

The Kerala State Civil Supplies Corporation Limited
PB No: 2030, MaveliBhavan, Maveli road,
Gandhinagar, Kochi - 682 020
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Phone: 0484 2207920, 2206727

Date: 16/12/2016

TENDER NOTICE

The Kerala State Civil Supplies Corporation Limited invites tenders for the following work from eligible technically & financially competent Contractors having valid experience in same nature of works and meeting criteria as mentioned in Cl:1.01 of NIT.

TENDER NO:

1	Name of Work	Supply, Installation, Testing and commissioning of AMF Panel at Supplyco Head office, Maveli Bhavan, Kochi.
2	PAC Amount	Rs. 387567/-
3	Earnest Money Deposit (EMD)	Rs. 9700/-
4	Tender Submission Fee	Rs. 500/- + 5% tax
5	Period of completion	35 days
6	Tender documents	Can be downloaded from the website www.supplycokerala.com
7	Last date and time of Receipt of Tender/Bids	28.12.2016 - 02:00PM
8	Date and Time of Opening of Tender	28.12.2016 - 03:00PM
9	Form of Contract	Item Rate

Sd/-
Manager Estate

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1.0 NOTICE INVITING TENDER (NIT)

- 1.01 The bidder should submit the following eligibility criteria documents as PDF format in designated covers.

Eligibility Criteria

- i. The bidder shall have executed similar nature of works/should possess appropriate class registration with CPWD/ State PWDS/ Public Sector companies/ Government Undertakings.
- ii. The bidder should have satisfactorily completed two similar works of value not less than 50% of PAC of the work in a single contract, during the last 3 years as Prime contractor. Details to be submitted with technical bid.
- ii. The bidder should have valid Registration Certificate, PAN, and Service Tax registration, VAT, ESI and PF Registration.

(The proof of the above shall be submitted as PDF format in designated covers)

- iv. The bidder should have valid digital signature.

The schedule of quantities, specifications and commercial conditions of the Contract are appended.

- 1.02 The general information of the project is given in Annexure to this NIT. The information is only indicative. The tenderers are required to visit the site and familiarize themselves with the site conditions, nature of strata, availability of construction materials, etc., before quoting. The drawings, general & special conditions of contract, schedule of quantities and the technical specifications may be carefully studied before they offer their prices. No claims for extra compensation over and above the quoted rates will be entertained by ACCEPTING AUTHORITY on the ground that the tenderer have misjudged site conditions, nature of strata, tender conditions or any item of tender.
- 1.03 The offer shall be valid for 60 days from the tender opening date. The firm period of a tender is the period from, the date of opening of the tender to the date upto which the offer given in the tender is binding on the bidder. The firm period is fixed as the maximum time required within which a decision can be taken on the tender and order of acceptance issued in writing to the bidder which shall not exceed two months in the normal course. The consideration of tenders and decision there on shall be completed well before the date of expiry of the firm period noted in the tender so that the letter of

acceptance is sent before the expiry of the firm period. If delay is anticipated, the officer who invited the tenders shall get the consent of the lowest two bidders for extending the firm period by one month or more as required. In case the lowest or any bidder refuses to extend the firm period that tender cannot be considered. All officers concerned with the consideration of tenders, shall deal with them expeditiously to settle the contract before the expiry of the firm period.

- 1.04 After the public opening of the tenders, the information relating to the examination, Clarification, evaluation and comparison of tenders and recommendations concerning the award of Contract all shall be online.
- 1.05 Subject to ACCEPTING AUTHORITY's right to accept any tender and reject any or all tenders; the work will be awarded to the tenderer whose bid has been determined to be substantially responsive to the tender documents and who has offered the lowest Evaluated Tender Price provided further that the tenderer has the capability and resources to carry out the contract effectively.
- 1.06 Prior to the expiry of the period of validity of the tender ACCEPTING AUTHORITY will notify the successful tenderers in writing their name the sum which ACCEPTING AUTHORITY will pay to the contractor in consideration of the execution completion, operation, maintenance and guarantee of the work by the contractor as specified by the contract (hereinafter called the contract price). This letter of acceptance will constitute the formation of a contract.
- 1.07 Before commencing the work and within **7 days** after the letter of acceptance of the tender has been intimated to him, the tenderer shall make a performance security deposit as given in clause 1.13 of this notice and furnish the same for the proper fulfillment of the contract and shall execute an agreement for the work in required non-judicial stamp paper of value not less than Rs.200/- in the prescribed format.
- 1.08 If the tenderer fails to execute the agreement as stated above within the specified period, the earnest money deposit shall be forfeited to ACCEPTING AUTHORITY and fresh tenders called for or the matter otherwise disposed off. If as a result of such measures due to the default of the tenderer to pay the required deposit, execute the agreement or take possession of the work site, any loss to ACCEPTING AUTHORITY results, the same will be recovered from the tenderer by deducting from any amount due to him from other works or revenue recovery or by suitable course of action including legal proceedings.
- 1.09 Tenders not properly filled, mutilated with incorrect calculations or generally not complying with the conditions are susceptible to be rejected.

- 1.10 In the case of percentage rate contract only a single rate as an overall percentage above or below or at par with the rate given in the schedule by a single entry at the specified column of the schedule under the head quoted rate, may be made. The overall percentage rate accepted and specified in the agreement shall not be varied on any account whatever. In case of item rate tender, only the rate quoted shall be considered. In event no rate has been quoted for any item(s) leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly. The bidder should quote each and every item. The rate thus quoted will be deemed to include the cost of all materials, labour, hire charges for all machinery's, cost of fuel, power, all leads and lifts, taxes, levies, royalties all over heads contingencies, profits, etc. and the quoted price is all inclusive. The total contract price shall also be worked out and entered in.
- 1.11 If the tender is made by an individual it shall be signed with his full name and his complete address shall be given. If it is made by partnership firm it shall be signed with the co-partnership name by a member of the firm who shall sign his own name and give the name and address of each partner of the firm and attach a copy of 'Power of Attorney' with the tender authorizing him to sign on behalf of the other partners. A certified copy of the 'Registered Partnership Deed' shall also be submitted along with the tender. A certified copy of the registered deed shall also be submitted along with the tender. The tender should be in a sealed cover.

1.12 EMD

- .01 The EMD of **Rs.9,700/-** shall be paid in the form of crossed DD drawn from Nationalized / Scheduled Bank favour of Chairman & Managing Director, Supplyco, payable at Ernakulam and the details should be entered in the format along with the technical bid.
- .02 Bidders shall remit the tender fees and EMD as crossed DD drawn from Nationalized / Scheduled Bank in favour of Chairman & Managing Director, Supplyco, payable at Ernakulam.
- .03 EMD deposited with ACCEPTING AUTHORITY will be forfeited,
- i) If a bidder withdraws his bid during the period of validity specified.
 - ii) If the successful bidder fails within the time limit to sign the contract document or fails to furnish the required security deposit.
- .04 EMD will be refunded to the Contractor after remittance of the security deposit and execution of the agreement.

1.13 PERFORMANCE SECURITY DEPOSIT

- .01 Within **7 days** of issue of letter of acceptance, the Contractor should submit 5% of the Contract Value as Security Deposit in the form of a crossed DD or Bank Guarantee in favour of The Kerala State Civil Supplies Corporation Ltd payable at Ernakulam from Nationalized\Scheduled Bank.
- .02 In addition to Performance, Guarantee, and Retention money shall be collected by deduction from the running/final bill of the Contractors @ 2.5% of the gross amount of each running and / or final claims.
- .03 All the deposits of EMD, PERFORMANCE GUARANTEE AND SECURITY DEPOSIT will not bear any interest whatsoever.

1.14 REFUND OF PERFORMANCE SECURITY DEPOSIT

- .01 On satisfactory completion of the work, 5% Security Deposit will be refunded to the Contractor based on the completion report from the Engineer-in-Charge.
- .02 The Retention money of 2.5% deducted from the running bills shall be retained by Supplyco for the entire period of Defects Liability Period and the same will be refunded by the Accepting Authority provided that the Engineer-in-Charge is satisfied that there is no rectification works of repair works or outstanding works of any sort pending from the Contractor.

1.15 STATUTORY DEDUCTIONS

- 1.15.1 Income-tax at the rate prevailing at the time of payment will be deducted from each running account bill and final bill.
- 1.15.2 All statutory payments in connection with the employment of the workmen for this work will be borne by the Contractor.
- 1.15.3 The Contractor is the employer of all the worker's engaged for this work and should therefore take all required registrations and pay premium correctly to labour welfare funds constituted by the Union Government and Government of Kerala from time to time as per the existing rules.
- 1.15.4 All statutory deductions shall be made from the amount eligible to the Contractor in each part bill at current rates. The deduction towards the work Contract tax shall be as per the prevailing rates of Kerala Government Sales Tax Rules. Any tax omitted, to be deducted in any part bill shall be deducted in the subsequent bills/final bill.

1.16 QUANTUM OF WORK

- 1.16.1 A schedule of approximate quantities for various items accompanies this tender. It shall be definitely understood that ACCEPTING AUTHORITY do not accept any responsibility for the correctness or completeness of this schedule in respect of items and quantities and this schedule is liable to alteration by deletions, deductions or additions at the discretion of ACCEPTING AUTHORITY without affecting the terms of the Contract.
- 1.16.2 ACCEPTING AUTHORITY reserves the right to increase or decrease the quantum of work at site without assigning any reason.
- 1.16.3 Variations in the quantities put to tender will not be the basis of any claim or disputes. The rates agreed by the Contractor shall hold good for any amount of variation in the quantities and no claims whatsoever will be entertained on this amount. The Contractor shall carry out all works as directed by ACCEPTING AUTHORITY at the same agreed rates.

1.17 ALL INCLUSIVE RATES

The quoted rate of Contractor must be firm and shall be inclusive of cost of transportation of material to the site and all applicable taxes and duties of State Government as well as Central Government including service tax.

The rates quoted by the Contractor shall be firm throughout the Contract period and there shall be no upward revision of the rates quoted by the Contractor for any reasons whatsoever. It should be clearly understood that any claims for extra Sales Tax, Excise duty, Construction Tax or any Additional tax, Service Tax etc., shall not be entertained in any case whatsoever once the tenders are opened.

1.18 INTERPRETING SPECIFICATIONS

- 1.18.1 In interpreting the specifications, the following order or decreasing importance shall be followed:
- a. Specification mentioned in Schedule of Quantities
 - b. Unit Rate Specifications and Technical Specifications,
 - c. Special Conditions of Contract,
 - d. Drawings,

1.18.2 Matters not covered by the specifications given in the Contract, as a whole shall be covered by the relevant Indian Standard Codes. If such codes on a particular subject have not been framed, the decision of ACCEPTING AUTHORITY shall be final.

1.19 ALTERATIONS

No alterations shall be made by the tenderer in the Notice Inviting Tender, Instructions to the Contractors, Contract form, General Conditions of the Contract, Special Conditions of Contract, drawings and specifications and if any such alterations are made or any conditions attached, the tender is liable to be rejected.

1.20 ACCEPTANCE OF THE TENDER

1.20.1 The acceptance of a tender rests with the Authorised Representative of ACCEPTING AUTHORITY who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all the tenders received without assigning any reason(s) whatsoever.

1.20.2 The authorised representative of ACCEPTING AUTHORITY reserves the right of accepting the whole or any of the tenders received and the tenderer shall be bound to perform the same at the rates quoted.

1.20.3 The work shall be carried out under the direction and supervision of ACCEPTING AUTHORITY or their representative at site. On acceptance of the tender, the Contractor shall intimate the name of his accredited representative who would be supervising the construction and would be responsible for taking instructions for carrying out the work.

1.20.4 ACCEPTING AUTHORITY's decision with regard to the quality of the material and workmanship will be final and binding, any material rejected thus shall be immediately removed by the Contractor and replaced by materials as per specifications and standards.

1.21 DEFECTS LIABILITY PERIOD

Defect Liability Period will be **1 year** from the date of completion of work. Any defect developed within 'Defect Liability Period' will have to be rectified by the Contractor at their own cost and in case the defects are not rectified by the Contractor, ACCEPTING AUTHORITY or their representative shall get the work done at the risk and cost of the Contractor.

1.22 DELAYS IN COMMENCEMENT

The Contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause for such delays may be including delays in procuring Government Controlled or other materials.

1.23 OCCUPATION IN PART & CO-OPERATION

- 1.23.1 If ACCEPTING AUTHORITY wants to occupy areas in part, the Contractor shall complete the work of these areas in conjunction with ACCEPTING AUTHORITY and hand over the same to ACCEPTING AUTHORITY without affecting any of the clause of Contract agreement.
- 1.23.2 The Contractor must co-operate and co-ordinate with other Contractors involved in other works at the site. The Contractor should also note that they shall have to clear the site of vegetation, debris, etc. before the commencement of the work and that no extra payment is permissible on this account.

1.24 ISSUE OF MATERIALS, TOOLS AND PLANT

- 1.24.1 The Contractor should inspect the source of materials, their quality, quantity and availability. All materials must strictly comply with the relevant B.I.S. specifications.
- 1.24.2 ACCEPTING AUTHORITY shall issue the following material or Tools and Plants required for the execution of the works.
- a) Materials Nil
 - b) Tools and Plants Nil

1.25 PERIOD OF CONSTRUCTION

Time is the essence of this contract. The construction period shall be **35 days**. Commencement of the work shall be considered from the date of receipt of letter of acceptance and handing over possession of the site. The Contractor shall draw a detailed schedule of programme in the form of a Bar Chart on whole work, within one week of award of work and submit to the Engineer for their approval.

1.26 INSURANCE

The successful tenderer shall take out Contractor's All Risk (CAR) insurance policy, jointly in the name of ACCEPTING AUTHORITY and the Contractor, and the original policy shall be deposited with ACCEPTING AUTHORITY.

- 1.27** This Notice Inviting Tender will form part of the tender document and the agreement executed by the successful tenderer.

Sd/-
Manager Estate
KSCSC

ANNEXURE TO NIT

GENERAL INFORMATION OF THE PROJECT

1. Name of Project : Supply, Installation, testing and commissioning of AMF Panel at Supplyco Head office, MaveliBhavan, Kochi.
2. Site and location : Supplyco Head Office, Ernakulam
3. Nature/scope of work : SITC of AMF Panel for 125 kVA DG installed at Supplyco Head office, MaveliBhavan, Kochi.
4. Nearest Railway Station : Ernakulam Junction
5. Nearest Airport : Nedumbassery
6. Owner/Client : The Kerala State Civil Supplies Corporation Ltd, Ernakulam
7. Accepting Authority : The Kerala State Civil Supplies Corporation Ltd, Ernakulam, P.B.No. 2030, MaveliBhavan, Maveli Road, Gandhinagar, Kochi – 682 020.
9. Payment Authority : The Kerala State Civil Supplies Corporation Ltd, Ernakulam, P.B.No. 2030, MaveliBhavan, Maveli Road, Gandhinagar, Kochi – 682 020
10. Period of completion of work : As per NIT
11. Data & Schedule taken : Kerala PWD 2012, Market rate, DSR 2014 with Cost Index 44.76%

A.

TENDER FORM

TENDER NO:

To

Accepting Authority

Dear Sirs,

Sub: Supply, Installation, testing and commissioning of AMF Panel at Supplyco Head office,
MaveliBhavan, Kochi

With reference to the tender invited by you for the above proposed work, I/We do hereby tender for the same after having:

- a) Examined the designs, details, specifications schedule of quantities, instructions to tenders, agreement and the conditions of contract annexed thereto (hereinafter called the Contract Documents).
- b) Visited the site of work, studied the site conditions, nature of strata, availability of construction materials etc., and
- c) Acquired the requisite information on all prevailing factors affecting the tender.

I/We undersigned hereby offer to construct the proposed work in strict accordance with the Contract document for the consideration to be calculated in terms of the priced schedule of quantities.

I/We have noted that time is the essence of the contract and ready to undertake and complete the whole of the works as per the attached schedule from the date of issue of an intimation by you that our tender has been accepted and upon receiving possession of site. I/We further undertake that on failure subject to the conditions of the contract relating to extension of time, I/We are willing to pay the agreed Liquidated Damages/Penalty for the period during which the work remains incomplete beyond the due date of completion.

I/We further agree to the deduction of security deposit mentioned in NIT which will be returned to me/us as per the relevant clauses in the agreement. The deduction will be as explained in clause 1.13 of Notice Inviting Tender.

I/We undertake to execute the work of electrification of various facilities if any, through a licensed electrical contractor of appropriate class as given in the tender condition. All the requirements of supervision, testing, commissioning and energizing will be fulfilled by us.

We have also executed the preliminary agreement as is enclosed.

Further we undertake the execute the works which will be entrusted to us in the most workman like manner within the stipulated completion period. If our Tender is found acceptable, we agree to enter into a contract as specified by you within **7 days** of this receipt of intimation of acceptance of our tender.

Our Bankers are:

1.....

2.....

Place:

Date :

Signature of tenderer

Name of the partners of the firm

OR

Name of the person having power of Attorney to sign the contract.

Postal Address :

Telephone Number

i) Land :

ii) Mobile :

Email :

Income Tax PAN No. :

VAT TIN :

Service Tax Registration No. :

B.

PROFORMA OF PRELIMINARY AGREEMENT

(To be executed on stamp paper of value Rs.200/- and submitted along with tender).

Preliminary agreement entered into on this day of..... Between (name of Accepting Authority) (Hereinafter called ACCEPTING AUTHORITY on one part and Shri..... (name and address of the Contractor) (Hereinafter called the Contractor) on the other part for the execution of the agreement as well as the execution of the (NAME OF WORK) Andwhere as the notice inviting tenders it is stated as follows. Before commencing the work of within a week of the date when the acceptance of tender has been intimated to him, the tenderer shall deposit a sum of Rs.....(as per NIT) which shall be treated as security for the proper fulfillment of the same and he shall execute an agreement for the work in the scheduled form of agreement. If he fails to do this or fail to maintain a specified rate of progress, the security deposit shall be forfeited to ACCEPTING AUTHORITY and fresh tenders shall be called for or the matter otherwise disposed. If as a result of such measures due to the default of the tender to pay the requisite deposit sign contracts to take possession of the work any loss to the ACCEPTING AUTHORITY results, the same will be recovered from him as arrears of revenue but should it be a saving to ACCEPTING AUTHORITY the original contractor shall have no claim whatever to the difference. Recoveries to this or any other account will be made from the sum that may be due to contractor on this or any other contracts or under the Revenue Recovery Act or otherwise as ACCEPTING AUTHORITY may decide.

Now therefore these present witness and it is mutually agreed as follows:

1. The terms and condition for the said contract having been stipulated in the said tender form to which the contractor has agreed, a copy of which is appended, and which forms part of this agreement, it is agreed that the terms and conditions stipulated there in shall bind the parties to this agreement, except to the extent to which they are abrogated or altered by express terms and conditions herein, agreed to and in which respect the express provisions herein shall supercede those of the said tender form.
2. The Contractor hereby agree and under take to perform and fulfill all the operation and obligations connected with the execution of the said contract work viz. – (NAME OF WORK)
3. If the Contractor does not come forward to execute the original agreement after the said work is awarded and letter of acceptance issued in his favour or commits breach of any of the conditions of the contract as stipulated in Notice inviting Tenders as quoted above within the period stipulated, ACCEPTING AUTHORITY may rearrange the works otherwise or get it done otherwise at the risk and cost of the contractor and the loss so sustained by ACCEPTING AUTHORITY can be realising from the contractor under the Revenue Recovery Act as if arrears of land revenue as assessed, quantified and fixed by an adjudicating authority consisting of ACCEPTING AUTHORITY or any other officer or officers authorised by ACCEPTING AUTHORITY taking into consideration the prevailing rates and after giving due notice to the

Contractor. The decision taken by such authorised officer or officers shall be final and conclusive and shall be binding on the contractor.

4. The contractor further agrees that any amount found due to ACCEPTING AUTHORITY under or by virtue of this agreement shall be recoverable from the Contractor from the Contractor from his EMD and his properties, movable and immovable as arrears of land revenue under the provision of the Revenue Recovery Act for the time being in force or in any other manner as ACCEPTING AUTHORITY may deem fit in this regard.

In witness where of Sri....., NAME OF ACCEPTING AUTHORITY and Sri.....

Contractor, have set their hands on the day and year first above written,

Signed by Sri..... NAME OF ACCEPTING AUTHORITY

In the presence of witness

1.

2.

Signed and delivered by Sri....., Contractor in the presence of witness.

1.....

2.....

**TENDER
FOR
SUPPLY, INSTALLATION, TESTING &
COMMISSIONING OF AMF PANEL
AT
KERALA CIVIL SUPPLIES CORPORATION
GANDHINAGAR-682020**

2.0 GENERAL CONDITIONS OF CONTRACT

2.01 Definitions

In the contract (as hereinafter defined) the following words and expressions shall have the meaning hereby assigned to them except where the contract otherwise requires.

The “OWNER/CLIENT” shall mean the Corporation/Board/Department/Person for whom the work is being arranged.

The ACCEPTING AUTHORITY shall mean the Accepting Officer/Firm with whom the Contractor executes the Agreement and this shall be mentioned in NIT.

The “CONTRACTOR” shall mean person or persons, firm or company whose tender has been accepted and includes the contractor’s legal representatives, successors and permitted assigns.

“TENDER” shall mean the tender submitted by the contractor for acceptance before the ACCEPTING AUTHORITY.

The “WORK” shall mean and include all works to be executed in accordance with the contract or part thereof as the case may be and shall include all extras, additional, altered or substituted works required for the purpose of the contract.

The “CONTRACT DOCUMENT” shall mean the agreement between ACCEPTING AUTHORITY and the contractors for the execution of the work including therein all documents such as the Notice Inviting Tender, Tender Forms, General Conditions of Contract, Technical Specification, Schedule of Quantities, Special Conditions of Contract, Letter of Acceptance, Agreed variation if any, drawings, work orders, and / or any other / correspondences or negotiations, etc.

“SPECIFICATIONS” shall mean all directions, Descriptions of the item in the schedule of quantities various technical specifications, provisions and requirements attached to the contract which pertain to the method and manner of performing the work, and the materials to be furnished under the contract for the work as may be amplified or modified by ACCEPTING AUTHORITY/CONSULTANT, drawings for the performance of the contract in order to provide the unforeseen conditions or in the best interest of the work. It shall also include the latest revised version of the relevant B.I.S. specification and other relevant codes.

“SITE” shall mean the land allotted by the Owner/Client under in or through which the work is to be carried out.

“LETTER OF ACCEPTANCE/AWARD OF WORK” shall mean an intimation by letter, telegram, telex or fax to the tenderer that the tender has been accepted in accordance with the provisions contained therein.

“ENGINEER/ENGINEER-IN-CHARGE” shall mean the Engineering Personnel representing ACCEPTING AUTHORITY/CONSULTANT and entrusted with work of supervision of work at the site.

“CONTRACT VALUE /PRICE” shall mean the total amount quoted in the Price Bid and accepted by ACCEPTING AUTHORITY including tender below/excess.

The ‘PROBABLE AMOUNT OF CONTRACT’ (PAC) shall mean the Estimated amount/Tendered amount of the work.

The “PAYMENT AUTHORITY” shall mean the Officer/Firm who makes payments of the bills for the work done as mentioned in NIT.

2.02 **SITE**

Location and details of site are specified in NIT.

Entry into the project area will be restricted. If required passes and permits will have to be obtained from Owners for entry of all persons and vehicles into the project area. During working, the contractor shall provide barricades and working place shall be isolated from other places. Working place shall be visible from other areas.

2.03 **SCOPE OF WORK**

The scope of work is described in the NIT.

The scope of work further includes variation or modification of design, quantity or quality of work, addition, omissions or substitution of any work, under the written instruction of Engineer-in-Charge. Such instructions shall be complied forthwith.

The Contractor shall provide all necessary labour, materials, equipments and management and supervisory personnel to complete the works provided under this contract in time.

2.04 GENERAL OBLIGATIONS

2.04.1 INSPECTION OF SITE ETC. BEFORE SUBMISSION OF TENDER

The Contractor shall inspect and examine the site and its surroundings, and shall satisfy himself before submitting his tender, as to the nature of the ground, form and nature of the site, the quantities and nature of work and materials and its availability required for the completion of the works, the means of access to the site, the local labour conditions, the accommodation he may requires and in general shall obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect his tender. He must go through all the drawings, specifications and other tender documents. Any further clarifications in the drawings and documents can be had from ACCEPTING AUTHORITY at the above mentioned address.

2.04.2 SUFFICIENCY OF TENDER

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the priced schedule of quantities and the schedule of rates and prices, if any, with tender rates and prices shall cover all is obligations under the contract and all matters and things necessary for the proper completion and maintenance of the work.

2.04.3 DISCREPANCY OR ERROR IN TENDER DOCUMENT

Should the Contractor notice any discrepancy or error in the tender document, in the specification, conditions of contract or quantities or units shown against items or any other part of the tender document, he shall immediately bring to the notice of ACCEPTING AUTHORITY and obtain the clarification before submitting the tender. The tender shall be based on such clarifications received and shall be recorded as such in the covering letter to the tender, failing which ACCEPTING AUTHORITY shall have the right to ask the Contractor to execute the work according to the corrected statement made or quantities or units shown in the tender, without any compensation; when the same has come to the notice of the ACCEPTING AUTHORITY.

2.04.4 RATES QUOTED FOR FINISHED WORK

The rates quoted in the tender by the Contractor must be for the finished work as per the drawings and specifications.

2.04.5 LOCATION OF WORK

Unless specifically mentioned in the item, the work described there-in may be at any location or elevation.

2.04.6 FIRM PERIOD

The tender shall remain open for acceptance for a period of **2 months** from the date of opening of the tender. If any tenderer withdraws his tender before the said period or makes any modifications in terms and conditions of the tender, then Accepting Authority has the liberty to forfeit the said Earnest Money Deposit.

2.04.7 COMMENCEMENT OF WORK

The Contractor shall commence the work at site, within 15 days from the date of receipt of letter of award of work or handing over of the site whichever is later or as mentioned in the letter of award of work and shall proceed with the same with due expedition.

2.04.8 PROGRAMME OF WORK

As per the clause in special conditions of contract.

2.04.9 CONTRACTOR'S EMPLOYEES

The Contractors shall provide and employ sufficient qualified personnel at site the project management. Only such technical assistants are skilled and experienced in their respective fields and such agents, foreman and leading hands as are competent to give proper supervision to the work they are required to supervise and, Such skilled, semi-skilled and un-skilled labour as is necessary for the proper and timely execution and maintenance of works.

2.05 ASSIGNMENT AND SUB-CONTRACTING

2.05.1 ASSIGNMENT

The contractor shall not assign the contract or any part there of or any benefit or interest there in or there under without the written permission of ACCEPTING

AUTHORITY; not shall transfers be made by Power of Attorney authorizing others to carry out the work or receive payment on behalf of the tenderer.

2.05.2 SUB-CONTRACTING

The contractor shall as soon as practicable, after signing the contract, notify to the Engineer-in-Charge, in writing, the names of the subcontractors proposed for the work. The Contractor shall be fully responsible to ACCEPTING AUTHORITY 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 ACCEPTING AUTHORITY. Subcontracting shall be limited to NOT exceeding 40% of the total amount of contract. In case of specialised 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.

2.06 REMOVAL OF WORKMEN

ACCEPTING AUTHORITY shall be at liberty to object to and require the Contractor to remove forth with from the works any person employed by the Contractor in or about the execution or maintenance of the works who in the opinion of ACCEPTING AUTHORITY misconduct himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by ACCEPTING AUTHORITY to be undesirable and such person shall be replaced by the Contractor without delay by a competent substitute approved by ACCEPTING AUTHORITY.

2.07 COMMUNICATIONS TO BE IN WRITING

All references, communications, correspondences made by ACCEPTING AUTHORITY/Engineer-in-Charge or the Contractor concerning the works shall be in writing and no reference, communication, or complaint which is not in writing, shall be recognized.

2.08 DRAWING

2.08.01 ISSUE OF DRAWINGS

Contractor shall prepare all the necessary drawings to the minute details based on the layout provided with tender documents for execution as per the scope provided and shall get the approval of Engineer-in-charge before proceeding with procurement of materials/execution of work. The Contractor shall give a notice well in advance in writing to ACCEPTING AUTHORITY/ Engineer-in-Charge or his representative of any further drawings or specifications of clarification that may be required for the execution of the works or otherwise under the contract.

2.08.2 COPIES OF DRAWINGS TO BE KEPT AT SITE

One copy of the drawings furnished to the Contractor shall be kept at the site and the same shall at all reasonable times be available for inspection and use by Engineer-in-Charge or any other person authorized by ACCEPTING AUTHORITY in writing.

2.08.3 ISSUE OF FURTHER DRAWINGS AND INSTRUCTIONS

ACCEPTING AUTHORITY/ENGINEER-IN-CHARGE shall have full power and authority to issue to the Contractor from time to time through his representative, during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the Contractor shall carryout and be bound by the same.

2.08.4 EXECUTION AS PER DRAWINGS

The Contractor must not vary or deviate from the drawings in any respect while executing the work or executing any extra work of any kind whatsoever unless authorised by Engineer-in-Charge.

2.08.5 FABRICATION DRAWINGS

Contractor shall prepare at his own cost all fabrication drawings of all structural steel works and bar bending schedule for R.C.C. works and submit them to Engineer-in-Charge for their approval at least before 15 days of commencing the fabrication. All the details like sizes, capacities, dimensions, arrangement of fabrication, etc. should be clearly indicated on these drawings.

2.09 ROYALTIES AND PATENT RIGHTS

All royalties or other sums payable in respect of the supply and use in carrying out the work as desired by or referred to in the schedule of quantities of any patented articles, process or inventions shall be deemed to have been included in the contract sum and the Contractor shall indemnify ACCEPTING AUTHORITY from and against all claims, proceedings, damages, costs and expenses which may be brought or made against ACCEPTING AUTHORITY or to which he may be put by reason of the Contractor infringing or being held to have infringed any patent rights in relation to any such articles, process and inventions.

2.10 OCCUPATION AND USE OF LAND

No land, building belonging to or in the possession of the Owner/Client/ Consultant shall be occupied by the Contractor. The Contractor shall not use, or allow to be used, the site for any purpose other than that for executing the works.

2.11 CONTRACTOR'S STORE AND SITE OFFICE

Any facility, proposed to be temporarily constructed by the Contractor for his office work, storage of materials, etc. shall conform to the standard sketch, or to the plan approved by ACCEPTING AUTHORITY. Permission for the construction of such facility shall be obtained in writing. Suitable area in the site of work shall be allowed to the contractor free of cost for constructing the temporary facility. However, the required structure shall be provided by him at his own expense and he shall be solely responsible for guarding his property with requisite insurance against theft, fire, etc. The contractor however will have to dismantle facility and clear the land of all debris, etc. at his own expense after completion of work.

2.12 MATERIALS, TOOLS AND PLANT

All materials, tools and plants required for the execution of the works other than those mentioned in the Tender shall be supplied by the Contractor. Permanent materials so

supplied shall have the approval of Engineer-in-Charge before using on the works. All the rejected materials shall be removed at once from the site of work at the Contractor's own cost.

2.13 TOLLAGES, ETC.

The Contractor shall pay all tollages and other royalties, rent and other payments or compensations, if any, for getting all materials required for the works.

2.14 SETTING OUT

The Contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and labour in connection there with. If at any time during the progress of the works any error shall appear or arise in the position, level, dimensions or alignment of any part of the works, the Contractor on being required to do so by ACCEPTING AUTHORITY/ Engineer-in-Charge shall at his own cost rectify such error to the satisfaction of ACCEPTING AUTHORITY/ Engineer-in-Charge. The checking of any setting out or of any way relieve the Contractor from the responsibility of true and proper setting out of the works. The Contractor shall provide all necessary instruments, appliances and labour required by ACCEPTING AUTHORITY/ Engineer-in-Charge for checking if any, of the setting out. The Contractor shall carefully protect and observe all bench marks, site levels, pegs and other things used in setting out the works. The rates quoted for the work shall also include the cost of reference and level pillars and other dismantling, when no longer required.

2.15 DAMAGE TO PERSONS AND PROPERTY

The Contractor shall indemnify and keep indemnified Engineer-in-Charge/Client/Owner against all losses and claims for injuries or damages to any person or property whatsoever which may arise out of or in consequence of the construction and maintenance of works and against all claims, demands proceedings, damages, costs, charges, expenses, whatsoever in respect thereof in relation thereto.

2.16 CO-OPERATION WITH OTHER AGENCIES

The Contractor shall co-operate with the work of other agencies or Contractors that may be employed or engaged by ACCEPTING AUTHORITY/ CONSULTANT and as far as

it relates to the Contractor's work. The sequence of work shall be so arranged that the work of other agencies are also in progress simultaneously.

2.17 WORK IN OR AROUND OPERATING PLANT OR OFFICES ETC.

Where the work is being carried out inside the offices, buildings, etc. without causing disturbance to the office work. For this the work may be required to be done during off-hours and Sundays. No addition amount will be allowed beyond the rates quoted for doing work in the manner described above.

2.18 WORK IN SHIFTS AND ON OFF-DAYS

The Contractor shall work in one or more shifts as also on Sundays and off days to complete the work on time, if so required by ACCEPTING AUTHORITY for which ACCEPTINGAUTHORITY shall not be liable to pay any extra. If instructed by Engineer-in-Charge, the Contractor should carry out the work in the night also.

2.19 SITE TO BE KEPT CLEAN

The surplus spoil and dismantled debris shall be removed to a place as directed by Engineer-in-Charge and stacked, leveled and dressed as directed. Rehandling charges will not be allowed.

2.20 CONFLICT IN MEANING BETWEEN SCHEDULES OF QUANTITIES AND SPECIFICATIONS

The schedule of quantities shall be read in conjunction with the specification, and in the event of conflict in meaning between the two, the meaning of the item in the schedule of quantities shall always have precedence over the technical specifications.

2.21 LABOUR

2.21.1 LABOUR RULES

In respect of all labour directly or indirectly employed on the works by the Contractor, the Contractor shall comply with the provisions of the contract labour (Regulation and Abolition) Act 1970, Minimum Wages Act 1948, Payment of Wages Act 1936, Employees Provident Funds and Miscellaneous Provision Act 1952, The Employees State Insurance Act, 1948 and any amendments thereof and all legislation and rules of the State and/or Central Government or other local authorities, framed from time to time, governing the

protection of health, sanitary arrangements, wages, welfare and safety for labour employed on building and construction works and for bonus, retirement benefits, retrenchment/lay off, compensation and all other matter liabilities of ACCEPTING AUTHORITY to employees. The rules and the other statutory obligations with regard to fair wages, welfare and safety measures, maintenance of register, etc. will be deemed to be part of the contract. The contractor shall produce documentary evidence for compliance of above Acts.

2.21.2 REPORTING ACCIDENT OF LABOUR

The Contractor shall be responsible for the safety of all employees and/or workers employed or engaged by him on and in connection with the works and shall forthwith report all cases or accidents to any of them, however caused and whenever occurring, to ACCEPTING AUTHORITY/ Engineer-in-Charge and shall make every arrangement to render all possible assistance and aid to the victims of the accident.

2.21.3 PROVISION OF WORKMEN'S COMPENSATION ACT

The Contractor shall at all times indemnify and keep indemnified ACCEPTING AUTHORITY against all claims for compensation under the provisions of the workmen's Compensation Act 1923 or any other law for the time being in force by or in respect of any workmen employed by the Contractor in carrying out the contract and against all cost and expenses or penalties incurred by ACCEPTING AUTHORITY in connection therewith. In any case by virtue of the provision of the said act, ACCEPTING AUTHORITY is obliged to pay compensation to a workman employed by the Contractor in executing the works, ACCEPTING AUTHORITY shall recover from the Contractor the amount of the compensation so paid and without prejudice to the rights of ACCEPTING AUTHORITY under the said Act. ACCEPTING AUTHORITY shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any amount due to the Contractor, whether under this contract or otherwise without prejudice to any other remedy that may be available to ACCEPTING AUTHORITY, in law. ACCEPTING AUTHORITY shall not be bound to contest any claim made against under the said Act, except on the written request of the Contractor and upon his giving to ACCEPTING AUTHORITY full security for all cost for which ACCEPTING AUTHORITY might become liable in consequence of contesting such claim.

2.21.4 ACCIDENT OR INJURY TO WORKMEN

ACCEPTING AUTHORITY shall not be liable for, in respect, or any damages or compensation payable as per regulations or in consequence of any accident or injury to

any workmen or other person in the employment of the Contractor shall indemnify and keep indemnified ACCEPTING AUTHORITY against all such damages and compensation and against all claims, demands, proceedings costs, charges and expenses whatsoever in respect thereof or in relation thereto.

2.21.5 PRESERVATION OF PEACE

The Contractor shall take requisite precautions to prevent any riotous or unlawful behavior by or amongst the workmen and/or others employed on the works by the contractor, for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the works.

2.21.6 AGE LIMIT OF LABOUR

The age limit for employment of labour shall be in strict accordance with the prevailing labour legislation.

2.21.7 RETURN OF LABOUR EMPLOYED

The Contractor, if required by ACCEPTING AUTHORITY, shall submit return in detail in such form and at such interval as ACCEPTING AUTHORITY may prescribe showing number of different classes of labour employed on the work from time to time by the Contractor.

2.22 MATERIAL TESTS AND WORKMANSHIP

2.22.1 QUALITY OF MATERIALS, WORKMANSHIP AND TESTS

All materials and workmanship shall be of the respective kinds described in the contract and in accordance with ACCEPTING AUTHORITY or Engineer-in-Charge instructions and shall be subject, from time to time, to such tests as ACCEPTING AUTHORITY or Engineer-in-Charge may direct at the place or any of such places. The contractor shall provide required assistance, instruments, machines, labour and materials, as normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the works for approval as may be required by ACCEPTING AUTHORITY.

2.22.2 CONSTRUCTION OF PROTOTYPES OR SAMPLES OF WORK

The Contractor shall construct prototypes or samples of work as laid down in the contract or as instructed by Engineer-in-Charge. Such prototypes or samples or work, after approval by ACCEPTING AUTHORITY, shall serve as the standards to be achieved in the final construction.

2.22.3 COST OF SAMPLES/ PROTOTYPES

All Samples/Prototypes shall be supplied by the Contractor at his own cost.

2.22.4 COST OF TESTS

The cost of making any test as per specifications shall be borne by the Contractor, and the Contractor should arrange for all facilities like meters, instruments as required for carrying out such tests.

2.22.5 INSPECTION OF OPERATION

ACCEPTING AUTHORITY/ Engineer-in-Charge shall at all times have access to the works and to the site and to all workshops and places where materials, manufactured articles or machinery are being obtained for the works and the Contractor shall arrange every facility for every assistance in obtaining the right to such access.

2.22.6 EXAMINATION OF WORK BEFORE COVERING UP

No work shall be covered up or put out of view without the approval of ACCEPTING AUTHORITY or Engineer-in-Charge and the Contractor shall arrange full opportunity to ACCEPTING AUTHORITY or Engineer-in-Charge to examine and measure any work which is about to be covered up or put out of view and to examine them before permanent work is placed thereon. The contractor shall give due notice to Engineer-in-Charge wherever any such work or foundations is or are ready or about to be ready for examination and Engineer-in-Charge shall without unreasonable delay, unless he considers it unnecessary and advise the Contractor accordingly, or attend for the purpose of examining and measuring such work.

2.22.7 UNCOVERING AND MAKING OPENINGS

The Contractor shall uncover any part of parts of the works or make opening in or through the same as ACCEPTING AUTHORITY may, from time to time, direct and shall reinstate and make good such part or parts to the satisfaction of ACCEPTING AUTHORITY. If any such part of parts have been covered up or put out of view and

found to be executed in accordance with the contract, the expenses of uncovering, making openings in or through, reinstating and making good the same shall be borne by Engineer-in-Charge but in any other case all such expenses shall be borne by the Contractor and shall be recoverable from him by Engineer-in-Charge and deducted by Engineer-in-Charge from any money due, which may become due to the Contractor, without prejudice to any other remedy that may be available to Engineer-in-Charge , by law.

2.22.8 REMOVAL OF IMPROPER WORK AND MATERIALS

Engineer-in-Charge shall during the progress of the works have power to order the following in writing from time to time for which no extra payment will be made to the Contractor.

- a) The removal from the site within such time or times as may be specified in the order of any materials which in the opinion of Engineer-in-Charge are not in accordance with the contract.
- b) The substitution of proper and suitable materials.
- c) The removal and proper re-execution notwithstanding a previous test thereof or interim payment thereof of a work which in respect of materials or workmanship is not in the opinion of Engineer-in-charge or his representative in accordance with contract.

2.22.9 SUSPENSION OF WORK

The Contractor shall, on the written order by ACCEPTING AUTHORITY suspend the progress of the works or any part thereof for such time or times and in such manner as ACCEPTING AUTHORITY may consider necessary and shall during such suspension, properly protect and secure the work, so far as is necessary in the opinion of ACCEPTINGAUTHORITY.

2.23 TIME OF COMPLETION AND TAKING OVER

2.23.1 TIME OF COMPLETION

Time is deemed to be the essence of this contract and the whole of the works shall be completed within the time stipulated or within such extended time as has been allowed as mentioned in the contract.

2.23.2 EXTENSION OF TIME OF COMPLETION DUE TO EXTRA/ ADDITIONALWORKS

Should the amount of extra or additional work of any kind or changes in scope of work or other special circumstances of any kind whatsoever which may occur, be such as fairly to justify the Contractor's request for extension of time for the completion of the works, the CLIENT/ENGINEER-IN-CHARGE/ACCEPTING AUTHORITY shall determine the amount of such extension and shall intimate the Contractor in writing provided that the ENGINEER-IN-CHARGE/ACCEPTING AUTHORITY is not bound to take into account any extra or additional work or other special circumstances unless the Contractor has within 28 days, after such work has been commenced or such circumstances have arisen, submit to the Consultants full and detailed particulars of any request for the extension of time to which he may consider to be justified. The contractor is bound to complete the work at the same rates, terms and conditions during the extended time of contractor.

2.23.3 EXTENSION OF TIME OF COMPLETION DUE TO FORCE MAJEURE CONDITIONS

If in the opinion of the ENGINEER-IN-CHARGE/ACCEPTING AUTHORITY the progress of the work has at any time been delayed due to force majeure conditions like strikes, fire, inclement weather, un-avoidable causalities, acts of god or any cause whatsoever beyond the control of the Contractor, continuously for more than one month, then the time of completion of the work may be extended for such reasonable time as the Consultants may decide and this will be indicated in writing. The Contractor shall complete the work at the accepted rates, terms and conditions. Even, if such extension of time is granted.

2.23.4 LIQUIDATED DAMAGES

If the contractor fails to complete the work within the period of completion or within any extended time allowed the contractor shall pay or allow to the ACCEPTING AUTHORITY the sum equivalent to 0.1% of the Contract Value per day of delay calculated on each day basis and upto a maximum of 10% of Contract Value as liquidated and ascertained damages for the period of stipulated completion or such extended time as the case may be during which the work shall remain unfinished. Such damages may be deducted by the ACCEPTING AUTHORITY from any money due or that may become due the contractor.

2.23.5 WORK TREATED AS COMPLETE

The works shall not be treated as complete until:

i) The site is clear from all materials, temporary facilities, etc of the contractor. And ACCEPTING AUTHORITY is satisfied with the job done by the Contractor.

- ii) The Contractor has submitted the reconciliation statement regarding the stores received from ACCEPTING AUTHORITY, and all the surplus and salvaged materials are returned to the stores.
- iii) All equipment, tools, plant taken from ACCEPTING AUTHORITY has been returned by the Contractor.
- iv) Any other material, taken on loan/transfer from other agency has been returned by the Contractor.
- v) All power and water supply connections taken for the execution of the works have been disconnected by the Contractor.
- vi) Rectification of any damage done by the Contractor to the work executed has been completed by the Contractor.
- vii) The works shall not be considered as completed until ENGINEER-IN CHARGE/ACCEPTING AUTHORITY has certified in writing that the works have been completed and the Defects Liability Period shall commence from the date of such certificate.

2.23.6 TAKING OVER

After completion of works or any substantial part of the works before the completion of the whole of the works, the Contractor shall notify ACCEPTING AUTHORITY in writing, who within 15 days of receipt of the said notice shall give such certificate with respect to any substantial part of the works which has been both completed to the satisfaction of ACCEPTING AUTHORITY and occupied or used by ACCEPTING AUTHORITY or refuse to issue the same stating the reasons thereof in writing. When any such certificate is given in respect of a part of the works, such part shall be considered as completed for the purpose of taking over and computation of the period of maintenance of such part, that is such period of the work as certified. The works in whole or part shall not however, be treated as completed for the purpose of other relevant clauses hereof unless and until the provision of this clause hereof are fully complied with.

2.23.7 MAINTENANCE

For a period of **12 MONTHS** commencing immediately after taking over of the work by ACCEPTING AUTHORITY, the Contractors liability shall be to replace the defective parts, rectify/reconstruct the defective work that may develop of his own construction or those of his sub-contractor approved by ACCEPTING AUTHORITY arising solely from faulty materials or workmanship.

If it is necessary for the Contractor to rectify/reconstruct any defective portions of the work under the contract, the provision of this condition shall apply to the portions of

work so replaced or renewed until the expiration of second months from the date of such replacement or renewal or until the end of the above mentioned period of 12 months, whichever may be later.

If any defects be not remedied within a reasonable time ACCEPTING AUTHORITY may proceed to do the work at Contractor's risk and expense, but without prejudice to any other rights which ACCEPTING AUTHORITY may have against the Contractor in respect of such defects. The Contractor shall bear the cost of such repair/rectification carried out on his behalf at site.

Immediately upon expiry of the maintenance period the ACCEPTING AUTHORITY shall issue a final certificate indicating that the Contractor has completed his obligation under the contract.

2.24 TERMINATION AND BACK CHARGING OF CONTRACT

2.24.1 TERMINATION

If the Contractor has abandoned the contract or has failed to proceed with the work due to negligence or the progress on any particular item, items is slow or has failed to execute the work in accordance with the terms and conditions of the contract, is persistently or frequently neglecting to carry out his obligation under the contract, then it shall be lawful for ACCEPTING AUTHORITY to terminate the contract forth with under written notice and to proceed with the balance work through any other agencies. During the course of execution of the job, in case the Contractor has done any substandard work, he shall be asked in writing to dismantle and redo the same at his own expenses. If the Contractor fails to comply with the above instructions immediately, then ACCEPTING AUTHORITY shall proceed with the above rectification work, through another agency or agencies. Similarly, if the Contractor goes slowly on any particulars item or items of work, ACCEPTING AUTHORITY shall have the right to execute this item or items through another agency or agencies, including its own department.

2.24.2 BACK CHARGING THE CONTRACTOR

Extra cost and expenses incurred for completing the work of balance work or carrying out the rectification of any work as mentioned above through another agency or agencies including its own department, shall be debited to Contractor's account and shall be recovered from any money due or that may become due to the contractor without prejudice to any other remedy that may be available to ACCEPTING

AUTHORITY in law. If there is any savings in cost due to re-arrangement or supplementing through other agencies the original contractor will not have any claim on this.

2.25 ALTERATIONS, ADDITIONS AND OMISSIONS

2.25.1 VARIATION

ACCEPTING AUTHORITY/OWNER shall be entitled to make any variation of the quality or quantity of the works or any part thereof that may in his opinion, is necessary and for that purpose, or if for any other reason it shall, in his opinion be desirable, he shall have power to order 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 portion of work.
- c) Change the character or quality or kind of any such work.
- d) Change the levels, lines, position and dimensions of any part of the works and
- e) Execute additional work of any kind necessary for the completion of the works, and no such variation shall in any way vitiate or invalidate the contract by the value, if any, of all such variations shall be taken into account in ascertaining the amount of the contract price.

2.25.2 ORDER FOR VARIATIONS TO BE IN WRITING

No variation shall be made by the Contractor without an order in writing of Engineer-in-Charge, provided that no order in writing shall be required for increase or decrease in the quantity of any item or work where such increase or decrease is the result of the actual quantities exceeding or being less than those stated in the schedule of quantities which are estimates. In such cases, the Contractor shall be paid only for the actual quantity of work done as certified by Engineer-in-Charge at the accepted schedule of quantities and no compensation shall be allowed. Provided also that if for any reason Engineer-in-Charge shall consider it desirable to give any such order verbally, the Contractor shall comply with such order but it must be followed by confirmation in writing of such verbal order given by Engineer-in-Charge, which shall be deemed to be an order writing within the meaning of this clause.

2.25.3 EXTRA ITEMS

.01 Any item of work that do not find a place in the schedule of quantities, in the original tender or in the accepted tender or contract as has been directed by Engineer-in-Charge

to execute is deemed as an extra item of work. All such works that are necessary to be carried out under the direction of Engineer-in-Charge shall be carried out by the contractor. No such variation will violate the Contract.

.02 Extra items of work thus carried out by the contractor will be paid at the rates worked out by Engineer-in-Charge in the following manner.

.03 In the case of all extra items whether additional, altered or substituted, if accepted rates for identical items are provided for in the contract such rates shall be applicable.

.04 In the case of extra items whether altered or substituted, for which similar items exists in the contract, the rates shall be derived from the original item by appropriate adjustment of cost of affected components. The percentage excess or deduction of the contract rate for the original item with reference to the estimated rate shall be applied in deriving the rates for such items.

.05 In the case of extra items, whether altered or substituted, for which similar items do not exist in the contract, the rates shall be arrived at on the basis of provisions of standard data book and schedule of rates prevailing at the time of tender (as specified in general information of project in NIT) by adding profit and overhead charge of 15%.

.06 In the case of extra items, whether additional altered or substituted, for which the rates cannot be derived from similar items in the contract, and only partly from similar items in the contract and only partly from the public work department rates, the rates for such part or parts of items as are not covered in the schedule of rates shall be determined by Engineer-in-Charge on the basis of the prevailing market rates giving due consideration to the analysis of the rate furnished by the contractor with supporting document including contractor's profit.

.07 In the case of extra item whether additional, altered, substituted, for which the rates cannot be derived either from similar items of work in the contract or from the departmental schedule or rates, the contractor after execution of the work as mentioned here in above and shall within 14 days of the receipt of order to carry out the said extra item of work, communicate to the Engineer the rate which he proposes to claim for the item, supported by analysis of the rate claimed and Engineer-in-charge shall within one month thereafter, determines, the rate on the basis of the market rate giving due consideration to the rate claimed by the Contractor.

2.26 MEASUREMENTS

2.26.1 QUANTITIES

The quantities set out in the schedule of quantities are the estimated quantities of the work. They are not to be taken as the actual and correct quantities of the works, to be executed by the Contractor in fulfillment of his obligations under the contract.

2.26.2 WORKS TO BE MEASURED

.01 Engineer-in-Charges shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the contract. He shall when he requires any part or parts of the works to be measured, give notice to the Contractor's authorised agent or representative, who shall forthwith attend or send a qualified agent to assist Engineer-in-Charge or his representative in making such measurement, and shall furnish all particulars required by either of them. Should the Contractor not attend or neglect or omit to send such agents, then the measurement made by Engineer-in-charge and approved by him, shall be taken to be the correct measurement of the work. For the purpose of measuring such permanent work as is to be measured by record and drawings, Engineer-in-Charge shall prepare records and drawings month by month and the Contractor, as and when called upon to do so in writing, shall within fourteen days, attend to examine and agree such records and drawings with Engineer-in-Charge and shall sign the same when so agreed. If the Contractor does not so attend to examine and agree such records and drawings they shall be taken to be correct if, after examination of such records and drawings, the contractor does not agree to the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor shall, within fourteen days of such examination, lodge with Engineering in Charge for decision by ACCEPTING AUTHORITY, notice in writing of the respects in which such records and drawings are claimed by him to be incorrect.

.02 The contractor shall raise bills once a month or for a minimum payment of 10% of contract amount.

.03 Payments towards all interim bills will be made by ACCEPTING AUTHORITY within 30days of presentation by the contractor.

.04 Period of final measurement shall be 1 month from the time of completion of the project.

2.26.3 METHOD OF MEASUREMENT

The works shall be measured in accordance to relevant IS codes not withstanding any general or local custom, except where otherwise specifically described or prescribed in the contract.

2.27 **FURTHER INSTRUCTIONS**

In this tender specifications of the works are given in the following sections:

A. TECHNICAL SPECIFICATIONS

B. SCHEDULE OF QUANTITIES with Unit Rate Specifications

Technical specifications are the general instructions for carrying out the works.

Unit rate specifications are the descriptions of items for which unit rates are to be worked out by the tenderer by considering all tender information.

The Contractor has to work out his rate as an overall percentage above or below or at the rate given in the Schedule by a single entry. The contractor's over all percentage shall be worked out based on the unit rate specification and rates provided against each specification.

The rate has to be entered by a single entry at the end of the schedule both in words and in figures.

Every contractor should furnish along with his tender income-tax clearance certificate and information regarding the income-tax circle or Ward of the District in which he is assessed by income-tax, the reference No. of assessment and the assessment year.

The rates should be quoted in decimal coinage system.

Certified copies of Registration Certificate, Partnership Deed and Power of Attorney or Articles of Agreement in case of Limited companies will have to be furnished for considering the acceptance of the tender.

Should the contractor notice any discrepancy or error in the statement made, or quantities or units shown against items, he shall immediately bring it to the notice of Engineer-in-Charge and obtain the clarification before submitting the tender. The tender shall be based on such clarifications received and shall be recorded as such in the covering letter to the contractor to execute the work according to the corrected statement made for quantities or units shown in the tender, without any compensation.

The tender of the Contractor not complying with the above instructions may be rejected.

The tenderer should put the signature on all pages of the tender documents.

2.28 JURISDICTION

Any legal dispute arising out of or in any way connected with this contract shall be deemed to have arisen at site and shall be settled in a court of competent jurisdiction located in Ernakulam, Kerala.

Sd/-
Manager Estate
Kerala State Civil Supplies Corporation Ltd

I/We have carefully read the above said instructions and shall comply with the same.

Signature of the tenderer.

Place:

Date

3.0 SPECIAL CONDITIONS OF CONTRACT

3.01 MOBILISATION ADVANCE

No mobilization will be paid to the Contractor

3.02 WATER

Water required for the construction will have to be provided by the Contractors at their own cost. It will be the responsibility of the Contractor to make arrangements for drawing and bringing it to the various construction points. Non availability of water from the owner's property will not be ground for any delay in work or any claim for any compensation whatsoever.

3.03 ELECTRICITY

Electricity required for the construction and general lighting of the site will have to be provided by the Contractors at their own cost. Non availability of power from KSEB will not be a ground for any delay in work or any claims for any compensation whatsoever. Temporary wiring/cabbling shall not be routed across floors, around doors. It shall be properly routed as directed by the Engineer-in-Charge. Temporary wiring shall be protected from sharp edges, heat and sunlight to avoid breakdown of the insulation.

3.04 **FABRICATION WORKS**

The contractor shall furnish to the Engineer-in-Charge 3 copies of detailed fabrication/erection drawing showing clearly all the joint details, two weeks before the commencement of actual fabrication/erection works. The Engineer-in-charge will have the right to suggest such modification to these details as found necessary by them, which shall be duly incorporated in the works by the Contractor. For the purpose of this clause, the two weeks period shall be deemed to begin from the date of the said drawings are received in the Engineer-in-charge office.

3.05 **EXCISE DUTY, SERVICE TAX , VAT AND OTHER TAXES & DUTIES**

Unit rate shall be inclusive of all applicable taxes and duties including VAT and Service tax.

Royalty charges & taxes if any on account of supply of materials for all works shall be paid by the Contractor at his own cost. No extra claim in this regard shall be admissible.

3.06 **TURNOVER TAXES/WORKS CONTRACT TAXES:**

Deductions will be made from the bills towards Sales Tax as per the KVAT Act. As per the existing provisions.

a) Cess for the construction of works under building and other Construction Workers Welfare Cess Act-1996. The Contractor shall remit the building and other Construction Workers Welfare Cess at 1% on the total cost of construction including the cost of materials and shall produce the certificate of remittance of Cess to ACCEPTING AUTHORITY. In case the Contractor fails to remit the Cess the applicable Cess will be recovered from the final bill of the contractor.

b. All plumbing and sanitary works shall be executed by a qualified and licensed plumber. The Contractor shall satisfy the Engineer-in-charge as to the competence and qualification of the workmen employed for plumbing and sanitary works.

c. All shuttering used in the work shall be either steel shuttering or of plywood with smooth surfaces so as to give a smooth finish to the concrete.

d. All fixtures & fittings (plumbing fixtures, sanitary materials, doors & window fixtures etc.) have to be got approved by the Engineer-in-charge in writing before fixing the same. However samples of all these fixtures & fittings have to be got approved well in advance of bulk procurement action.

3.07 PROCUREMENT OF MATERIALS

Contractor shall make his own arrangements for the procurement of all materials required for the work including cement, steel and bitumen. No assistance will be provided by ACCEPTING AUTHORITY for arrangement for quarries for sand, metal or earth.

3.07.1 SUPERVISORY STAFF

The Contractor shall appoint required number of experienced and qualified technical and supervisory staff at the site for 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 sufficient person as per terms given below, Owner/Client reserves the right to deduct a reasonable amount from the Contractor's bill, subject to a maximum of Rs.25, 000/- for every month of absence.

3.07.2 PROGRAMME OF WORKS AND PROGRESS REPORTS

a) The entire work is scheduled to be completed as stipulated in NIT. The Contractor shall programme the different items of work in accordance with the detailed time schedule approved by the Engineer-in-charge.

b) CONTRACTOR TO SUBMIT PROGRAMME

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

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

In support of this programme, the Contractor shall submit a work schedule in the form of a CPM/PERT Chart. The Engineer-in-Charge shall if necessary modify the programme submitted by the Contractor and approval shall be given by the Engineer-in-Charge indicating the major milestones. The programme approved by

the Engineer-in-Charge shall be final and binding on the Contractor. The approval by the Engineer-in-Charge of such programme, or furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the contract.

c) **PROGRESS REPORTS AND SCHEDULES**

The Contractor shall submit to the Engineer-in-Charge by the third day of every fortnight, three (3) 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.

3.08 WORKS TO BE DONE BY CONTRACTOR

On award of the contract, the contractor should prepare a detailed drawing including but not limited to the layout, sections, finishes, co-ordination drawings etc and submit to the Engineer in charge for approval. Work should be executed based on the approved drawings.

Unless and otherwise mentioned in the tender document, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:

- a) Foundation and brackets and components wherever required, including foundation bolts, etc. wherever specified.
- b) Excavation and refilling of trenches in soil wherever the pipes/cables are to be laid directly in ground, including necessary base treatment and supports for pipes, bricks, etc, as specified.
- c) Sealing of all opening provided for pipes and cables, from fire safety point of view, after laying of the same.
- d) Painting of all exposed metal surfaces of equipment and components.
- e) Fixing of danger notice boards wherever required.
- f) Making good all damages caused to the structure, walls, floors, slabs, etc., during installation and restoring the same to their original finish.
- g) Consumables, fuels, cement, etc. required for the work, testing, trial runs and commissioning.
- h) Testing and commissioning of the completed installation.
- i) For any item of work, not covered in particular specification, the same shall be done as per latest relevant BIS codes of practice.
- j) For any item of work not covered in particular specification, the same shall be done as per sound engineering practice as directed/approved by Engineer-in-Charge.

3.09 GENERAL REQUIREMENTS AND ARRANGEMENT OF MATERIALS

All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender document or not.

Busway/Cable Layout

Prior to the laying of the busbar trunking and cables, the contractor shall submit to the Engineer-in-charge detailed layout plan and get it approved. The layout plan shall contain particulars regarding size & routes of the busbar system/cables, number of supports, pipes carried and the tap-off points, inspection chambers provided along the route.

Quality of materials

All the materials and equipment supplied by the contractor for this work shall confirm to relevant BIS Specifications. They shall be of such design, size and material as to function satisfactorily under the rated conditions of operation and to withstand the environmental conditions at site. The type test certificates, routine test certificates and acceptance test certificates are also to be submitted.

Inspection of material and Equipment

The materials should be inspected/ tested prior to the despatch from the manufacturer by Purchaser/Consultant. The inspection call should be given at least fifteen days in advance so as to depute the officials of Purchaser/Consultant for the inspection.

Such inspection will be of the following categories:

1. Inspection of materials/equipment to be witnessed at the manufacturers' premises in accordance with relevant BIS/Agreement Inspection Procedure.
2. To receive materials at site with manufacturers' Test Certificate(s).
3. To receive materials after physical inspection at site.

Similarly, for fabricated equipment, the contractor will first submit dimensional detailed drawings for approval before fabrication is taken up in the factory. Suitable stage inspection at factory also will be made to ensure proper use of materials, workmanship and quality control.

Rating of components

All current carrying components in an installation shall be of appropriate rating 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.

Fabrication of Panels in a CPRI approved workshop

Unless otherwise specified, switch boards/HT/LT panels etc. will be fabricated by a fabricating workshop preferably having a CPRI Certificate for short circuit withstand capability for manufacture/fabrication for the rating of Switchboards specified. The workshop also should have reasonable quality control, and testing facilities, besides, having a proper 7-tank process for treatment and painting of metal parts.

Storage of materials

The storage of materials brought to site is the full responsibility of the contract. The contractor should construct necessary storerooms. The land required for stores will be provided by the Purchaser free of cost. The storeroom should be with double lock arrangement and key of one lock will be with Engineer-in-charge or his authorized representative and other one will be with the contractor.

Procurement of Materials

Contractor shall make his own arrangements for the procurement of all materials required for the work.

3.10 SAMPLES

The Contractor shall be required to produce samples of all the materials sufficiently in advance to obtain approval of the Engineer-in-charge.

Approved samples shall be retained by the Engineer-in-charge 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 Engineer-in-charge.

If on handing over the site or at any time thereafter during the execution of work, the contractor considers that any drawing or information necessary for the execution of the work has not been provided, he shall inform the Engineer-in-charge in writing giving full details required. All materials or workmanship, which in the opinion of the Engineer-in-charge is defective or is unsuitable shall be removed immediately from the site within a reasonable time to be fixed by the Engineer-in-charge depending on the requirement in each case, failing which, the same shall be removed at the risk and cost of the Contractor. No claim whatever shall be entertained on this account.

Whenever B.I.S. codes are referred to in other particular specifications attached, the latest B.I.S. codes prevalent at the time of execution shall be followed.

3.11 BYE-LAWS

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 Purchaser 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 work or temporary work and from and against all claims, demands proceeding, cost, charges and expenses whatsoever in respect of or in relation thereto. The Contractor shall defend all actions arising from such claims and shall himself and any every sort that may be legally incurred in respect thereof.

The Electrical work shall be carried out as per local Electrical Inspectorate / Central Electrical Authority, which even is concerned. standards/ specifications/ guidelines and the Contractor shall get the approval and safety certificate from the Inspectorate after the completion of work and before energisation.

3.12 CO-ORDINATION

The Contractor shall co-operate with other agencies working in the same project, compare plans, specifications and the time schedules and so arrange his work that there will be no interference. The Contractor shall forward to the Engineer-in-charge all correspondence and drawings exchanged. Failure to check plans for conditions will render the Contractor responsible for bearing the cost of any subsequent change found necessary or damages done.

However, the Contractor shall afford necessary facilities to execute the works imultaneously with other agencies executing the works for the same project. The Purchaser shall entertain no claim on this account.

3.13 SAFETY

Only properly tested and marked material handling equipment shall be used.All important connections/assembly of sound design related to pulley/guide etc., including

the supporting arrangement and fixing details shall be checked periodically and necessary rectifying actions are to be taken in order to ensure safe handling of loads during different operations.

All plant and machinery of the contractor shall observe the safety regulations needed for working in a project where other contractors/ sub-contractors/ agencies might also be working on the project, so as not to interfere with the work of the other contractors or foul with their constructions shall be taken by the contractor and nothing extra is payable on this account.

The Contractor shall take all precautions to avoid all accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused due to negligence on his part. No hindrances shall be caused to traffic during execution of work.

The rates quoted by the Contractor for all items except those where specific provisions indicated in the schedule of Requirements shall include all leads, lifts, and nothing extra shall be paid on this account.

The Contractor shall adjust his labour, staff, plant, machinery. etc., according to the requirement of work from time to time with particular regard to approved phases of work and no claim shall be entertained on account of idle labour, plant, machinery, etc., due to any reason whatsoever.

The Contractor shall clear the site thoroughly of all shuttering materials and rubbish etc., left out of his work and dress the site around the area to the satisfaction of Engineer-in-charge upon completion of the work and before release of payment of the last running bill. He will remove the labour huts on completion of the work. The payment of final bill will be subject to the compliance of this condition by the contractor.

3.14 TESTS

The Contractor shall produce samples of all the materials well in advance so that there is sufficient time for testing of the materials and clearance of the same before incorporation in the work.

All the materials to be used in and on every part of the work shall be subjected, from time to time, to such tests as the Engineer-in-charge may direct. Such tests shall be performed at the expense of the Contractor. The samples for tests shall be in all cases selected by the Engineer-in-charge and supplied by the Contractor as part of the contract. If at any time, any material so tested, fails to meet the acceptance criteria, the

same shall be removed from the site of works and other materials substituted therefore, but in the absence of any specified test/acceptance criteria, the decision of the Engineer-in-charge shall be final and binding as to whether the said material or materials shall be used on the works, or removed forthwith and other suitable, approved material substituted.

The contractor shall produce on demand from the Engineer-in-charge, the necessary test certificates, Manufacturers' Authorization form certifying that the materials conform to the technical specifications. However, this clause will not apply to routine testing of materials at the site laboratory of the Contractor.

All tools, instruments, plants and labour/operating personnel for the test shall be provided by the Contractor at his own cost. For any tests as directed by the Engineer-in-charge, that has to be carried out at an outside laboratory, the same should be carried out by the Contractor without any extra cost.

3.15 SITE FOR PLANTS/EQUIPMENT, STACKING OF MATERIALS AND LABOUR

The Contractor shall stack materials at the site of work strictly as per instructions of Engineer-in-charge keeping in view the safety and smooth progress of the project. Nothing extra shall be payable for any extra lead involved in stacking the materials at a reasonable distance away from the work place.

3.16 SITE MAINTENANCE DURING CONSTRUCTION

The Contractor and each Sub-Contractor shall from time to time clear and remove all rubbish and obstructions and driveways in the work area shall be kept clear and unobstructed at all times. Nothing extra shall be paid on this account.

3.17 INSURANCE

The Contractor shall arrange, secure and maintain insurance as may be necessary and for all such amounts to protect his risks as detailed herein. The form and the limit of such insurance as defined herein together with the underwritten thereof in such case shall be as acceptable to the Purchaser.

However, irrespective of such acceptance, the responsibility to maintain adequate insurance coverage on comprehensive all risks basis at all times during the period of contract shall be of the Contractor. The Contractor's failure in this regard shall not

relieve him of any of his contractual responsibilities and obligations. Any loss or damage to the construction equipment or materials during handling, transporting, storage and erection, till such time as the work is certified by the Engineer-in-charge as having been completed in all respects & is taken over by the Purchaser: shall be to the account of the Contractor and his responsibility preferring all claims and make good for the damage or loss by way of repairs and/or replacement of the portion of the work damaged or lost.

The completion of work shall not, in any, way relieve the Contractor of the above responsibilities during the period of the contract. The Contractor shall provide the Purchaser with a copy of all insurance policies and documents taken out by him in pursuance of this contract. Such copies of documents shall be submitted to the Purchaser immediately after such insurance coverage.

The risks that are to be covered under the insurance shall include but not be limited to the loss or damage in transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, etc. The scope of such insurance shall cover the entire value of the work from time to time. All costs on account of insurance liabilities covered under the contract will be on the Contractor's account and will be included in contract price. However, the Purchaser, may from time to time during the pendency of the contract, ask the Contractor in writing to limit the insurance coverage risks and in such a case the parties to the contract will agree for a mutual settlement for reduction in contract price to the extent of reduced premium account.

3.18 INSURANCE FOR STAFF

The Contractor shall insure all his staff working at site against injury, loss of life etc., and the Purchaser will entertain no claims of compensation in this regard. The Contractor shall indemnify the Purchaser against all such claims as above, by his staff.

3.19 COMPENSATION FOR DELAY

If the Contractor fails to complete the work and clear the site for any particular phase on or before the stipulated completion time of that respective stage or extended period of completion, a delay penalty calculated at the rate of 1% per week of delay or part there of subject to a maximum of 10% of contract amount shall be imposed as per rule in force.

The Contractor shall maintain in perfect condition all works executed till the completion of the entire works allotted to him. When, phased handing-over is contemplated, the provisions mentioned above will apply to each phase.

3.20 GUARANTEE

At the close of work and before issue of final certificate of total completion by Engineer-in-charge, the contractor shall furnish a written guarantee indemnify the Purchaser against defective materials and workmanship for a period of one year after completion. The Contractor shall hold himself fully responsible for reinstallation or replace free of cost to the Purchaser 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 the Purchaser/owner, which is proved to be damaged or destroyed as a result of defective workmanship by the Contractor.

3.21 INSPECTORATE APPROVAL

All the equipment to be supplied and works to be executed shall conform to the State Electrical Inspectorate/Central Electrical Authority Standards including all protection and metering accessories. Nothing extra will be paid in this regard.

Contractor has to obtain necessary scheme approval, if any, from the statutory authorities concerned immediately after the award of work. All testing/calibration etc., are to be carried out as per the requirements of statutory authorities concerned.

On completion of work, the contractor has to obtain necessary safety/energization certificate from the statutory authorities concerned by submitting necessary completion certificate, drawings, equipment details, load details, test results etc., before energization.

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.

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.

3.22 STRUCTURAL ALTERATIONS TO BUILDING

No structural member in the building shall be damaged/ altered, without prior approval from the Engineer-in-charge. Structural provisions like openings, if any, provided by Purchaser for the work, shall be used. Where these require modifications, such contingent works shall be carried out by the contractor, at his cost.

All cut out openings in floors provided by Purchaser shall be closed, after installation, in accordance with the schedule of work.

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

3.23 DEVIATIONS FROM PURCHASER'S SPECIFICATION

Deviations from the purchaser's specification, if any, proposed by the bidder will be considered, provided they meet with the purchaser's requirements and are necessary to improve utility, performance and efficiency. The deviations proposed by the bidder shall include the technical merits and the financial implications.

3.24 CONFORMITY TO IE ACT, IE RULES AND STANDARDS

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 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.

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-1910, 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 wherever applicable.
- d) In all electrical installation works, relevant Safety codes of practices shall be followed.
- e) Fire Insurance Regulations/Tariff Advisory Committee.
- 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 the Factory Inspector of the State.
- h) Any other regulations laid down by the local authorities.

i) Installation & operating manuals of original manufacturers of equipment.

3.25 DATA/DRAWINGS/DOCUMENTS

The bidder shall submit the following data/information/drawings/documents as indicated below:

- i) List of deviations clause by clause and reasons.
- ii) Descriptive literature of the various equipment offered with catalogues, if any.
- iii) Guaranteed technical particulars of the equipment and performance particulars
- iv) Approximate dimensions and weights and preliminary G.A drawings.
- v) List of optional features with extra price.
- vi) Make of various equipment and associated components/
- vii) Where applicable, preliminary schematic of the equipment/ system offered in the tender.
- viii) Control wiring and associated drawing should be submitted by the contractor to engineer in charge.

Liaison with all statutory authorities including KSEB for getting sanction/approval/safety certificate/ power connection including submission of necessary forms to KSEB/ Electrical inspectorate as required is included in the scope of this work. Necessary fee for the above will be reimbursed by CLIENT on production of actual bills.

Sd/-
Manager Estate
Kerala State Civil Supplies Corporation

4.0 SPECIAL CONDITIONS FOR INSTALLING THE AMF

1. Any facility not mentioned in this scope, but which is vital for erection and commissioning of AMF Panel is assumed to be included in the scope of work.
2. Contractor has to ensure safety and provide adequate supervision.
3. During working at site, some restrictions may be imposed by Engineer-in-Charge/Security staff of Corporation or Local Authorities regarding safety and security etc., the contractor shall be bound to follow all such restrictions/instruction & nothing extra shall be payable on this account.
4. No compensation shall be payable to the contractor for any damage caused by rains, lightening, wind, storm, floods Tornado, earth quakes or other natural calamities during the execution of work. He shall make good all such damages at his own cost; and no claim on this account will be entertained.
5. The tender shall be based on Conditions of Contract and tenderers are required to quote their own rates against each item in schedule of quantities, which is enclosed. All rates shall remain firm for the contract period/extended contract period.
6. If the contractor fails to proceed with the work within the stipulated time as specified from the date of issue of letter of intent/letter to proceed with the work, the Corporation shall forfeit the earnest money deposited by him along with the tender.
7. All the works to be carried out in accordance with latest Kerala EI/CPWD/BIS Specifications and as per the directions of Engineer-in-charge.
8. All the works to be carried out in accordance with latest Kerala EI/CPWD/BIS Specifications and as per the directions of Engineer-in-charge.
9. COST OF TESTS

The contractor is bound to carry out the tests as per the CEI/CPWD/BIS/Applicable codes guidelines for ascertaining the quality of the works executed/ materials used as and when directed by the Engineer-in-charge. The cost of preparing samples and carrying out tests for quality of material or workmanship will be borne by the contractor except for such exclusions as are specifically mentioned in the specifications laid down in the contract. The cost of all test carried out in Laboratories as directed by the Engineer-in-charge will be borne by the contractor.

Sd/-

Manager Estate

SIGNATURE OF THE CONTRACTOR

4.1 DETAILED TECHNICAL SPECIFICATION FOR AMF PANEL

A. Operation:-

1. When mains are healthy, the Mains MCCB should be ON.
2. When Mains supply is unhealthy i.e. phase failure, undervoltage, overvoltage and no voltage, the mains MCCB should trip. The DG should start automatically, develop the voltage and connect the DG Breaker to load.
3. When the main is restored, the relay should monitor the mains for healthiness for 05 minutes. Disconnect the DG Supply and connect the mains MCCB ON. The DG should stop after 1 minute (cool off time) and should go on standby mode again.

B. General Features:

The AMF panel shall be indoor type, floor mounted, dust and vermin proof in sheet steel construction. The panel shall have doors at the front and back for proper maintenance. The panel shall have steel channel fabricated kick-plate and bolted type cable gland plate fitted at the bottom. The panel shall be constructed from 2 mm thick steel sheet. All the joints shall have proper gaskets.

- i. Monitoring and control devices shall be housed on the front door. Generally the construction of the panel will be such that various equipments for different applications will be housed in compartments. All incoming and outgoing power and control cables shall be from the bottom or back side.
- ii. Panel will be equipped with the following:-
 - 2 nos. 4 pole, 400Amp MCCB type
 - 2 set of CTs for Metering
- iii. AMF Logic
 - One Main supply voltage monitor
 - One Alternator supply voltage monitor
 - One set of DC control relays and timers

- One Set of control relays for the automatic control
- iii. Indications
 - Set running
 - Set on Load
 - Phase Indication

C. Terminal Blocks and wiring

Terminal blocks of robust type and generally not less than 15 amps capacity, 250/500 volts grade for DC upto 100 volts and 660/1100 volts grade for AC and rest of the junction shall be employed in such as manner so that they are freely accessible for maintenance. All control and small wiring from unit to unit inside the panel shall also be done with not less 2.5 sqmm copper conductor PVC insulated and 660/1100 volts grade. All ends shall be identified with ferrules at the ends.

D. Labeling:

All internal components shall be provided with suitable identification labels suitable engraved. Labels shall be fixed on buttons, indication lamps etc.

E. Painting:

The entire panel shall be given primer coat after proper treatment and powder coating with 7 tank process before assembly of various items.

F. Equipment requirements:-

The control cubical shall incorporate into assembly general equipment and systems as under:-

- Control system equipments and components such as relays, contactors, timers etc. both for automatic operation on main failure and as well as for manual operation.
- Equipments and components necessary for testing generating sets healthiness with test mode and with load on mains.
- Necessary indication lamps, fuses, terminal blocks, push buttons, control switches etc as required.
- Necessary engine/generating set shut down devices due to faults/abnormalities.

- Necessary visual audio alarm indication and annunciation facility, as specified.
- Breakers as specified in the schedule of work.

G. System Operation:-

G.1 Auto mode:

- A line voltage monitor shall monitor supply voltage on each phase. When the mains supply voltage fails completely or falls below set value (variable between 80 to 95% of the normal value) on any phase, the monitor module shall initiate start up of diesel engine. To avoid initiation due to momentary disturbance, a time delay adjustment between 0 to 5 second shall incorporated in startup initiation.
- A three attempt starting facility shall be provided 6 seconds ON, 5 seconds OFF, 6 seconds ON, 5 seconds OFF, 6 seconds ON. If at the end of the third attempt, the engine does not start, it shall be locked out of start and a master timer shall be provided for this function. Suitable adjustment timers are to be incorporated which will make it feasible to vary independently ON-OFF setting periods from 1-10 seconds. If alternator does not build up voltage after the first or second start as may be further starting attempt will not be made until the starting facility is reset.
- Once the alternator has built up voltage, the alternator circuit breaker shall close connecting the load to the alternator. The load is now supplied by the alternator.
- When the main supply is restored and is healthy as sensed by the line voltage monitor setting, both for under voltage and unbalance, the system shall be monitored by a suitable timer which can be set between 1 minute to 10 minute for the load to be transferred automatically to main supply.
- The diesel alternator set reverts to standby for next operation as (a), (b) and (c) above.

G.2 Manual mode:-

- In a manual mode, it shall be feasible to start-up the generator set by the

operator on pressing the start push button.

- Three attempts starting facility shall be operative for the start-up functions.
- Alternator circuit breakers closing and trip operations shall also be through operator only by pressing the appropriate button on the panel and closure shall be feasible only after alternator has built up full voltage. If the load is already on 'mains', pressure on 'close' button shall be ineffective.
- Engine shut down, otherwise due to faults, shall be manual by pressing a 'stop' button.

G.3 Test mode:

- When under 'test' mode, pressing of 'test' button shall complete the start up sequence simulation and start the engine. The simulation will be that of mains failure.
- Engine shall build up voltage but the set shall not take load by closing of alternator circuit breaker. When the load is on the mains, monitoring of performance for voltage/frequency etc. shall be feasible without supply to load.
- It during test mode, the power supply has failed; the load shall Automatically get transferred to alternator. Bringing the mode selector to auto position shall shut down the set as main supply is ON. If the main supply is not available at that time, the alternator shall take load.

H. Monitoring and metering facilities:-

- A set of visual monitoring lamp indication for
 - i) Load on set
 - ii) Load on mains
 - iii) Set on test (alternator on operation duty, alternator on standby duty).
 - iv) Set of lamp for engine shut down for over speed, low lube oil pressure and high coolant water temperature, overload trip of alternator, earth fault trip of alternator, engine lock out and failure to start etc. all these indications shall have a audio and visual alarm, when operator accepts

the alarm, the hooter will be silenced and the fault indication will become steady until reset by operating a reset button.

I. Operating devices:-

A set of operation devices shall be incorporated in the front of panel as under:-

- Master engine control switch: this shall cut off in 'OFF' position DC control to the entire panel, thus preventing start-up of engine due to any cause. However, battery charger and lamp test button for testing the healthiness of indication lamps, DC voltmeter/ammeter etc. shall be operative. It shall be feasible to lock the switch in OFF position for maintenance and shut down purposes.
- Operation selectors switch OFF/AUTO/MANUAL/TEST position.

LT CABLES

GENERAL

L.T. Cables shall be supplied, inspected, laid, tested and commissioned in accordance with drawings, specifications, relevant Indian Standards, CPWD/KPWD specifications and cable manufacturer's recommendations. The cable shall be delivered at site in original drums with manufacturer's name clearly written on the drums. The recommendations of the cable manufacture with regard to jointing and sealing shall be strictly followed.

MATERIALS

The LT Power Cables shall be XLPE insulated PVC sheathed aluminum conductor armored cable conforming to IS:7098 : Part -1:1988 with up-to-date amendments.

INSTALLATION OF CABLES

Cables shall be laid directly in ground, pipes, masonry ducts, on cable tray, surface of wall etc. as indicated in BOQ and/or as per the direction of Engineer-in-charge, and as per CPWD specifications.

INSPECTION

All cables shall be inspected at site and checked for any damage during transit.

JOINTS IN CABLES

The contractor shall take care to see that the cables received at site are apportioned to various locations in such a manner as to ensure maximum utilization and avoiding of cable joints. This apportioning shall be got approved from Engineer-in-charge before the cables are cut to lengths.

LAYING CABLES IN GROUND

Cables shall be laid by skilled experienced workmen using adequate rollers to minimize stretching of the cables. The cable drums shall be placed on jacks before unwinding the cable. With great care it shall be unrolled on over wooden rollers placed in trenches at intervals not exceeding 2 meters. Cables and other accessories shall be laid as per CPWD specification and other relevant IS Codes. At all changes in direction in horizontal and vertical planes, the cables shall be bent smooth with a radius of bent not less than 12 times the diameter of cables. Minimum 3 metre long loop shall be provided at both end of cable. Distinguishing marks may be made on the cable ends for identifications of phases. Insulation tapes of appropriate voltage and in red, yellow and blue colours shall be wrapped just below the sockets for phase identifications.

PROTECTION OF CABLES

The cables shall be protected by bricks laid on the top layer of the sand for the full length of underground cable. Where more than one cables is laid in the same trench, the bricks shall cover all the cables and shall project a minimum of approximately 80mm on either side of the cables. Cable under road crossings and any other places subject to heavy traffic shall be protected by running them through Pipes of suitable size.

EXCAVATION & BACK FILL

All excavation and back fill required for the installation of the cables shall be carried out by the Contractor in accordance with the drawings and requirements laid down elsewhere. Trenches shall be dug true to line and grades. Back fill for trenches shall be filled in layer not exceeding 150 mm. Each layer shall be properly rammed and considered before laying the next layer. The contractor shall restore all surface, roadways, sidewalks, kerbs wall or the

works cut by excavation to their original condition to the satisfaction of the Engineer-in-Charge.

TESTING OF CABLES

Prior to installation, buying of cables, following tests shall be carried out. Insulation test between phases, phase & neutral, phase & earth for each length of cable.

- a. Before laying
- b. After laying
- c. After jointing

On completion of cable laying work, the following tests shall be conducted in the presence of the Engineer-in-Charge.

- a. Insulation Resistance Test (Sectional and overall)
- b. Continuity Resistance Test
- c. Earth Test

All tests shall be carried out in accordance with relevant Indian Standard code of practice and Indian Electricity Rules. The Contractor shall provide necessary instruments, equipments and labour for conducting the above tests & shall bear all expenses of conducting such tests.

PROTECTIVE EARTHING

The scope of work shall cover earthing stations, laying copper/GI earth strips a connecting the power panels, DBs and switch boards.

The work shall be done as per the CEI specification; Materials of which the protective system is composed shall be resistant to corrosion or be adequately protection against corrosion. All apparatus and equipment transmitting or utilizing power shall be earthed.

5.0 SCHEDULE OF QUANTITIES					
Name of work:-		SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AMF PANEL AT SUPPLYCO HEAD-OFFICE, GANDHINAGAR-682020			
Sl.No	QTY	Specification	Unit	Rate	Amount
Electrification					
AMF PANEL					
1		Supply, Fabrication, erection, testing and commissioning of following cubicle type fully compartmentalized LT Switchboards dust tight and vermin proof, fabricated out of 16 SWG CRCA sheet chemically treated and powder coat the panels with approved shade. The Switchboards have a set of 400A TPN Aluminium busbars + earth bus with the specified current and fault level insulated with heat shrinkable colour coded PVC sleeves and supported using DMC/ SMC pillar or finger type busbar supports. The design shall be as per the standards of the State Electrical Inspectorate.			
1.1	1	Fabricated out of 16SWG CRCA sheet bottom cable entry for incoming and outgoing feeders with AMF facility for D.G set automatically start on power failure	No		
MCCB					
2		Supply, conveyance and fixing the following types & current rated control gears & switchgears conforming to IS 13947 suitable for 440 V, 50 Hz, AC supply in the existing panel assembly as required			
2.1	3	400A, 4P MCCB, 35KA Ics, Isolation duty & current limiting, Thermal Adj range between 80-100% with shunt and UV release contactor with auxillary contacts (includes spreader, ROM)	No		
POWER CONTACTORS					
3		Supply, conveyance and fixing of 400A 4P AC3 rating or equivalent power contactors conforming to IS 60947-4-1 suitable for 440V, 50 Hz, AC supply in the existing panel assembly as required.	No		
AMF RELAY & ACCESSORIES					

4	1	Supply, Installation, testing and commissioning of AMF relay with display and communication including all related control accessories for wiring the AMF relay in the existing panel.(This include AMF relay + all the control side material and labour charge)	No		
		INDICATION LAMP, MFM, C.T, BATTERY CHARGER			
5	6	Supply and fixing of LED indicators for all voltage ranges - Red, Green, Blue Color in the existing panel (includes control wiring charge and material charge)	No		
6	2	Supply and fixing of LED type multifunction meter with i/p voltage measuring range 3x 240VAC, Aux 17-520VAC(P-P), Flush mounting, parameters such as V, A, F, PF, Phase sequence in the existing panel (includes control wiring charge and material charge)	No		
7	6	Supply and fixing of current transformer 400/5A 15VA CL.1 accuracy CT	No		
8	2	Supply and fixing of Auto/Manual/Test/Off selector switch in the existing panel	No		
9	1	Supply and fixing a battery charger for providing emergency charging for an automatic operation of DG.	No		
10	1	Labour and material charge for converting the key operation Dg into automatic type	Lum		
11	1	Dismantle the earth fault relay from MSB panel and mount the same relay in AMF panel.(This include the control accessories and wiring charge)	Lum		
12	1	Dismantling and disconnecting of 400A Iso. 200A contactor, castle key interlock, cables, compression gland, pilot lamp etc. from the existing MSB panel.	Lum		
		POWER CABLES			
13		Supply, laying, testing and commissioning of PVC 1.1 KV grade Aluminium cables for the following sizes & laying in built type trenches, racks, risers, trusses, walls, pulling through pipes, including all minor/major civil works.			
13.1	7	3.5 Core x 240 Sqmm	M		

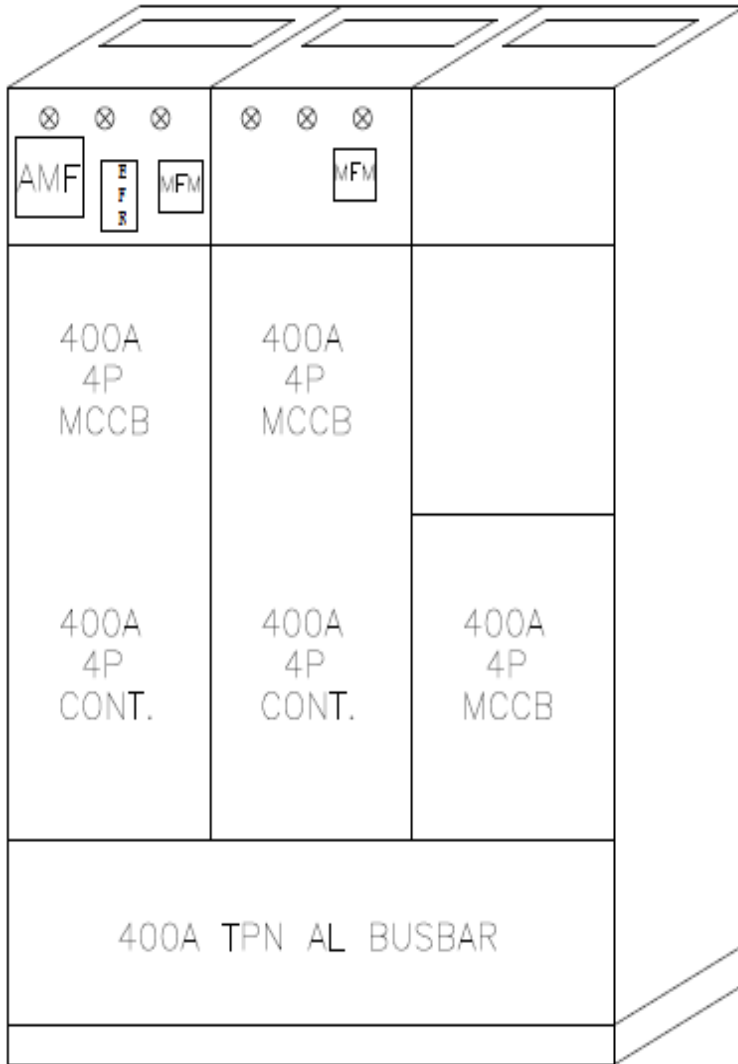
13.2	5	3.5 Core x 150 Sqmm	M		
		CABLE TERMINATION			
14		Supply of all materials and termination of PVC insulated armoured copper / aluminium LT cables using single compression type cable glands. Copper crimped type cable lugs, cable identification tags and including glad earthing using copper conductor of 16 SWG			
14.1	6	3.5 Core x 240 Sqmm	No		
14.2	2	3.5 Core x 150 Sqmm	No		
		CONTROL CABLES			
15		Supply and Laying, testing and commissioning of the following 11KV Grade PVC insulated Armoured Copper control Cables (YWY/YFY) through excavated trenches built up cable trenches cable trays hume pipe as necessary and including supply of all materials for clamping, cable route markers identification tags and clamping at intervals			
15.1	30	6C x 2.5 SQ.MM YWY	M		
		TERMINATION			
16		Supply of all materials and termination of the following PVC 1.1 KV Grade PVC Insulated Armoured copper Control Cables (AYWY/AYFY) using single compression typecadmium plated brass cable glands, copper crimped type cable lugs, cable identification tags and including gland and armour earthing using copper conductor of adequate size etc.			
16.1	2	6C x 2.5 SQ.MM YWY	No		
17		Supplying and making straight through joint with compound including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.			
17.1	2	3½ X 240 sq. mm	No		
17.2	1	3½ X 150 sq. mm	No		
		EARTHING			
18		Supplying and laying/fixing of earthing conductor of copper strips/wires including necessary earthing trenches, jointing as per IS 3043/87 in trenches, walls, pulling through pipes			

		etc,			
18.1	10	Copper Strip 25 x 3	M		
18.2	10	Copper Wire No. 10 SWG	M		
19	4	Supply and laying of 40mm GI pipe	M		
		MISC. CIVIL ITEMS			
20	1	Excavation and other civil work	Lum		
		STATUTORY FEES			
21	1	Preparation of completion reports with necessary drawings and submission of report to local Electrical Inspector, liaisoning work, Conducting Rule 63 Inspection and getting safety certificate / sanction order (All statutory fees to be paid by client)	No		
TOTAL					

6.0 LIST OF APPROVED MAKES/SUPPLIERS - ELECTRICAL		
Sl. No.	ITEM	MATERIALS/EQUIPMENT
1	AMF Relay	C&S, L&T, Honeywell, Siemens, ABB
2	MCCB	Siemens, Schnieder, L&T, ABB, Legrand
3	MCB	Siemens, Schnieder, L&T, ABB, Legrand, Hager
4	Battery charger	System control/AE or equalient
5	Indicating lamps	GE/ABB/L&T
6	Push button	L&T, C&S
7	Cable glands, lugs, End termination kit	Gripwel, HMI, Denson, Multipressings, Dowell,Commet
8	current transformers	AE/L&T or PWD approved
9	Cables	Polycab, RRkabel, havells, finolex, gloster, KEI, Finolex, Torrent
10	Contactors	L&T, C&S, Schnieder, ABB, siemens
11	Meters	L&T, Elmeasures or K. PWD approved
12	Auto/Manual/Test/Off selector switch	Ceilzer/L&T/Havells or K. PWD approved
13	GI pipe	Jindal/Tata or Kerala PWD approved
14	Distribution Board/ Panel	Approved by state electrical inspectorate

7.0

MODEL FOR AN AMF PANEL



16SWG CRCA SHEET
ISM75 CHANNEL

