



KERALA STATE ELECTRICITY BOARD LIMITED

TRANSMISSION SUB DIVISION, KASARAGOD

E Tender No.01/TSD-KSD/2026 – 27 /Dated 11.05.2026

Name of work: 110kV Substation, Mulleria - Extension of 33kV Bay & associated works for power evacuation from the 15 MW / 60 MWh Battery Energy Storage System (BESS) project under Deposit Work in favour of M/s. Opera Energy Pvt Ltd. Under Transmission Circle, Kannur

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SAFETY PRECAUTIONS

The work is to be carried out in a live 110 kV Substation. All necessary safety precautions are to be taken during the execution of the work.

The contractor should employ supervisor all the time at the work site. The contractor should ensure that his employees are always following the instructions of the substation operating staff. No entry into the yard shall be made without the permission of the operator on duty.

The contractor should ensure that his employees should not carry any long metallic items such as ladders into the yard without prior permission and supervision. The employees should not make any attempt to touch any equipments or climb on any structure.

The live areas indicated by the operating staff should be kept marked by red warning tapes during the execution of the work.

The contractor should provide all necessary safety equipments and personnel protection equipments to all his employees at his own cost.

Any failure or negligence in complying with safety regulations or instructions of operating staff shall not be allowed under any circumstances.

INSURANCE

The contractor shall, at his own expenses, take and keep comprehensive insurance including third party risk for the plant, machinery, men, materials etc brought to the site and for all work during execution.

The contractor shall, at his own expenses, take workmen's compensation insurance as required to meet the claims, demands, losses and damages that may arise due to any accidents during the execution.

TAXES AND DUTIES

- I. 1% of the bill amount shall be deducted towards Construction Workers Welfare Fund and credited to the funds as directed by the Government.
- II. Income tax as stipulated by the Government from time to time shall be deducted from each bill and will not be reimbursed. Regarding income tax, surcharge on income tax and any other corporate tax, KSEBL shall not bear any tax liability irrespective of the mode of contract. The bidder shall be solely liable for payment of such taxes and they will be deducted at source whenever required.
- III. In the tender, the rate quoted by the bidder should be exclusive of GST and TCS.
- IV. The bidder should mandatorily specify the registration status and quote GST registration number along with copy of GST registration certificate.

TENDER EVALUATION

Tenders shall be evaluated and lowest bid determined based on the directions in the order No. FA/Tax cell/GST-Tendering/2020-21/Dated 24.02.2021

Main points are given below;

- a. In case where the bidders participated in a Tender consists of registered parties, Tenders shall be evaluated based on the total cash outflow to KSEBL. That is the rates quoted by contractors excluding taxes plus prevailing GST (for registered parties) should be taken into consideration for the purpose of determining the L1 bidder.
- b. If reverse charge is applicable for the subject work at the time of tender evaluation, KSEBL's liability on account of Reverse Charge Mechanism should also be considered (as cash outflow) in the evaluation of the tender.
- c. If the bidder is a composite dealer (which can be identified from GST registration certificate furnished by the bidder (Type of Registration-Composite) such contractors shall be evaluated as if they were unregistered contractors and their tenders will be cancelled
- d. In case of tenders having PAC less than or equal to Rs.20/- Lakhs, if the GST registration details were not specified by a registered bidder while submitting the Tender, he shall be treated as if he were an unregistered dealer and their tender will be cancelled .
- e. TCS u/s 206C(1H) need not be considered for Tender evaluation.

ONLINE TENDER PROCESS

The tender process shall consist of the following stages:

- a. Downloading of tender document:** Tender document will be available for free download on www.etenders.kerala.gov.in. However, tender document fees shall be payable at the time of bid submission as stipulated in this tender document.
- b. Publishing of Corrigendum:** All corrigendum shall be published on www.etenders.kerala.gov.in and shall not be available elsewhere.
- c. Bid submission:** Bidders have to submit their bids along with supporting documents to support their eligibility, as required in this tender document on www.etenders.kerala.gov.in. No manual submission of bid is allowed and manual bids shall not be accepted under any circumstances.
- d. Opening of Technical Bid and Bidder short-listing:** The technical bids will be opened, evaluated and shortlisted as per the eligibility and technical qualifications. **All documents in support of technical qualifications, financial soundness and mandatory documents(PAN ,GSTN and Aadhar) shall be submitted (online). Failure to submit the documents online will attract disqualification.** Bids shortlisted by this process will be taken up for opening the financial bid.
- e. Opening of Financial Bids:** Bids of the qualified bidder's shall only be considered for opening and evaluation of the financial bid on the date and time mentioned in critical date's section.

ELIGIBILITY OF CONTRACTOR

The bidders with sound financial capability and technical capability for the similar works only be considered. The bidder's financial capability and technical soundness is proposed to be assessed based on the following parameters:

Technical Capability

Experience in executing *the following works*

Experience in Electrical & Civil works in HT (33 KV and above) substations

a. Qualification Criteria for Financial Capability

The bidder should have sufficient financial capability

b. Qualification Criteria for Technical Capability

The bidder should have satisfactorily completed **similar works** of value specified below as a prime contractor during the last three years as on the date of notice inviting bid. In case of joint venture, lead partner need to meet the experience in the similar works.

Note: similar works means the experience in all the following

Experience in Electrical & Civil works in HT (33 KV and above) substations

The bidder should have satisfactorily completed all the above works.

Details of the experience and past performance of the bidder (or of each party to a joint venture) on works of similar nature shall be submitted in the format as per Annexure IV of this bidding document.

C.Evaluation of Technical Capability

Bidders who have met or exceeded the eligibility criteria mentioned above shall be only qualified for Technical capability and should have experience in all the works below:

Experience in Electrical & Civil works in HT (33 KV and above) substations

d. Qualification of bidder

The Bidder who qualifies for financial capability and technical capability shall be considered as qualified bidder and they alone shall be considered for further processing.

Even though the bidder meets the above qualifying criteria, the bidder may be disqualified if they had made misleading statements or false representations in the forms, statements and attachments submitted as proof of the qualification requirements, and /or have poor track record such as abandoning of works, failure in completing the works, inordinate delays in completion of the work etc

Award of Work order/Execution of the Agreement

- a. The work order / agreement executed with the successful bidder shall clearly specify that, GST will be given extra over and above the quoted amount, except in case of unregistered contractors, composite dealers and in cases mentioned in clause (d) of tender evaluation.

Payment Processing

- a. Registered/compounding dealer/supplier shall produce GST Invoice containing all the particulars stated in Rule 46 of the CGST Rules, 2017. In case where contractor is having annual turnover of more than 100 crores (or as amended from time to time), E-Invoice shall be submitted.
- b. The payments has to be made to the contractor for total value of work plus the applicable GST and TCS, if applicable, subject to recovery of TDS, other recoveries,etc
- c. It is brought to attention of KSEBL that registrations of some contractors are being cancelled by the GST department on Suo-moto basis. Hence the ARU processing the payment should ensure that the GST registration status of the contractor is “Active.” This can be verified from “GSTIN/UIN status” in www.gst.gov.in/search by GSTIN/UIN.” GST should be reimbursed to the contractors only if their status is “Active”. In case the status is inactive/suspended/cancelled, GST should not be reimbursed till the status becomes active. If the GSTIN status of the contractor is inactive/ suspended/cancelled, all the GST reimbursed to the contractor in respect of invoices raised or payments made after the date of suspension or cancellation should be recover from the immediately succeeding bill/bills of the contractors after giving due intimation to them.
- d. If a contractor/supplier was unregistered dealer at the time of submission of tender has later became a registered dealer and if any additional claim of GST has been raised by a such contractor/supplier, due to change in the registration status after the award of work, such additional claim GST need not be entertained. However, the contractor should be insisted to provide GST invoice with the quoted base rate with applicable GST and the quoted amount without GST should only be reimbursed to him.

Defect Liability Period

The defect liability period of the work is 3 Years from the actual date of completion or handing over the work whichever is earlier. Security Deposit will be released only after the defect liability period.

KERALA STATE ELECTRICITY BOARD LIMITED

GENERAL SPECIFICATION AND ADDITIONAL CONDITIONS OF CONTRACT

1. SCOPE AND EXTEND OF WORK

This contract is for both Electrical and civil works at 110 kV Substation, Mulleria

2. LOCATIONS AND ACCESS

The proposed work site is to be carried out 110 kV Substation, Mulleria located at road near Mulleria Town in Kasaragod district.

3. GENERAL DESCRIPTION OF WORK

The work involves mainly the following items.

- a. Electrical works : Loading and unloading of equipments, erection works, wiring etc
- b. Civil works : earth work excavation, random rubble masonry, reinforced cement concrete, cement plastering etc
- c. Switchyard light
- d. Cable trench works
- e. Earthmat and eathing connections

The contractor is responsible to do any other item of work under instruction of the Engineer in charge in whose opinion it is required to be done for the satisfactory completion of the work entrusted to the contractor. All the items of work are to be done in accordance with the latest Indian Standard Specifications unless otherwise specified in the tender documents.

4. PROBABLE AMOUNT OF CONTRACT

Probable amount of contract is **Rs. 37, 39, 464/- (Rupees Thirty Seven Lakhs Thirty Nine thousand Four hundred and Sixty Four only)**

5. PERCENTAGE RATE:

This contract is on percentage rate contract basis and hence the tenderer is required to quote a single percentage adjustment to the net P.A.C. shown in the schedule excluding GST and TCS. The bidders need not be quote GST (amount or rate) in the bidder detail document.

6. EXTRA / EXCESS QUANTITY

The rates for extra items will be worked out based on the departmental data/schedule of rates prevailing at the time of inviting the bids, irrespective of the time of execution of work. This means that the rates of labour, materials and other charges shall be same as in the schedule of rates on which the tender was based. The rate once fixed for an item will not be varied during the currency of the contract.

7. FIRST AID FACILITY

The contractor has to maintain facilities at site for first aid including adequate supply of sterilized dressings and cotton wool in readily accessible place. The contractor will have to make his own arrangements at his cost for treatment of his workers in hospitals in case of accidents. All the staff and workers of the contractor engaged in this work should be provided with personal accident insurance coverage from the general insurance company.

8. PERIOD OF COMPLETION.

All the works covered by this tender including preliminary and enabling works, finishing and final cleaning should be completed in a period of not more than **2 (Two) months**. The time of completion will be reckoned from, 30 days after the date of issue of letter of acceptance and time of completion will be worked out accordingly. The works should be executed strictly adhering to the program approved by the Engineer. Periodical progress of the works will be watched based on approved time schedule and if the progress is found to be not satisfactory, the Board will have the option either to terminate the contract or to supplement the work through other agencies both at the risk and cost of the contractor or to allow the contractor to carry on with the work imposing suitable penalties for the short fall in progress, as decided by the Engineer in charge.

9. CONSTRUCTION FACILITIES.

a) Water supply:

The Contractor has to make his own arrangements for necessary water supply for construction purposes as well as his camps and other requirements. In respect of source and supply arrangements of water the contractor shall select the source and make distribution line in such a way that they do not interfere with the water supply arrangements of other works of the Board. All arrangements for water supply including source is the full responsibility of the contractor and shall be subject to the prior approval of Engineer in-charge of the work.

b) Power Supply:

The contractor shall be responsible for arranging power at their own cost from the nearby KSEB section office (Distribution wing), for the work. The Board shall no way be responsible for supplying power to the contractor at this reach. The department will not be responsible for any failure or interruption of electric supply and no compensation shall be claimed. The contractor electrical installation shall be in accordance with the requirement of the Electrical inspectorate of the Government of Kerala.

c) Compressed air and other supplies:

Arrangements for compressed air and any other supplies or services as required shall be made by the contractor at his cost.

d) Facilities outside the work site:

The Board will not be responsible to provide any facilities outside the compound.

e) Tools and plant:

No tools and plant will be supplied by the Board. The contractor will have to bring his own tools and plant required for the works.

10. AVAILABILITY OF CONSTRUCTION MATERIALS:

The available information regarding availability of materials as gathered by the Board shall be presented for guidance to the tenderers. However the tenderers are expected to make their own study of all these information by themselves and acquainted with the availability of construction materials, equipment, wages of laborers and other aspects affecting the execution of this work. Any failure to get acquainted with the required information will not relieve him from the responsibility of execution of this work. The materials used for this work should be of good quality and conformity to the relevant Indian Standard Specification. The contractor shall supply the material for the work only after ensuring the quality by the department officials.

11. ISSUE OF DEPARTMENTAL MATERIALS:

No materials will generally be issued by the Board for the work to the contractor. All materials required for the work including cement and steel shall be supplied by the contractor at site as per the specification. Materials supplied or brought by the contractor at site shall not be taken out without the written permission of the Engineer in charge.

a) Cement

Cement used for the work shall conform to IS standards. The entire quantity of cement for the work shall be procured, transported, stored and supplied by the contractor as per IS standards according to requirements and as directed by the Engineer in charge. All the RCC items shall be executed as per the results of mix design conducted by K.S.E. Board at approved quality control lab. The materials required for the mix design shall be procured and entrusted at approved quality control labs to be specified by K.S.E. Board by the contractor at his expense. A quantity of 432 Kg/m³ of cement are assumed for RCC M 20 mix. If any reduction results in the above quantity of cement, recovery shall be affected from the contractor @ Rs. 8500/MT ± tender excess/ reduction for the reduced quantity of cement.

b) Steel

M.S. Rods, M.S. flats, channels and ribbed tor steel of all sizes and grades for reinforcement shall conform to IS standards. The entire quantity of steel for the work shall be procured, transported, stored and supplied by the contractor as per IS standards according to requirement and as directed by the Engineer In -charge.

c) Other Materials

All other materials required for the satisfactory completion of all the items shall be supplied by the contractor at his own cost.

12. WATCHING ARRANGEMENTS:

The contractor shall make his own arrangements for watching, lighting and protecting of the work and materials at site during day and night on all days including Sundays and holidays at his own cost.

13. CONTRACTOR'S OFFICE:

The contractor shall have an office at the work site where notices, directions and instructions from the Engineer may be served. The contractor shall have a Clerk or some authorized persons always present in this office on all days during working hours who shall receive such notices on behalf of the contractor.

14. SITE REGULATION

The contractor shall be responsible for maintaining good order on the work site and shall employ such officers, watchmen or persons as may be required. Unauthorized persons may be excluded from the work site.

15. RESTRICTIONS AT WORK SITE:

Other works entrusted with separate agencies will have to be carried out simultaneously in the same compound. The contractor shall arrange and execute the works in such a way as not to cause hindrance or damage to the work being executed by other agencies. It is also to be noted that the programme and scheduling of works may have to be made and modified to suit the progress and programme of other contract agencies involved in construction of other works in the same compound. The contractor shall be responsible for maintaining good order on the work site and shall employ such officers, watchmen or persons as may be required. Unauthorized persons may be excluded from the work site. The contractor should ensure that the works and peaceful atmosphere in the above place is not disturbed due to the work carried out at site. The materials should be kept neatly. The contractor or his workmen should not enter to the premises of the offices or store – yard situated in the compound without the sanction of the competent authority. The provisions in these general and additional conditions of contract will prevail over the printed conditions of contract in the case of conflict. The mode of execution and method of measurements of various items in the tender shall be generally in accordance with the relevant I.S. Specifications prevailing at the time of execution.

16. Earnest Money Deposit

Each tenderer is requested to deposit Earnest Money [online](#) as given in the tender notice. The earnest money shall be returned to the Contractor after he has furnished Security Deposit and agreement executed. Earnest money of unsuccessful tenderers will be returned as early as possible. Earnest money will be forfeited to the Board in the event of the tenderer refusing to enter into an agreement within 30 days from the date of acceptance of the tender subject to the conditions mentioned in clause E1.008 of “General Conditions of contract and instructions to tenderers”. The machinery equipments and other valuable materials of the Contractors at work sites shall be insured by them, so that any loss or damage due to the act of God’ etc. can be taken up by the Contractors with the insurance companies for getting their claims. The Board will not give any financial assistance on this account.

The Tenderer/Contractor must clearly understand that the settlement of claims either by part bill or final bill will be made only according to the allotment of funds made with the divisional officer in charge of the work under the respective head of account in which the work is sanctioned and arranged and also subject to the seniority of such bills. No claims for interest for damages what so ever shall be made for the belated settlement of claims of bills. No such claims shall be admitted by Board.

17. Kerala Construction Worker's Welfare Fund

An amount equivalent to 1% of the contract amount less cost of departmental materials from the contractor's bills will be recovered as contemplated in clause (2) and (3) of the Kerala Construction Worker's Welfare Fund Act, 1989. Tax on works contract will be recovered at source from the bills of Contractors at the rate existing from time to time and remitted to sales tax department. The Board will not take any liability to pay tax on works contract or any other taxes which the contractor is required to pay under the statute. The tenderer is requested to note the entries in ink/correction effected in the tender documents which are to be duly attested with full signature of the tenderer before submitting the tenders.

Special attention of the tenderers are invited to fill up the agreement forms in Rs. 200/- stamp paper, to be submitted along with tenders. Care may be taken for filling all information such as names and address of all concerned with their signature failing which it is likely that the tenders as a whole may be rejected without assigning any reason.

18. Retention money

From each part bill, 10% of the passed bill amount will be retained as retention money to form part of the comprehensive security, till the total of the performance security and the retention money accrued reaches the limit of comprehensive security i.e. 10% of the amount of contract. When the retention money deducted from the part bills accrue above Rs. 10 Lakhs, the amount over Rs. 10 Lakhs can be released at the discretion of the Engineer- in- Charge on production of Bank guarantee in prescribed form, from a Bank defined vide item no: 4 of part I of Vol: II for an equivalent amount and for a period as that mentioned in clause 5.1.9. The minimum amount thus released shall be fixed as Rs.1 Lakh at a time. In case the quantity of work done exceeds over the amount of contract due to excess execution, execution of extra items etc., the comprehensive security shall be suitably re-fixed and recovered as retention money to fulfill the requirement of comprehensive security so re-fixed.

19. Escalation/Revision of rate

The rates agreed and forming part of the contract shall be firm during the period of contract. No escalation will be allowed on whatever reasons and grounds. The contractor is not eligible for any escalation or other wise of the rates other than that quoted, accepted and agreed to. No claim for revision of rates will be allowed on any account during the period of contract or during the extended period of contract if any.

20. Penalty

The contractor is liable to pay the penalty imposed by the Board for any default. Delay incompletion of works renders the investment made by the Board idle and results in loss in generation of energy. The construction programme approved and accepted vide clause 5.3.5 which forms part of the contract includes the milestone dates for the completion of various important component parts and installation of equipments. These milestones are indicators for the timely completion of the project. Any slippage/slackness occurred in the milestones shall be compensated for attaining the final completion date. If any delay/slackness occurs in achieving each milestone stipulated in the approved construction programme forming part of the agreement, a penalty at the rate of 1% of value of works remaining to be completed for that mile stone for each day of slippage shall be levied. If the Contractor completes the whole project in the agreed time of completion, the penalty so levied shall be paid back without interest.

The maximum amount of penalty to be levied so shall be limited to 5% of the contract amount. The penalty if levied will be recovered from the part bill. In case the liquidated damages

are to be charged, the amount of penalty already levied shall be set apart from the amount of liquidated damages. The penalty is to be charged only during the period of completion.

The Engineer-in-Charge shall determine the works completed and the balance works remains to be completed on the date of expiry of period of completion and assess the reasonable period required for completion of the balance work and will be granted extension of period of completion. If any default or breach of contract is there from the part of the contractor, period of completion will not be extended. The ordered extension of time shall not release the contractor from any of its obligations under the contract. No extra payment other than those agreed to in the contract will be given on account of the ordered extension of time and the Board will not have any financial commitment. The contractor shall extend the validity period of the comprehensive security suitably to cover such extension and also, for the period of contract.

21. Liquidated damages

Any delay in commissioning a project will adversely affect the total planning which in turn will affect the State and the public exchequer. Hence, for any damage or loss caused to the Board due to the failure from the part of the contractor in completing the work in all respects within the stipulated period of completion, the contractor shall compensate for the same. The liquidated damage is to be realized from the end of the period of completion. The maximum amount of liquidated damage shall be limited to 10% of the accepted contract amount. The rate of liquidated damages shall be 0.05% of agreed probable amount of contract per day of delay subject to a maximum of 10% of agreed probable amount of contract. If the delay prolongs in excess of 200 days from the agreed date of completion as per the original agreement, the work will be terminated and balance work will be arranged to be completed at the risk and cost of the contractor.

22. Contractor's representative

The contractor may with prior consent of Engineer-in-charge appoint his representative giving him necessary authority to act on contractor's behalf under the contract. The contractor shall furnish the name and details of such representatives to the Engineer-in-charge and to his delegated officers well in advance. Without the prior consent of Engineer-in-charge, the contractor shall not revoke or replace such appointments.

If the contractor's representative is to be absent from the site a suitable replacement shall be made by a suitable person with the prior consent of Engineer-in-charge. The contractor's representative receives instruction on behalf of the contractor from the Engineer-in-charge and such instruction shall be deemed to have been given to the contractor.

The contractor shall also inform the personnel at site for assisting representative of contractor at site, their duties to the Engineer-in-charge. The contractor's representative shall be fluent in language for communication, competent for understanding drawing, executing and managing work. The contractor shall employ for the entire period of the contract, sufficient number of competent and qualified Engineering personnel (graduate and diploma engineers) as required and approved by the Engineer-in-charge for execution of the work. The contractor shall intimate the Engineer-in-charge in writing the names and identity of technical personnel proposed to be engaged on the work. The Engineering Graduates and Engineering Diploma holders are to be paid by the contractor at the prevailing rates during the entire period of execution of the work. In case minimum technical personnel as prescribed by the Engineer-in-charge is not continuously engaged in the work at site by the contractor, the expenditure that would have been incurred by the contractor on such engagement of personnel, subject to the amount as per the provisions of PWD schedule of rates, will be recovered from the contractor.

Cost of works executed	Number of persons to be employed
For works costing from Rs. 2 lakhs to Rs. 5lakhs	One diploma holder
For works costing from Rs. 5 lakhs to Rs. 10 lakhs	One Engineering Graduate and one Engineering diploma holder
For works costing over Rs. 10 lakhs	One Engineering Graduate and two Engineering diploma holders

For large works the technical organization shall be suitably enlarged such that the works can be carried out smoothly as determined by the Engineer - in - charge. Engineer-in- charge may require the contractor to engage a specialist based on nature of works. The contractor shall intimate the Engineer in charge in writing the names and identity of the technical personnel proposed to engage on the work. In the case minimum technical personnel as mentioned in this clause is not continuously engaged in the work at site by the contractor, the expenditure that would have been incurred by the contractor on such engagement of personnel, subject to a minimum amount assessed at the rates of minimum remuneration mentioned above will be recovered from the contractor.

23. PAYMENTS

General:

Upon satisfactory progress of work and at the discretion of the Engineer-in-charge, the contractor will be eligible for part payments based on the quantity of work done. Part payments will be made after observing all procedures and formalities of the Board, if the contractor has carried out works for a minimum of Rs.10 Lakhs. Payments will be made by cheque only after required checking and auditing. The amount of a bill will be arrived at based on the measured quantity for each item of work and as per the agreed rates.

No work will be paid unless it is fully in accordance with the specifications and satisfaction of Engineer-in-charge. If by inadvertence, any bad work, incomplete work or unsatisfactory work happened to be passed and paid for, the Engineer-in-charge shall have the right to recover the amounts so made at any time.

If any amount due to the contractor by virtue of this contract, but not claimed for payment for three months from the date on which it falls due, the same will be placed on the deposit account and if it remain unclaimed for three years, the contractor shall have no claim on such amount and will be finally credited to the account of the Board.

The amount of individual item duly measured in the contract systems shall be arrived at on the basis of agreed rates in the accepted price schedule forming part of the agreement and shall be carried out as below.

For Percentage rate contract system

The amount of individual items as well as sum total of items of work done and duly measured shall be arrived at on the basis of estimate rate per specified unit given in the price schedule of the agreement by the multiplication of quantity thus measured and rate thus given. Then the percentage rate quoted by the contractor and accepted by the Board shall be applied over the amount of work done which will give the amount to be passed in favor of the contractor.

The amount to be passed is worked out as per the following formula.

$$R = (A-B) (1 \pm P/100) + B$$

conditions of contract. Final measurements will be made on the completion of the work and payment will be given to the contractor on the basis of final measurements so taken, after adjustment of all outstanding recoveries and all amounts due to the Board as per the terms of the agreement. Payment of final bill will not be considered as a conclusive evidence for the sufficiency of any work or material or correctness of measurements to which it relates and it shall not relieve the contractor from his liabilities arising from any defects.

The Engineer-in-charge shall have the right to take over the works once it has been tested, commissioned and made operational. At the time of taking over, if any, minor works are seen left undone, such works can be got done by the Engineer-in-charge, for which twice the amount admissible for such items as per the contract can be retained from the final bill and settled.

c) Measurements

The price schedule specifies only the estimated quantities and the agreed unit rates. The estimated quantities given in the price schedule are not to be taken as the actual and correct quantities of the individual items to be executed by the contractor for the fulfillment of his obligations under the contract. The Engineer-in-charge shall ascertain and determine the quantity of each individual item by taking measurement of each item as specified elsewhere in this contract and as per the I.S.S and as per Public Works Account Code and Department Code and the value of works in accordance with the contract. The contractor shall be paid that value in accordance with the above clause. The contractor or the person authorized by the contractor for the purpose shall affix his dated signature in token of acceptance in the Board's documents.

When required, the Engineer-in-charge will give notice to the contractor or the person authorized by the contractor for the purpose, to measure any part of the work and he shall attend forthwith to assist the Engineer-in-charge for making such measurement and make available all necessary labour and other facilities at the cost of the Contractor. He shall also supply all particulars required by the Engineer-in-charge. If the contractor or the person authorized by him does not attend or neglect to do so, then the measurement made by the Engineer-in-charge shall be taken as the correct measurement for such part of work and the value of work shall be deducted accordingly.

d) Due date of payment

The agreement authority shall make earnest effort to make payments within 60 days from the date of submission of the bill in full particulars in the prescribed form/format, by the contractor. Any delay in making payment due to any reasons shall not be a cause to the contractor for raising any claims for interest or other claims and shall not affect the works in anyway.

e) Delayed payment due to dispute

No claim for interest or damages will be entertained by the Board with respect to any money or balance which may be lying with the Board owing to any dispute, difference or misunderstandings between the Engineer-in-charge on the one hand and the contractor on the other hand or with respect to any delay on the part of the Engineer-in-charge in making periodic or final payment of any respect whatsoever, and the Board shall not be liable to pay any interest or damages or loss to the contractor.

TECHNICAL SPECIFICATIONS

The following technical specification shall govern the items of work covered under this contract. For works and supply of materials not covered by these specifications, the I.S. Specifications for the respective work or materials shall apply and the contractor is bound to execute, supply such items in conformity with these specifications as though such standard specifications form part of this contract specifications.

SECTION -I **MATERIALS**

- a) Materials and fixtures shall be of best approved quality and confirming to the respective Indian Standard Specifications.
- b) Samples of all materials shall be got approved by the Engineer before placing order and the approved sample shall be deposited with the Engineer in-charge.
- c) All facilities including necessary labour for carrying out field test on materials shall be provided by the contractor without any cost.
- d) All materials supplied by the Board shall be properly stored and the contractor shall be responsible for safe custody till the completion of work.
- e) Unless otherwise shown on the drawings or mentioned in the “Schedule of quantities” or conditions of contract the quality of materials, workmanship, dimensions etc. shall be as specified hereunder.
- f) If directed, materials shall be tested in any approved testing laboratory and the test certificates in original shall be submitted to the Engineer in-charge and the entire charges connected with testing including charges for repeated tests, if ordered shall be born by the contractor.
- g) It shall be obligatory for the contractor to furnish certificate, if demanded, by the Engineer in - charge from manufacturers/supplied, that the work has been carried out by using their materials and as per their recommendations.

h) CEMENT:

The weight of ordinary Portland cement shall be taken as 1440Kg. per cum. Cement shall be measured by weight and in whole bags. Each undisturbed and sealed 50Kg. bag packed according to Indian Standards is considered equivalent to 34.72 liters in volume. No cement shall be supplied by the Board for the works. Cement will be sampled at the site of work for conducting tests. The contractor will conduct all tests. No cement shall be used until notice has been given by the Engineer in-charge that the test results are satisfactory. Cement shall be stored in weatherproof shed with raised wooden plank flooring to prevent deterioration by dampness or intrusion of foreign matters. It shall be stored in such a way as to allow the removal and use of cement in chronological order of receipt i.e. first received being first used. The stacking shall also be in such a way as to facilitate verification by counting of the whole stock easily and without notice. Cement deteriorated and or clodded shall not be used for work. Daily record of cement consumed shall be maintained by the contractor in an approved form and submitted to the Engineer in-charge. Coloured or other special type of cement if any specified in the work by the Engineer in-charge shall also be supplied by the contractor at his cost.

i) FINE AGGREGATE:

Sand shall conform to I.S. 383 and or relevant portion of I.S. 515. It shall pass through an I.S. sieve 4.5mm (3/16 B.S) test sieve leaving a residue not more than 5%. It shall from natural source of crushed stone, Screening if allowed, and shall be chemically inert, clean, sharp, hard, durable, well graded and free from dust, clay, shale, large pebbles, salt, organic matter, loam mica or other deleterious materials, sand obtained from natural source shall be washed in a sand washing plant of approved design made at site at the contractor's cost to reduce the percentage of deleterious substances to acceptable limits. Sand shall not contain any trace of salt and it shall be tested and sand containing any trace of salt shall be rejected.

The fine aggregate for concrete shall be graded within limits as specified in I.S. 383 and the fineness modulus may range between 2.60 to 3.20. No. extra will be paid for the grading as required above and for variation thereon. The fine aggregate shall be stacked carefully on a clean hard dry surface that it will not get mixed up with deleterious foreign materials. If such surface is not available a platform or planks or corrugated iron sheet or brick floor or a thin layer of lean concrete shall be prepared.

j) COARSE AGGREGATE:

Course aggregate shall consist of crushed or broken stone 95% of which shall be retained on 4.75mm I.S. test sieve. It shall be obtained from crushing granite, quartzite, basalt, or similar approved stones from approved quarry and shall be chemically inert when mixed with cement and shall be cubical in shape and free from soft, friable, thin, porous, laminated or flaky pieces. It shall be free from dust and any other foreign matter. Course aggregate used for all concrete works shall be graded and washed clean before mixing. Department from time to time shall fix the grading, based on laboratory tests at site and as directed by the Engineer in - charge. The grading of course aggregates may have to be varied from time to time based on quality control tests and as decided by the Engineer in-charge and no extra will be payable for grading for grading of aggregates as above or variation thereof and washing of aggregates.

k) REINFORCEMENT

Reinforcement shall be of mild steel tested quality conforming to IS 432-1266 and any other I.S.S. applicable or deformed bar conforming to I.S. 1786 and I.S. 1139 (Tore steel). All finished bars shall be free from cracks, surface, laminations, jagged imperfect edges.

l) RUBBLE

Hard granite stones shall be used. It shall be of uniform color and texture hard durable tough and quality approved by the Engineer in-charge; it shall be free from decay, sand holes, voids, flaws, cracks and other defects.

m) WATER:

Water for mixing cement, lime, surki mortar or concrete shall not be salty or blackish and shall be clean, reasonably clear and free from objectionable quantities of silt and traces of oil, acid and injurious alkali, salts, organic matter and other deleterious materials which will either weaken the mortar or concrete or cause, efflorescence or attack the steel in reinforced cement concrete. Water shall be obtained from approved sources. Potable water is generally considered satisfactory for mixing and curing concrete, mortar, masonry etc.

n) BRICKS

Bricks shall generally comply with I.S. 1077 and shall be of size 19x9x9cm or nearest available size. First class wire cut bricks shall be used for the work. Bricks shall be the best quality, locally available table molded, well burnt but not over burnt, having plane rectangular faces with parallel sides and sharp right angled edges and having a fine compact and uniform texture. The brick shall be free from cracks, chips, flaws, stones or lumps of any kind and shall not show efflorescence either on dry condition or subsequent to soaking in water. It shall omit a clear ringing sound on being struck and shall not absorb water not more than 20% by weight after 24 hours immersion in water. Common building bricks shall have a minimum compressive strength of 35 Kg/square centimeter. In the event of I.S. size bricks are not available locally; contractors will be allowed to use standard local size bricks as deemed acceptable by the Engineer in-charge.

o) METAL SPREADING

Supplied metals (6mm, 20mm, and 40mm granite broken stone etc) must be well stocked for measurement. Measurement will be in cubic meter volume. 7.5% of cubic meter volume will be deducted from the total volume as air space for the broken stone 40mm and above.

p) LATERITE STONE

Laterite stone shall be of size 35x20x20cm or nearest available size. Laterite stone best quality and locally available shall be used for the work. The size and quality of the stone shall be approved by the Engineer in - charge.

q) CEMENT MORTAR

Cement mortar shall be of proportions specified for each type of work in the schedule. It shall be composed of Portland cement and sand. The ingredients shall be accurately gauged by measure and shall be well and evenly mixed together in a mechanical pan mixer. Care being taken not to add more water than is required. If hand mixing is allowed, then it shall be done on pucca waterproof platform. The gauged materials shall be put on the platform and mixed dry. Water will then be added and whole mixed again until it is homogeneous and of uniform colour. Not more than one bag of cement shall be mixed at one time and which can be consumed within half an hour mixing.

r) PLAIN & REINFORCED CEMENT CONCRETE:**General:**

Except where they are varied by the requirements of this specification relevant of Indian Standard Specification. I.S. 456 for plain and reinforced concrete and I.S. 432 Part I * II for mild and medium tensile steel bars and hard drawn steel wire for concrete reinforcement. I.S. 1786 and I.S. 1139 for 16 deformed bar (Tor steel) or any other relevant I.S.S. applicable together with the latest amendments shall be held to be in corporate in these specifications. It shall be the intent of

these specifications to ensure that all concrete placed at various locations of the job should be durable, strong enough to carry the design loads; it should bear well and practicably impervious to water. It should be free from such defects as shrinkage, cracking and honeycombing etc.

Composition:

Concrete shall be composed of Portland cement, water, fine and coarse aggregates. The Engineer in accordance with the requirements of strength shall make the design of each concrete mix, durability, workability etc. weigh batching is proposed for all concreting works under this contract. The contractor is expected to use weigh batcher and mixer machine production of concrete.

Proportioning of Concrete:

- 1) The proportions of all materials entering into the concrete shall be as directed by the Engineer in charge. The contractor shall provide all necessary equipments to determine and control the actual amounts of materials entering each batch. The materials entering into the concrete shall be batched and measured by weight. The proportions will be changed whenever necessary.
- 2) All materials entering into the concrete shall be mechanically batched and measured by weight.
- 3) The Cement Concrete in the various scheduled items of concrete will vary depending on the size, type and gradation of aggregate used and on the structural requirements as determined by the Engineer in charge. The quantity will have to be varied if so directed by the Engineer in-charge.
- 4) Consistency: The amount of water used in concrete shall be regulated as required for proper consistency and to adjust for any variation in the moisture content or grading of the aggregate as they enter the mixer. Addition of water to compensate stiffening of the Concrete before placement will not be permitted. Slump test may be carried out with the procedure laid down in I.S. 1199 for different types of work.
- 5) Mixing: Concrete shall be mixed in an approved mechanical mixer. Weigh batchers should be used in conjunction with the mixers so that the approved mix designs are followed. Aggregates shall be accurately measured out and mixed dry along with cement. Water shall then be added in measured quantity and mixing shall be continued until there is uniformity in colour and consistency but in no case shall the mixing be done for less than 2½ minutes. The concrete shall be discharged from the mixers on to a level, clean water tight platform or floor into a water tight container. The area surrounding the mixer shall be paved and kept clean. The Mixer and supporting areas shall be suitably protected from wind and rain.
- 6) Admixture: Any admixture required for concrete or mortar will be supplied by the Board free of cost by its Division Officer. The contractor shall mix these in concrete or mortar in proportions as directed by the Engineer in charge. No separate payment will be made for using admixture as this is considered incidental to the work. "Placing concrete / using mortar for the work".
- 7) Transporting: Concrete shall be conveyed from the place of mixing to the place of final deposit as rapidly as practicable by methods, which will prevent segregation or loss of any of the ingredients. If segregation does occur during transport the concrete shall be re-mixed before being placed. In no case, more than 30 minutes shall elapse between mixing and consolidation in its position. No concrete shall be permitted to be used in the works if initial set has taken place.
- 8) Placing and Compaction: Concrete shall be placed in layers of suitable thickness or in strips and compacted before initial setting commences and should not be subsequently

disturbed. Method of placing shall be such as preclude segregation and as far as practicable the placing shall be continuous. In no case concrete shall be thrown or dropped from a height more than two metres. Special care shall be taken in accordance with IS 456 concrete under extreme weather conditions, concrete shall be thoroughly compacted using vibrators during the operation of placing and thoroughly worked around the reinforcement, embedded fixtures and spaded against corners of the form work by vibrators or by any other approved means. The vibrators to be used shall be got approved by the Engineer and in general immersion type vibrators shall be used. External vibrators shall also be used whenever directed. Intensity and duration of vibration shall be sufficient to cause complete settlement and compaction without any segregation of successive layers or separation of ingredients. Vibrators shall be allowed to sink freely of its own weight in to concrete until it enters the previous lift, at points not more than 46 cm apart and withdrawn very slowly when air bubbles no longer come on the surface. Over vibration or vibration of very wet mixes is harmful and should be avoided. The contractor shall ensure that the concrete is thoroughly worked around the reinforcements and against external shutters so that the entrained air is expelled and the concrete surface when exposed is found good and free from pockets, honey combing or other defects. Care shall be taken to utilize the vibrator only to compact the concrete and not to spread it. Sufficient number of reserve vibrators in good working conditions shall be kept on hand at all times, so as to ensure that there is no slackening or interruption in compaction.

- 9) Construction joints: Concreting shall be carried out end - to-end continuously as far as possible and when construction joints are totally unavoidable, it shall be located in a pre-determined position approved by the Engineer in-charge. The joints shall be kept at places where the shear force is the minimum and these shall be straight and at right angles to the direction of main reinforcement. When the work was to be resumed on a surface, which has hardened, such surface shall be roughened. It shall be swept clean, thoroughly wetted and covered with a 13 mm thick layer of mortar composed of cement and sand in the same ratio as the cement and sand in the concrete mix. This layer of mortar shall be freshly mixed and placed immediately before placing concrete. No extra payment will be made for providing mortar layer as aforesaid. Where the concrete has not fully hardened, all laitance shall be removed by scrubbing the wet surface with wire brush or bristle brushes, care being taken to avoid dislodgment of particles of aggregate. The surface shall be thoroughly wetted and free water removed. The surface shall then be coated with neat cement grout. In horizontal joints first layer of concrete to be placed on the surface shall not exceed 15cm thickness and shall be well rammed against old work, particular attention being paid to corners.
- 10) Expansion joints: Expansion joints shall be provided where required as shown in the drawings or as directed by the Engineer. The joint shall be filled with approved quality filler. Suitable water seals be provided in the joints where so directed.
- 11) Curing: Concrete shall be carefully protected during Ist stage of hardening from harmful effects or excessive heat, drying winds, rain or running water. It shall be covered with a layer of sacking, sand, sand, canvas or similar absorbent materials and kept constantly wet for fourteen days from the date of placing of concrete if ordinary Portland cement is used and 21 days of Portland pozzolona cement is used.
- 12) Form work: The form work shall conform to the shape, lines and dimensions as shown in the drawing and be so constructed as to remain sufficiently rigid during placing and compacting of the concrete shall be sufficiently water tight to prevent loss of cement slurry from the concrete. Form work or centering shall be constructed of steel or timber and subsequently designed to support the full weight of wet concrete without deflection and retain its form during laying, vibrating, ramming and setting of concrete. Timber used for formwork shall be properly seasoned, so as to prevent

deformation when wetted. Plywood lined timber shuttering shall be used at no extra cost, at locations as directed by the Engineer in-charge. Special care shall be taken to see that surface of form work against exposed faces of concrete is perfectly smooth. All rubbish, shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be cleaned and thoroughly wetted or treated with non -staining oil or any other approved coating materials which will prevent sticking of the concrete. Care shall be taken that oil or such applied materials are kept out of contact with the reinforcement. The formwork shall be got approved by the Engineer before placing the concrete. All the formwork shall be removed without shock or vibration and shall be eased off carefully in order to allow the structure to take up its load gradually. Form work shall not be disturbed until the concrete has adequately hardened to take up super -imposed load coming on it and in no circumstance shall form be struck until the concrete reaches strength of at least twice the strength to which the concrete may be subjected at the time of striking. In the normal circumstances (generally where temperatures are above 20 degree centigrade) and where ordinary Portland cement is used form may be struck after expiry of flooring periods.

- a) Wall columns and vertical faces of all structural member: 24 to 48 hours or as decided by the Engineer in-charge.
- b) Slabs (Props left under) : 7 days
- c) Beam and soffits : 14 days
- d) Removal of props under slabs : 14 days
- e) Removal of props under beams & arches : 21 days.

The number of props left under, their sizes and disposition shall be such as to be able to safely carry the full load of the slab, beam and arch as the case may be together with any live load likely to occur during curing or further construction.

The period specified above may be increased at the discretion of the Engineer in-charge if pozzolona cement is used, the time of stripping the form work shall be as specified by the Engineer in charge, special care shall be taken while striking the concreting of cantilevered slab, canopies, portal frames, folded plate construction and period striking centering shall be as determined by the Engineer in charge.

If directed forms shall be given an upward camber to ensure that the beams do not have any sag. Surface that becomes exposed on removal of forms shall be carefully examined and any fins, projections etc. that are detected shall be removed, any honeycombing of minor nature shall be finished neatly with cement mortar 1:2 at his cost.

Any work of centering or shuttering, showing signs of damage through premature or careless removal shall be reconstructed by the contractor at his own cost.

13. Strength: Concrete mixed in the proportion desired shall have compressive strength after placing, not less than the following.

Sl. No.	Concrete mix	Minimum Compressive strength of 15cm cubes @ 7 days	Minimum Compressive Strength of 15cm cubes @ 28 days
1	M-20 (1:1½:3)	13.5N/mm ²	20N/mm ²
2	2 M-15 (1:2:4)	10 N/mm ²	15 N/mm ²

TESTS.

Samples for testing concrete, as mixed will be taken by the Board for various classes of mix. (a) When being delivered from the minors and (b) when being placed in the forms and tested in accordance with I.S. 456 and any other I.S.S. applicable, and current practices in the Board. The frequency of works test shall be at such intervals as ordered by the Engineer and subject to that every 15 cm³ of concrete placed or part thereof and for a day's concrete exceeding 20 m³, a batch of 6 cubes shall be made for every sample and 3 of them tested after 7 days and the remaining 3 cubes shall be tested 28 days. The criteria for acceptance of a concrete as conforming to the specified proportion/grade of concrete shall be in accordance with I.S, 456 and the contractor shall entirely re-do the rejected work at his own cost. Strength of 28 days shall alone be considered for acceptance. No payment will be made for the samples taken for testing.

STEEL REINFORCEMENT:

Reinforcement shall be accurately fabricated placed and adequately maintained position as shown on drawings or as directed by the Engineer. All finished bars shall be free from cracks, surface flaws, and laminations, jagged and imperfect edges. Cement mortar blocks shall be used to give requisite cover as shown in the drawing or as directed and all inter-sections of bars shall be firmly/tied with biding wire or 16 to 18 gauge. Reinforcement shall be in accordance with the procedure stipulated in I.S.2502-1963 and will not be straightened in a manner which will injure the materials. All reinforcement shall immediately before placing of concrete, be thoroughly cleaned or loose mill scale, dust, oil and grease or other deleterious matter that would destroy or reduce bond. Reinforcement shall not be connected by welding or coupling except in accordance with relevant I.S.S and with the previous approval of the Engineer in-charge. Over laps and joints shall be staggered and located at points, along the span where neither shear nor bending moment is maximum. Reinforcement shall have cover as shown in the drawings and or specified by the Engineer in charge.

BRICK AND STONE MASONRY:

All brick work should be carried out as shown on the drawing with set back projections, cuttings, toothings, etc . Brick work shall be kept while in progress till mortar has properly set. On holidays or when work in stopped, top of all unfinished masonry shall be kept wet should the mortar become dry, white or powdery, for want of curing. Work shall be pulled down and re-built at the contractor's expenses. Brick shall be thoroughly cleaned, well wetted and soaked for at least twelve hours in fresh water before being used on the work. Bricks shall be of locally available best quality. English bond shall be used throughout walling. A good bond shall be maintained throughout the work, both laterally and transversely, In walling, the courses shall be kept perfectly horizontal and in plumb with the frogs facing upwards. Vertical joints shall not exceed 10 mm thickness and shall be full of mortar. No broken bricks shall be used except as closers. After each day's work all joints shall be raked to 12 mm depth to provide for proper key to plastering. Cement mortar used shall be as specified in respective items and every their of brick work shall be flushed with mortar grout. Whole of the masonry work shall be brought up at one uniform level throughout the structure, but where breaks are unavoidable; joints shall be made in good long steps. All junctions of walls and cross walls shall be carefully bonded into the main walls.

During rains, the work shall be carefully covered to prevent mortar from being washed away. Should any mortar or cement be washed away the work shall be removed and re-built at the contractor's expense.

Half brick masonry:

The specifications for the brick masonry as above shall apply and bricks shall be set in cement mortar as specified in the schedule. 2 Nos. 6mm dia. M.S. rods shall be embedded in every sixth course or as directed by the Engineer, with thick mortar band. The work of embedment of M.S. rods as above well be deemed to be a contingent item to brick masonry, but the M.S. rods embedded will be measured and paid for separately as reinforcement.

PLASTERING:

Scaffolding for carrying out plastering work shall be durable scaffolding having two sets of vertical supports so that the scaffolding is independent of the walls.

Preparation of surfaces:

All putlog holes in brickwork and junction between concrete and brick work shall be properly filled in advance. Joints in brickwork shall be raked about 10mm and concrete surface hacked to provide the grip to the plaster. Projecting burns of mortar formed due to gaps at joints in shuttering shall be removed. The surface shall be scrubbed clean with wire brush to remove dirt, dust etc. and surface thoroughly washed with clean water to remove efflorescence, grease and oil etc. and shall be kept wet for a minimum of six hours before application of plaster.

Cement plaster:

Cement mortar of specified proportion and thickness shall be prepared in small batches and applied to the wall surface / slabs. Plastering of entire or unobstructed area shall be done at one stretch, and on occasions, when due to the extent of area being too large or for some other reasons, the work is to be left over for completion on the next day, the joint between the two days work shall be rubbed down with carborandum stone or the work carried out in such a manner as to have no marks left in the finished work. To ensure proper thickness of plastering, gauged patches shall be made at 1.5m to 2 m apart and the surface plastered true to the line, level and plumb taking special care to finish jambs of windows, doors, wall returns, covers, junctions, etc. The cement plaster shall be cured for seven days.

POINTING WITH CEMENT MORTAR:

All joints in masonry that are permanently exposed shall be raked out at least 20mm deep during construction of masonry, when the mortar is not set. The joints are to be brushed clean of dust with a wire brush. The surface of masonry shall then be washed with water and thoroughly wetted for six hours before pointing is commenced.

The mortar shall normally consist of one part of cement three parts of sand by volume unless otherwise specified. The raked joints shall be filled with mortars, well pressed into the face of the masonry and rubbed smooth. When finished the mortar pointing, shall be restricted to the width of joints and all superfluous mortar shall be removed with a trowel. The work shall be executed as rapidly as possible (not again torched after it has begun to set) and kept moist for three weeks thereafter.

METHOD OF MEASUREMENT FOR STRUCTURAL WORKS AND FINISHES

The method of measurements of various items in the tender shall generally be in accordance with the respective Indian Standards.

EARTH FILLING / SAND FILLING:

In open spaces, filling shall be measured from cross sections of embankments; levels are which are recorded by means of levels before start of work and after completion of work. When it is not possible to measure filling from cross-sections it may be measured from loose stacks of lorry measurements with previous written permission from Engineer in-charge and 20% deduction shall be made from the measured quantity to arrive at the net solid quantity payable.

CEMENT CONCRETE (PLAIN & REINFORCED):

Plain cement concrete and reinforced cement concrete items shall be measured exclusive of thickness of plaster or any finishing materials. No deductions shall be made for the volume occupied by the reinforcement. Reinforcement and plaster shall be measured and paid for separately. No deductions will be made for openings up to 0.1m². Columns shall be measured from floor level to floor level.

Beams shall be measured from face to face of columns/ beams and shall include launches, if any. The depth of beam shall be measured from bottom of the slab to the bottom of the beams except in the case of inverted beam where it shall be measured from top of slab to top of beam. The cross-section of the beam shall be actual cross - section below or above slab, in other works the rib of the beam alone will be measured and paid for. Slabs shall be measured in plan area with deductions for columns portion.

REINFORCEMENT:

Reinforcement shall be measured in lengths of bars as actually placed in positions of standard weight basis, no allowances being made in weight for rolling margin. Wastage and binding wire and chairs and supports shall not be measured; only authorized over laps and spacers shall be measured.

BRICK WORK:

All brickwork including half brick thick construction shall be measured in cubic meters. Brick wall exceeding one brick thick but not exceeding three bricks in thickness shall be measured in multiples of half brick which thickness shall be deemed to be inclusive of the mortar joints. Where frictions of half brick occur due to architectural or other reasons, the measurements shall be taken as follows:

Up to ½ brick-Actual measurements.

Exceeding ½ brick - full half brick.

For walling which is more than three bricks in thickness, the actual thickness of wall shall be measured to the nearest Centimeter.

DEDUCTIONS:

No deductions or additions shall be made on any account for:

- a) Ends of dissimilar materials (i.e. joints, beams, lintels, posts, girders, rafters, purlins, trusses, Corbels, steps etc. up to 0.10m² in section.
- b) Opening up to 0.10m² in section.
- c) Wall plates, bedplates and bearing of slabs and the like where the thickness does not exceed 10cm. and the bearing do not extent over the full width of the wall.
- d) Cement concrete blocks as for hold fast and holding down bolts.

STONE MASONRY AND LATERITE:

Except where otherwise described stonework and stone walling generally shall be measured in cubic meters. When measuring wall, the thickness shall be measured to the nearest one centimeter. The provisions regarding deductions or additions described under brickwork shall be applicable to stone masonry also.

PLASTERING AND POINTING:

All plastering and pointing work shall be measured in square meters unless otherwise described. Net area of the surface plastered shall be measured. No deductions will be made for ends of joists, posts, etc and opening not exceeding 0.50m² each and no addition shall be made for reveal jambs, soffits, sills etc; of these openings not for finishing the plaster around openings, ends of joists, beams and posts etc.

PAYMENT - ADDITIONAL CLAUSE:

“The tenderer/contractor must clearly understand that the settlement of claims either by parts bills or by final bill will be made only according to the availability of budget provision and allotment of funds made with the Divisional Officer in charge of the work under the respective head of account in which the work is sanctioned and arranged and also subject to the seniority of such bills. No claim for interest or for damages whatsoever shall be made for the belated settlement of claims of bills. No such claims shall be admitted by the Board”.

“Bills shall be submitted by the contractor for part payments while the work is in progress or final bill on completion of the work as per the specifications, terms and conditions of the contract and the Divisional Officer shall take the requisite measures for having the same checked and the claim as far as admissible settled according to the availability of budget provision and allotment of funds made with the Divisional Officer under the respective heads of account under which the work is sanctioned and arranged and also subject to the seniority of such bills. The contractor shall not make any claim for interest or for damages for any delay in settling the bills. No such claims shall be admitted by the Board.

If the contractor is unable to prepare the bill for himself, the Divisional officer shall depute a subordinate to measure the work performed in the presence of the contractor, whose counter signature to the measurement list will be a sufficient warrant to the Divisional Officer to prepare the bill for him from that list”.

All other terms and conditions existing in Kerala State Electricity Limited for similar tenders are applicable to this also.

Signature of the Contractor:

Name and Address:

Sd/-
ASSISTANT EXECUTIVE ENGINEER
TRANSMISSION SUB DIVISION
KASARAGOD.

SECTION –C

DECLARATION BY BIDDER

I, _____ hereby declare that I am not in any way related to any Board's Servant who is in charge of or having control of this work. I agree that if, at any stage, it is found that this declaration is untrue, the earnest money/Security Deposit paid by me will be forfeited and the contract entered will stand cancelled. It is understood that the relationship with the Board's servant referred to herein will be restricted to my Father, mother, Son, Daughter, Brother, Sister, Direct Uncle, Nephew , Father - in- Law, Mother - in-law, Brother i-in-law, Sister - in-law, and First Cousins of the Officer concerned.

Place:

Date:

Signature of Tenderer:

Name and address:

FORM OF BOUNDEN AGREEMENT TO BE SUBMITTED BEFORE BID OPENING DATE IN KERALA GOVERNMENT STAMP PAPER TO THE VALUE OF Rs. 200/- IN SEALED COVER

Articles of the Agreement executed on this the day of Between the Kerala State Electricity Board Ltd. acting through (Here enter the designation of the officer who has invited this tender) (Thereinafter referred to as “The Board”) of the one part and Sri. (here enter name and address of the tenderer) (herein after referred to as “ The bounden”) of the other part.

WHEREAS in response to the invitation for tenders as per Notification No. dated and subsequent amendments there to, the bounden has submitted to the Board a tender for the..... specified therein subject to the terms and conditions contained in the said tender documents.

WHEREAS the bounden has also deposited with the Board a sum of Rs.....as earnest money for execution of an agreement undertaking the due fulfillment of the contract in case his tender is accepted by the Board.

NOW THESE PRESENTS WITNESS AND it is hereby mutually agreed as follows.

1. In case in the tender submitted by the bounden is accepted by the Board with or without modifications and the Contract for..... is awarded to the bounden, the bounden shall within.....days of acceptance of his tender execute an agreement with the Board incorporating all the terms and conditions under which the Board accepts his tender.

2. In case the bounden fails to executed the agreement as aforesaid incorporating the terms and conditions governing the contract the Board shall have power and authority to recover from the bounden any loss or damage caused to the Board by such breach as may be determined by the Board, appropriating the moneys inclusive of earnest money deposit or/and any kind or security furnished by the bounden and if the money or security is found to be inadequate the deficit amount may be recovered from the bounden and his properties movable or immovable and also in the manner hereinafter contained. The bounden will have no claim or right over the money and/or securities and earnest money appropriated by the Board and those moneys or/and securities shall belong to the Board.

3. All sums found due to the Board under by virtue of this agreement shall be recoverable from the bounden and his properties movable, under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue and also in such other manner as the

Board may deem fit.

In witness there of Sri., Assistant Executive Engineer, Transmission Sub Division, Kasaragod (here enter name and designation) for on behalf of Board and Sri.....

..... the
bounden have hereunto set their names the day and year shown against their respective
signatures.

Signed by Sri.

In the presence of witnesses:

1.

2.

Signed by Sri.

In the presence of witnesses: