1 for general rules and IS 13947-2/IEC 947-2 for circuit breakers in all respects. The MCCB case & cover shall be made of high strength heat resistant and flame retardant thermosetting insulating material. The operating handle shall be quick make, quick break trip free type. The operating handle shall have suitable 'ON', 'OFF' indicators. In order to ensure suitability for isolation complying with IS13947-2/IEC947-2, the operating mechanism shall be designed such that the toggle or handle can only be in 'OFF' position. The MCCB unless otherwise specified shall have thermal-magnetic trip unit with adjustable overload protection from 80% to 100% of nominal current (In) and fixed magnetic protection. The MCCB shall be possible to fully co-ordinate the over-load & short-circuit tripping of the circuit breakers with the upstream and downstream circuit breakers to provide Total Discrimination. The rating of the MCCBs shall be as per the requirements of the equipments installed.

11.1 Material

The DB's are to be fabricated out of 14 SWG CRCA sheet / IK09 for double door suitable for all weather operation. E current carrying parts are to be made of electrolytic grade copper and are to be rated for the duly intended. Powder coated ensuring rust prevention and scratch resistant. DBs shall be painted epoxy gray.

11.2 Accessories

Following accessories are to be provided:-

- a) Copper bus bars of rated current capacity per phase.
- b) Special brass terminals to ensure perfect connections of incoming cable with the bus bars, colour coded interconnecting wire set.

- c) Earth bars for firm earthing and for facilitating individual earthings for each outgoing terminal, door earthing etc. Specified capacity neutral link bus bars shall be provided.
 - d) Suitable gaskets to ensure weather proof conditions
 - e) Sufficient number of blanking plates.
 - f) All MCB not specified otherwise shall be c curve with 10ka or above as per required breaking capacity.
- The item shall be of powder coated CRCA sheet steel double door distribution board, IK 09 etc. and neutral link with all accessories as per annexure.

12) Electrical WIRING (item no.I(22),

12.1 General Specifications For Wiring And Electrical Installations

All the switches, plugs etc. shall be of modular type with plates, cover etc. complete. All cables shall be FRLSH PVC insulated copper conductor multi stranded cable. Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm Fire Retardant PVC insulated copper conductor multi stranded cable in surface / concealed medium class PVC conduit, with Modular type switch, modular plates, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLSH PVC insulated multi stranded core cable etc as required.

The laying of cables for taking main supply and control supply shall be laid along the available duct provided at the back side of the Gate Building for taking supply / signals from top to bottom and verse-wise . The cable shall be fixed firmly through the duct. The cable can be laid through inside room by drilling etc. if need by drilling holes in the floor.

All inter connections shall be provided as follows:

The outgoing of 6 A & 10A MCBs shall be connected to the light/ fan/ plug points with 1.5 Sq mm copper cable as required .

The outgoing of 16/20 A & 20A MCB's shall be connected to power plug points with 4/2.5 Sqmm copper cable. The other interconnections with TPN isolator shall also be carried out with suitable size of copper cables.

Point wiring shall include all works necessary for complete wiring of a switch circuit of any length from the tapping point on the distribution circuit to the following through the switch.

- a) Ceiling rose or connector (in the case of ceiling/exhaust fan point).
- b) Ceiling rose (in the case of pendant except stiff pendant point).
- c) Back plate (in the case of stiff pendants and fittings with down rods)
- d) Socket and outlets (in the case of socket outlets points)
- e) Lamp holder (in the case of wall brackets, batten points, bulk head and similar fittings).

12.2 The following shall be deemed to be included in the point wiring.

Modular switch, plates, cover, ceiling rose or connector etc as required.

- a) Any special and suitable M. S. Box for neatly housing the connector and covering the fan hook in case of fan point.
- b) Earth wire from the distribution boards to all current carrying apparatus through switch boards, m. S. Boxes etc.
- c) All metal blocks, boards, covers and m. S. Boxes, recessed or surface mounted including those required for mounting fan regulators but excluding those for fixing the distribution switch boards.
- d) All fixing accessories such as clips, nails, screws, phil plug, rawl plug etc. As

required.

- e) Connection to ceiling rose, connector socket outlets, lamp holders, switch, fan regulator etc.
- f) Looping in the same switch board and inter connections between points on the same circuit.

12.3 All points in the distribution system shall be measured under point wiring irrespective of length of circuit from the respective switches to the ceiling rose/connector etc.

In the case of plug points the point length shall be measured from the DB to individual plug socket.

In case of point with more than one light point controlled by the same switch, the complete items shall be considered as separate point and the rate shall be quoted accordingly.

A light point controlled by 2 Nos. of control switches shall be measured as one point from the switch to either side of the appliance viz. total of two points.

Power wiring shall be kept separate and distinct from lighting and fan wiring. All conductors shall run as far as possible along the walls and ceiling so as to be easily accessible and capable of being thoroughly inspected except for concealed system.

In all types of wiring due consideration shall be given for neatness, good appearance and safety. The balancing of circuits in 3 wires on poly phase installation shall be arranged to the satisfaction of Engineer-in-charge. In large/important rooms light fans and socket outlet points shall be distributed over more than one circuit as directed by the Engineer-in-charge.

The Conductor of flexible cable for interconnecting the fan/lights to the respective points shall be of copper. The minimum permissible size of conductor for flexible cable shall be 16/0.2 mm. Only three core flexible cables shall be used for connecting single phase appliances.

The Control switches are to be connected to phase conductor. The complete wiring shall be done as per IE rules & regulations. In the case where the wiring is done as per phenolic laminated sheet/ hylum, the switchboards for mounting switches, plug sockets, etc shall be made of M S boxes, with hylum top cover and piano switches of 6 A capacity and suitable colour. Switch boxes shall be mounted flush with the wall. All outlets such as switches, sockets etc shall be flush mounting type.

All Civil works connected with this contract like plastering, grouting, making holes for providing fans, making good any damages caused etc shall be done by the contractor. The wall/ ceiling etc shall be re plastered by providing original surface coating using putty, paints etc as required. No additional cost shall be given for repairing/resurfacing the wall, ceilings etc.

The plug sockets shall be earthed continuously using separate multi stranded Cu wire (green). The light fittings and ceiling roses shall be fixed on junction boxes/ fixed on the false ceiling. All light fittings and fans shall be connected to the ceiling roses using twin core PVC insulated and overall sheathed flexible copper conductor cable.

12.4 All internal wiring shall be securely supported, neatly arranged readily accessible and connected to equipment terminals and terminal blocks. Wire terminations shall be made with solder less crimping type of tinned copper lugs which firmly grip the conductor and insulation. Insulated sleeves shall be provided at all the wire terminations. Engraved core identification plastic ferrules marked to correspond with the wiring diagram shall be fitted at both ends of each wire. Ferrules shall fit tightly on the wires and shall not fall off when the wire is disconnected from

terminal blocks. All wires directly connected to trip circuit breaker shall be distinguished by the addition of a red coloured unlettered ferrule

12.5 CONDUITS, PIPES AND ACCESSORIES.

All non-metallic conduit pipes and accessories shall be of suitable material complying with is:2509-1973 and is:3419-1989 for rigid conduits and is:9537 (part 5) 2000 for flexible conduits. the interior of the conduits shall be free from obstructions. the rigid conduit pipes shall be isi marked. the conduits shall be circular in cross-section. the conduits shall be designated by their nominal outside diameter. no non-metallic conduit less than 20 mm in diameter shall be used. voltage rating for cu wire shall be 650/1100v FRLS PVC insulated. the conduit wiring system shall be complete in all respect including accessories. rigid conduit accessories shall be normally of grip type. flexible conduit accessories shall be of threaded type. bends, couplers etc shall be solid type in recessed type of works, and may be solid or inspection type as required, in surface type of works. saddles for fixing conduits shall be heavy gauge non-metallic type with base.

13 WATER CONTROLLER for over head water tank and automatic water sensor for Underground tank.

The scope includes Supply, fixing , testing and commissioning of reputed make Automatic level controller/ Water sensor including supply and laying of suitable cables and all accessories in complete for functioning the same .

1. Water controller is intended for automatic sensing and operation of water pump motor for filling the OH tank provided at the top of the third floor in gate building.
2. The sensor is envisaged for automatic siren for sensing and alarming with suitable siren for the water level in the UG tank for avoiding the over flow of water from the UG tank , since the inlet pipe line is directed connected from the main water distribution system in the Willingdon island.

14 LED STREET LIGHTS ((Item no.I(9) II(25) of BoQ)

Data sheet of LED Luminaire

Sl. No.	Parameters	Specification
1	Make of LED	CREE/Lumileds/Osram/ Nichia/ Supplier's make
2	Type of LED	High power SMD LED
3	System Life of LED Luminaries	50,000 burning hours @L70
4	Type of Luminaries	Cut Off (as per IS1944)
5	Efficacy of LED	Min. 120 lm/W
6	Total System Wattage	as per specification in the tender
7	Driver Operating Voltage	140-270 V
8	Frequency	50-60 Hz
9	Driver Current	According to the wattage.

10	Power Factor	>0.95
11	THD	<10%
12	Driver Efficiency	at least 85%
13	Surge Protection	4kV in-built and 10kV external surge protection
14	IP Protection	IP 66 or above
15	IK Rating (IEC 62262, 2002)	IK 05 or above.
16	Housing	The fittings shall have Pressure die-cast housing with heat resistant toughened clear glass / acrylic diffuser fixed with SS screws and with weatherproof gasket for LEDs and control gear compartments
17	Cover	Polycarbonate/Toughened Glass
18	Ambient Temperature	plus 35 degrees C
19	Working Humidity	0 to 90% RH
20	System Lumen Output	as per the standard wattage specification .
21	Efficacy of Luminary	>120 lm/W
22	CCT (Correlated Color Temperature)	5000K-6500K
23	CRI (Color Rendering Index)	>=70
24	Optical Assembly	Structured LED array for optimized roadway photometric distribution with specific lenses designed to optimize application efficiency and minimize glare. Each LED is associated with a specific lens that generates the complete photometric distribution of the luminaire
25	Test Reports	LM80, LM79 and Test Certificate of luminaire from an NABL accredited laboratory or equivalent .

The LED street light luminaries shall be 70 Watts with the heat sink, driver, etc. of the same company. The fittings shall have minimum IP 66 degree of protection. The LED fittings shall be mounted firmly on an arm with suitable Stainless steel allen bolts. The LED light fittings shall have warranty for at least 3 years.

15 PIPE EARTHING

Pipe earthing has to be done as per IS 3043. Earthing shall be done with 'B' class GI pipe of minimum 40mm dia. With at least 2mtr. Length having cable pit and cover etc. as per standard

16 ENERGY METER PANEL & TOD METER

Energy meter panel shall be of polycarbonate equipped with required rating CT, 25A TP Isolator and other items, complete, as per KSEBL standards. The panel shall have the provision for fixing three phase smart TOD meter of existing make and model at CoPA with all accessories and providing communication with existing smart meter network

17 DISMANTLING

Dismantling of old/ damaged existing electrical wiring materials, electrical fittings, distribution boards, panels etc., The removed portions shall be made good with cement plaster etc. by the contractor at his own cost. The dismantled/ removed items shall be handed over to the scrap yard or as directed by the Engineer-in-charge.

18 GENERAL CONDITIONS FOR INSTALLATION OF EQUIPMENTS

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.

- a) 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.

19 STANDARD REQUIREMENTS FOR TESTING AND COMMISSIONING

- a) The standard requirements for testing and commissioning are furnished below.
- b) 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.
- c) 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 energizing the equipment.

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. 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, valves, etc., shall be checked for leakproofness. Oil filling if found required shall be done with dry and clean oil. Gaskets shall be replaced if found required. The condition of the oil shall be tested in accordance with IS-335.

20 GENERAL SPECIFICATIONS FOR WIRING AND ELECTRICAL INSTALLATIONS

All the switches, plugs etc. shall be of modular type with plates, cover etc. complete. The wiring shall be recessed type and cutting of the wall shall be done by the contractor and after fixing of conduits, DBs etc., shall be made good. All wiring cables shall be Fire Retardant FRLSH PVC PVC insulated copper conductor multi stranded cable. Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm Fire Retardant PVC insulated copper conductor multi stranded cable in surface / concealed medium class PVC conduit, with Modular type switch, modular plates, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLSH PVC insulated multi stranded core cable etc as required All inter connections shall be provided as follows:

- A. The outgoing of 6 A & 10A MCBs shall be connected to the light/ fan/ plug points with 1.5 Sq mm copper cable.
- B. The outgoing of 16/20 A & 20A MCBs shall be connected to power plug points with 4/2.5 Sqmm copper cable. The other interconnections with TPN isolator shall also be carried out with suitable size of copper cables.
- C. Point wiring shall include all works necessary for complete wiring of a switch circuit of any length from the tapping point on the distribution circuit to the following through the switch.
 - a. Ceiling rose or connector (in the case of ceiling/exhaust fan point).
 - b. Ceiling rose (in the case of pendant except stiff pendant point).
 - c. Back plate (in the case of stiff pendants and fittings with down rods)
 - d. Socket and Outlets (in the case of socket outlets points)
 - e. Lamp Holder (in the case of wall brackets, batten points, bulk head and similar fittings).
- D. The following shall be deemed to be included in the point wiring.

- a. Modular Switch, plates, cover, Ceiling rose or connector etc as required.
 - b. All metal boxes, boards, covers and G I Boxes, recessed or surface mounted including those required for mounting fan , distribution switch boards etc..
 - c. All fixing accessories such as clips, nails, screws, Fiber plug, rawl plug etc. as required.
 - d. Connection to ceiling rose, connector socket outlets, Lamp holders, switch, fan regulator etc.
 - e. Looping in the same switch board and inter connections between points on the same circuit.
- E. All points in the distribution system shall be measured under point wiring irrespective of length of circuit from the respective switches to the ceiling rose/connector etc.
- F. In the case of plug points the point length shall be measured from the DB to individual plug socket.
- G. In case of point with more than one light point controlled by the same switch, the complete items shall be considered as separate point and the rate shall be quoted accordingly.
- H. A light point controlled by 2 Nos. of control switches shall be measured as one point from the switch to either side of the appliance viz. total of two points.
- I. Power wiring shall be kept separate and distinct from lighting and fan wiring. All conductors shall run as far as possible along the walls and ceiling so as to be easily accessible and capable of being thoroughly inspected except for concealed system. In all types of wiring due consideration shall be given for neatness, good appearance and safety. The balancing of circuits in 3 wires on poly phase installation shall be arranged to the satisfaction of Engineer-in-charge. In large/important rooms light fans and socket outlet points shall be distributed over more than one circuit as directed by the Engineer-in-charge.
- J. The Conductor of flexible cable for interconnecting the fan/lights to the respective points shall be of copper.
- K. The Control switches are to be connected to phase conductor. The complete wiring shall be done as per IE rules & regulations. Switch boxes shall be mounted flush with the wall. All outlets such as switches, sockets etc shall be flush mounting type.
- L. All Civil works connected with this contract like plastering, grouting, making holes for providing fans, making good any damages caused etc shall be done by the contractor. The wall/ ceiling etc shall be re plastered by providing original surface coating using putty, paints etc as required. No additional cost shall be given for repairing/resurfacing the wall, ceilings etc.
- M. The plug sockets shall be earthed continuously using separate multi stranded Cu wire (green). The light fittings and ceiling roses shall be fixed on junction boxes/ fixed on the false ceiling. All light fittings and fans shall be connected to the ceiling roses using twin core PVC insulated and overall sheathed flexible copper conductor cable
- N. All internal wiring shall be securely supported, neatly arranged readily accessible and connected to equipment terminals and terminal blocks. Wire terminations shall be made with solder less crimping type of tinned copper lugs which firmly grip the conductor and insulation. Insulated sleeves shall be provided at all the wire terminations. Engraved core identification plastic ferrules marked to correspond with the wiring diagram shall be fitted at both ends of each wire.

Ferrules shall fit tightly on the wires and shall not fall off when the wire is disconnected from terminal blocks. All wires directly connected to trip circuit breaker shall be distinguished by the addition of a red coloured unlettered ferrule.

21 PROVIDING END TERMINATION OF LT CABLES (Item no.I(11),(18), I (19)& II (10) of BoQ)

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/pvc 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.

22 SPECIAL CONDITIONS FOR ELECTRICAL WORKS

- a) All current carrying components in all installation shall be of appropriate rating of voltage and frequency as required at respective areas.
- b) All equipments to be supplied and works to be executed shall conform to the CEA standards including protection and metering accessories. No extra amount will be paid in this regard.
- c) All testing and calibration etc are to be carried out as per requirement of statutory authority concerned.

23 TECHNICAL SPECIFICATIONS OF ELECTRICAL WORKS

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

1. Complete design and engineering of all the systems, sub-systems, equipment, material and services.
2. 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 part of this specification and Contractor is bound to acquiescence of the same.
3. 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.

23.2 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 for providing all necessary testing and commissioning personal, tools and plant, test equipment, etc.

The Contractor shall identify all interface issues with Employer and other agencies, and shall be responsible for each interfacing, coordination and exchange of all necessary information.

23.3 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 this 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 Bidder shall possess at least “B” class electrical license issued by the Kerala State Electricity Licensing Board.

The Contractor shall do complete coordination with all local and statutory agencies for execution of complete works including obtaining clearance for energizing of the HT system upon completion of entire works.

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.

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.

24. APPROVED MAKES

	ITEM	MAKES
1	PVC CONDUIT PIPES / CASING & CAPPING	BALCO/ ATUL/ GEO/ CLIPSAL/ PRECISION/ AVONPLAST/ KONSEAL
2	WIRING / LT CABLE	FINOLEX/ QFLEX/ RR KABEL/ RPG CABLES/ LAPP KABEL/ V-GUARD/ HAVELLS/ L&T/ RALLISON /KEI/PRIMECABLE /GLOSTER/ APAR
3	MODULAR SWITCHES/ PLUG SOCKETS/ TELEPHONE SOCKETS	ANCHOR/ MK/ LEADER / CRABTREE/SIEMENS/ FINOLEX/LEGRAND/ABB / INDOASIAN
4	CEILING FAN / WALL MOUNTING FAN/ EXHAUST FAN	CROMPTON / BAJAJ / USHA / KHAITAN / HAVELLS / ORIENT / ALMONARD
5	LED LIGHT FITTINGS	OSRAM / BAJAJ/ CG/ PHILIPS / WIPRO/ GE / POLYCAB / LIGHTING TECHNOLOGIES/ KLITE
6	RCCB / MCB	LEGRAND / MERLIN GERIN / MK / ABB/ INDOASIAN / L &T / SIEMENS /SCHNEIDER / HPL
7	INDUSTRIAL PLUG WITH MCB	ABB / HAGER / HAVELLS / INDOASIAN / CROMPTON/ LEGRAND / SCHNEIDER / L& T / HPL
8	DISTRIBUTION BOARD	ABB/ L&T/ SIEMENS/ SCHNEIDER /HENSEL / MENNEKES/ HAGGER/ LEGRAND/ HPL
9	1.1 KV XLPE CABLE	CCI / INCAB/ UNIVERSAL/ RPG/ NICCO/ TORRENT / POLYCAB / PARAMOUNT/ KEI / HAVELLS / FINOLEX / V-GUARD/ L&T / PRIMECAB / RR KABEL / GLOSTER
10	CABLE TERMINATION KIT	RAYCHEM /MAHINDRA / DENSON/3M/CCI / CABSEAL
11	TOD ENERGY METER	L&T/ ENERCON/SECURE
12	ENERGY METER / AMMETER / VOLTMETER	SIMCO / MECO/ L&T/ HPL/ AE / RISHAB / SCHNEIDER / SECURE /SOCOMECEC / CONZERVE /SIEMENS/ABB/C&S

13	RELAYS	ABB/ L&T/ SIEMENS / RISHAB / GE /SCHNEIDER / ALSTOM / EASUN REYROLLE / C&S
14	CURRENT / POTENTIAL TRANSFORMER	INTRANS/ KAPPA/ INDUS/ CG/ CYRO/ABB/BHEL/CG/ MEGAWIN/TRANSDELTA / KEL
15	MCCB / MCB / CONTACTOR / TIMER	LEGRAND / MERLIN GERIN / MK / ABB/ INDOASIAN / L &T / SIEMENS /SCHNEIDER / HPL
15	LT ACB	LEGRAND / ABB/ L &T /SIEMENS /SCHNEIDER
16	INDUSTRIAL PLUG WITH MCB	ABB / HAGER / HAVELLS / INDOASIAN / CROMPTON / LEGRAND / SCHNEIDER / L& T / HPL
17	PLUG SOCKETS -IP66	MENNEKES / HENSEL / MERLIN GERIN / L&T / ABB / WALTHER / CAPE
18	STREET LIGHT POLE	BAJAJ / GE / ASTER / CG / PHILIPS / K LITE / UNIQUE POLES
19	LED street / flood light fittings	OSRAM / BAJAJ/ CG/ PHILIPS / WIPRO/ GE
20	LED light fittings	OSRAM / BAJAJ/ CG/ PHILIPS / WIPRO/ GE /POLYCAB / Lighting Technologies
21	PVC CONDUIT PIPES / CASING & CAPPING	BALCO/ ATUL/ GEO/ CLIPSAL/ PRECISION/ AVONPLAST/ KONSEAL
22	HDPE PIPE/ FLEXIBLE HOSE	KONDOOR or any other make with BIS
23	WIRING CABLE	FINOLEX/ QFLEX/ RR KABEL/ RPG CABLES/ LAPP KABEL/ V-GUARD/ HAVELLS/ L&T/ RALLISON
24	INSTRUMENTATION / TELEPHONE CABLES	TRACO / HINDUSTAN CABLES / DELTON / FINOLEX / USHA BELTRON / PRIMECAB / VIDYA
25	MODULAR SWITCHES/ PLUG SOCKETS/ CEILING ROSE	ANCHOR/ MK/ LEADER / CRABTREE/SIEMENS/ FINOLEX/LEGRAND/ABB / INDOASIAN
26	MV PANEL / DISTRIBUTION BOARD	ABB/ INTRANS/ MEGAWIN/HESSEL/ WAVES/POWER CONTORLS / ABB /L&T/ SIEMENS/SCHNEIDER /HENSEL/MENNEKAS/HAGGER/ IMPERIAL
27	CEILING/ WALL MOUNTED / EXHAUST FAN	CROMPTON / BAJAJ / USHA / KHAITAN / HAVELLS / ORIENT / ALMONARD
28	ALTERNATOR	CROMPTON GREAVES / STAMFORD / LEROYSOMER / KIRLOSKAR / KEL / BHEL
29	FRP CABLE TRAY	PUSTRON/ SUMIP/ ERCON OR FIRM HAVING ISO AND CERTIFICATES AS PER THE TENDER SPECIFICATION .
30	GI CABLE TRAY	PUSTRON/ SUMIP/ ERCON/L&T OR REPUTED MAKE WITH ISO CERTIFICATION.

*Makes of items not mentioned if any shall be get approved from Engineer in charge before executing the work.

SECTION V

SECTION V
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

Drawings

NIL

SECTION VI

SECTION -VI
COCHIN PORT AUTHORITY
MECHANICAL ENGINEERING DEPARTMENT
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

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SECTION VI
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
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SECTION VI
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

1. PREAMBLE TO BILL OF QUANTITIES

2. General Instructions

2.1. General

- 2.1.1.** 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.
- 2.1.2.** 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.
- 2.1.3.** The detailed descriptions of work and materials given in the Specifications are not necessarily be repeated in the Bill of Quantities.
- 2.1.4.** 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.
- 2.1.5.** 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.

2.2. Rates and Prices to be Inclusive

- 2.2.1.** 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 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.
- 2.2.2.** 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.

- 2.2.3.** 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.
- 2.2.4.** The drawings for tender purposes are indicative only of the work to be carried out. However, the Tenderer must allow within his price for the items of work included in the Tender Documents for the details which will appear on subsequent drawings developed for construction purposes. Rate and price shall include any additional design/ detailing to be carried out by contractor.
- 2.2.5.** 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:
- i) Supervision and labour for the Works;
 - ii) All materials, installation/erection, handling and transportation;
 - iii) All Contractor's Equipment;
 - iv) All testing, commissioning, insurance, maintenance, security, welfare facilities, overheads and profit and every incidental and contingent costs and charges whatsoever including;
 - v) All temporary fencing, watching, lighting, sanitary accommodation, general security arrangements, welfare facilities and first aid provision;
 - vi) Provision and maintenance of Contractor's Site offices, cabins, huts, maintenance and storage areas;
 - vii) All taxes and duties including General Tax, Turn-Over tax, Duties etc.
 - viii) All necessary temporary services including fresh water, compressed air lines, electrical cabling and switchgear, telephone, walkie-talkie and facsimile facilities
 - ix) The maintenance of all Contractor's services;
 - x) All insurances for the Works;
 - xi) Allow for complying with all environmental aspects as specified;
 - xii) For carrying out hot work of any kind contractor should consider safety of vessel in adjoining berth;
 - xiii) Detail design of components of temporary works, wherever necessary as directed by Engineer.

2.3. 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.

2.4. Currency

- 2.4.1.** All monetary reference herein and the Bill of Quantities shall be priced in Indian Rupee Currency.

SECTION VI
COCHIN PORT AUTHORITY
Providing Electrical facilities like lighting, wiring and fans etc., at Ex- Forbes Building and
MT Shed for GoI at Willingdon Island

2. BILL OF QUANTITIES

Bill of Quantities attached separately as uploaded in the available in the
GeM portal(<https://gem.gov.in/>)

Bill of Quantities includes two sections,

- I. Providing basic electrical facilities at Ex- Forbes Building**
- II. Providing basic electrical facilities at MT Shed**

The format given in the Gem portal shows items against I and II
continuously

“Price Bid” shall contain Bill of Quantities duly filled in and fully priced, which
shall be submitted only in e-tendering mode in the above mentioned website.