



: AGREEMENT NO :

B-1/E-TENDER/KALYAN/ /2018-2019

dt.....

GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
EXECUTIVE ENGINEER (ELECTRICAL)
THANE ELECTRICAL DIVISION, P.W.D. THANE

B-1 E-Tender

NAME OF WORK	:	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.
AGREEMENT NO	:	<u>B-1/E-TENDER/KALYAN/ /2018-2019 dt.....</u>
ESTIMATED COST (PUT TO TENDER)	:	Rs. 15,86,250/-
AGENCY NAME	:	

EXECUTIVE ENGINEER,
THANE ELECTRICAL DIVISION,
(P.W.D.), THANE

Contractor sign.

No Of Correction

Executive Engineer

D. T. P. FOR APPROVAL

Name Of Work :- Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

ESTIMATED COST PUT TO TENDER Rs. 15,86,250/-

D. T. P. RECOMMENDED FOR APPROVAL PLEASE.

**DEPUTY ENGINEER (ELECTRICAL)
KALYAN ELECTRICAL SUB DIVISION
P.W.D. KALYAN**

D. T. P. RECOMMENDED FOR APPROVAL PLEASE.

**DEPUTY ENGINEER (ELECTRICAL)
AND P.A. TO EXECUTIVE ENGINEER
(ELECTRICAL)
THANE ELECTRICAL DIVISION
P.W.D. THANE**

**DIVISIONAL ACCOUNTANT
THANE ELECTRICAL P.W.D. THANE
THANE**

APPROVED DRAFT TENDER PAPER

**EXECUTIVE ENGINEER (ELECTRICAL)
THANE ELECTRICAL DIVISION
P.W.DEPTT. THANE**

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Note :- The Contractor is Advised to Verify the Documents mentioned in the above index **page No 1 to 83**

& signature in the index in token of such Verification.

Signature of Contractor

Divisional Accountant
Thane Electrical Division,
P. W. Deptt. Thane.

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No Of Correction

Executive Engineer

GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
EXECUTIVE ENGINEER (ELECTRICAL)
THANE ELECTRICAL DIVISION, P.W.D. THANE

E- TENDER PAPERS
(E-tender No. : 12 / 2018-19)
ELECTRICAL WORK

Name of work	:	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type-I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.
TENDER NO.	:	B-1/E-TENDER/KALYAN/ /2018-2019 dt.....
Agency	:	M/s.....
Estimated cost put to Tender	:	Rs. 15,86,250/-
Accepted Tender cost	:	
Work order No. and Date	:	
Time Limit	:	60 Days (including Monsoon)
Eretnest money @ 1 %	:	Rs. 15,900/-
Security Deposit Total 2 % (@ 1 % at the time of W.O and + 1 % at the time of 1 st R.A. or Final Bill)	:	Rs. 16,000/- + Rs. 16,000/- = Rs.32,000/-
Cost of Blank Tender Form	:	Rs 500/- + GST 12% (CGST 6% Rs.30/- + SGST 6% Rs.30/- = 60/-) Total Rs 560/-
Place date & Time of Opening of tender.	:	Office of the Executive Engineer, Thane Electrical Division, P.W.D. Campus, Station Road, Thane-400601 at 11.00 hours on Date 13.08.2018. if possible

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Executive Engineer

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Sl. No.	Particulars	Estimated Cost (Rs.)	Estimated Cost (Rs.)	Estimated Cost (Rs.)	Estimated Cost (Rs.)	Class of Contractor
1	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.	Rs. 15,86,250/-	Rs. 15,900/-	2	Rs. 500/- + GST 12% (CGST 6% Rs.30/- + SGST 6% Rs.30/- = 60/-)Total Rs 560/-	Bidder should be Registered Electrical Contractor with Public Works Electrical Department, Government of Maharashtra in Class " B " and above

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EXECUTIVE ENGINEER
P.W.ELECTRICAL DIVISION.THANE.
THANE ELECTRICAL

Executive Engineer

**GOVERNMENT OF MAHARASHTRA
EXECUTIVE ENGINEER (ELECTRICAL)
THANE ELECTRICAL DIVISION
PUBLIC WORKS DEPARTMENT, THANE**

AGREEMENT NO. : B-1/E-TENDER/KALYAN/ /
2018-2019
dt.....

NAME OF WORK	:	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.
PERIOD OF SALE OF BIDDING DOCUMENT ONLINE	:	FROM 21.07.2018 on 10.10 A.M. TO 08.08.2018 on 18.00 P.M.
TIME AND DATE OF PRE-BID CONFERENCE	:	NO PRE-BID CONFERENCE
LAST DATE AND TIME FOR RECEIPT OF ONLINE BIDS (BID DUE DATE)	:	DATE 08.08.2018 TIME 18.00 A.M. HOURS
DATE AND TIME OF SUBMISSION OF BID SECURITY AND COST OF TENDER FEE DOCUMENT IN ORIGINAL	:	DATE 13.08.2018 TIME 10.30 A.M. HOURS
TIME AND DATE OF OPENING TECHNICAL BIDS	:	DATE 13.08.2018 TIME 11.00 A.M. HOURS
TIME AND DATE OF OPENING FINANCIAL BIDS	:	TO BE ANNOUNCED
PLACE OF OPENING OF BIDS	:	EXECUTIVE ENGINEER (ELECTRICAL) THANE ELECTRICAL DIVISION PUBLIC WORKS DEPARTMENT, STATION ROAD, THANE
OFFICER INVITING BIDS	:	EXECUTIVE ENGINEER (ELECTRICAL)

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Tendering Procedure & Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e Procurement Portal.

- 1 Tender Forms can be downloaded from e-Tendering Portal of Public Works Department, Government of Maharashtra i.e. <http://www.mahatenders.gov.in> after entering the details of payment toward Tender Fees as per the Tender Schedule / tender notice
2. The tender submitted by the tenderer shall be based on clarification, additional facility issued (if any) by the Department, and this tender shall be unconditional. Conditional tenders will be summarily REJECTED.
- 3 All tenderers are cautioned that the tenders containing any deviation, from the contractual terms and conditions, specifications or other requirements, and conditional tenders will be rejected as non-responsive.
- 4 Tenderer should have valid class II / III digital signature certificates (DSC) obtain from any certifying Authorities. In case of requirements of DSC, interested Bidders should go to <http://mahatenders.gov.in>, information about DSC and follow the procedure mentioned in the document. procedure for application of "Digital Signature Certificate"
- 5 Bidder should do Online Enrolment in this Portal using the option Click Here to Enroll available in the Home Page. Then the Digital Signature enrollment has to be done with the e-token, after logging into the portal. The e-token may be obtained from one of the authorized Certifying Authorities such as eMudhraCA /GNFC IDBRT MTNLTrustline /SafeScript /TCS
- 6 Bidder then logs into the portal giving user id / password chosen during enrollment.
- 7 The e-token that is registered should be used by the bidder and should not be misused by others.
- 8 DSC once mapped to an account cannot be remapped to any other account. It can only be Inactivated.
- 9 The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under My Documents option and these can be selected as per tender requirements and then attached along with bid documents during bid submission. This will ensure lesser upload of bid documents.
- 10 After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as per the tender document, otherwise, the bid will be rejected.
- 11 The BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for that tender. Bidders are allowed to enter the Bidder Name and Item rates only
- 12 If there are any clarifications, this may be obtained online through the eProcurement Portal, or through the contact details given in the tender document. Bidder should take into account of the corrigendum published before submitting the bids online.
- 13 Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender schedule and they should be in PDF/XLS/RAR/DWF formats. If there is more than one document, they can be clubbed together.
- 14 Bid Security in the form of Cheque or Cash will not be accepted. Bid Security should be paid through online payment. Bid Security receipt shall be uploaded.
- 15 The bidder reads the terms and conditions and accepts the same to proceed further to submit the bids.
- 16 The bidder has to submit the tender document(s) online well in advance before the prescribed time to avoid any delay or problem during the bid submission process.

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Executive Engineer

- 17 There is no limit on the size of the file uploaded at the server end. However, the upload is decided on the Memory available at the Client System as well as the Network bandwidth available at the client side at that point of time. In order to reduce the file size, bidders are suggested to scan the documents in 75-100 DPI so that the clarity is maintained and also the size of file also gets reduced. This will help in quick uploading even at very low bandwidth speeds.
- 18 It is important to note that, the bidder has to Click on the Freeze Bid Button, to ensure that he/she completes the Bid Submission Process. Bids Which are not Frozen are considered as Incomplete/Invalid bids and are not considered for evaluation purposes.
- 19 The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.
- 20 The bidder may submit the bid documents online mode only, through this portal. Offline documents will not be handled through this system.
- 21 At the time of freezing the bid, the e Procurement system will give a successful bid updating message after uploading all the bid documents submitted and then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the e-token of the bidder and then submitted.
- 22 After the bid submission, the bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening event.
- 23 Successful bid submission from the system means, the bids as uploaded by the bidder is received and stored in the system. System does not certify for its correctness.
- 24 The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected.
- 25 The time that is displayed from the server clock at the top of the tender Portal, will be valid for all actions of requesting bid submission, bid opening etc., in the e-Procurement portal. The Time followed in this portal is as per Indian Standard Time (IST) which is GMT+5:30. The bidders should adhere to this time during bid submission.
- 26 All the data being entered by the bidders would be encrypted at the client end, and the software uses PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission and not viewable by any one until the time of bid opening. Overall, the submitted bid documents become readable only after the tender opening by the authorized individual.
- 27 During transmission of bid document, the confidentiality of the bids is maintained since the data is transferred over secured Socket Layer(SSL) with 256 bit encryption technology. Data encryption of sensitive fields is also done.
- 28 The bidders are requested to submit the bids through online e Procurement system to the TIA well before the bid submission end date and time (as per Server System Clock).
- 29 Bidder Manual Kit available on website www.mahatenders.gov.in
- 30 For Submitting the tender the P.W.D. Registration is not necessary and The Contractor who can fulfill the terms and condition of the tender only are eligible to submit e-tender.
- 31 Government of Maharashtra , Finance Deptt. Mantralaya, Mumbai , circular GST 2017/pr. Kr. 81 / kradhan -1 dated 19.08.2017 and , circular GST 2017/pr. Kr. 155 / kradhan -1 dated Dt 11.09.2017 The rates to be quoted by the contractor must be exclusive of GST . As actual GST applicable as per prevailing Govt. Rules

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1) INSTRUCTION TO THE TENDERER - ENVELOPE NO. 1 (DOCUMENTS)

Sr. No	Documents required in ENVELOPE NO. 1 (Technical Bid)
1	Scanned copy of valid Electrical Contractor License issued by I.E.& L Deptt. Government of Maharashtra.
2	Scanned copy of valid Registered Electrical Contractor appropriate Class (Class – 'B' and above) issued by Public Works Electrical Department, Government of Maharashtra.
3	Scanned copy of PAN Card .
4	Scanned copy of G.S.T. Registration Certificate / Scanned copy of Online G.S.T Registration
5	Scanned copy of original partnership deed in case of partnership firm and attested copies, memorandum, article of association and copy power of attorney in case of registered company. (if applicable)
6	Details of similar type of work tendered for & in hand as per Statement No. I (Work order copy for works in hand must be attached)
7	Details of Technical person on the roll of tenderer who will be exclusively spared for this work by the tenderer. (Information to be given in Statement IV) (Prescribed form attached Page No.)
8	Bidder must have satisfactorily completed one similar type of work* (Rs. 4,75,875/- and above) amounting to 30% value of the estimated cost in Govt. of Maharashtra /Govt. of India / Semi Govt./ PSU. Work completion certificate from competent authority should be attached. (Rank not below the Executive Engineer)
9	Bidder average annual turnover must be at least 75% of the estimated cost during last three preceding years. C.A. certified copy should be attached.
10	Declaration of Contractor on letter head (Prescribed form attached; Page No. 72)
11	Self-declaration on letter head for the tender document (Prescribed form attached; Page No. 73)
12	Self-declaration on letter head for self-attestation (Prescribed form attached; Page No. 74)
13	Undertaking on letter head that the bidder has not been Blacklisted / Banned / Suspended by any government / semi government authority (Prescribed form attached; Page No. 75)
14	Self-declaration that Additional Performance Security is enclosed in envelope No.2(Prescribed form attached; Page No. 76) (if applicable)

*Similar type of work shall be described specifically.

1.2 Important Note: Important Note:

1. Please note that Non Submission to attach any document will invalidate the tender.
2. The Envelope No.2 will be opened only after confirmation as per B-1 Agreement Clauses
3. All other document as per various section also be submission for qualification.
4. E- mail address must be given by **bidder**

1.3 ENVELOPE No. 2 TENDER (FINANCIAL BID)

Upload Blank Tender Copy (In Word Format) Issued and Digitally Signed by the Department Offer to be submitted Online

1.4 SUBMISSION OF TENDER :

Refer to Section '**Guidelines to Bidders on the operations of Electronic Tendering System of Public Works Department**' for details.

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1.5 **OPENING OF TENDERS:**

On the date, specified in the Tender Schedule, following procedure will be adopted for opening of the Tender.

ENVELOPE No. 1 : (Documents)

First of all Envelope No. 1 of the tender will be opened online to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderers Envelope No. 2 will not be considered for further action and the same will be recorded.

The decision of the tender opening authority in this regard will be final and binding on the contractors.

(B) ENVELOPE No. 2: (Financial Bid)

This envelope shall be opened online immediately after opening of Envelope No. 1, only if contents of Envelope No. 1 are found to be acceptable to the Department. The tendered rates (Item rates) in Schedule 'B' shall then be read out in the presence of bidders who remain present at the time of opening of Envelope No. 2.

The " **Hard Copy** " of bid Document shall be submitted to the office of **Executive Engineer, Thane Electrical Division, P.W.D. Campus, Station Road, Thane-400601** Within the period of 72 Hours Last Date of submission of the Tender in the sealed envelope " Hard Copy " of bid Document mentioning Name of Work and Tender Notice Number

Note:-The " Hard Copy " of bid Document shall be submitted to the Tender Clerk/Divisional Accounts Officer in the office of the **Executive Engineer, Thane Electrical Division, P.W.D. Campus, Station Road, Thane-400601** only during office hours

1.5 1. EARNEST MONEY@ 1 % :

- (i) Earnest money of minimum @ 1 % i.e. **Rs. 15,900/-** shall be paid via online using net banking only .Earnest Money Exemption certificate shall not be accepted in lieu of Earnest Money as per Government Resolution CAT-06/2014/CR-242/Bldg-2 dated 24.02.2016 .

After Tender opening, the EMD of the unsuccessful bidder will be returned to account provided by the bidder during the bid preparation as given in challan under Beneficiary Account Number.

- (ii) Earnest Money Exemption certificate shall not be accepted in lieu of Earnest Money as per Government Resolution CAT-06/2014/CR-242/Bldg-2 dated 24.02.2016

Earnest Money in the form of cheques or any other form except above will not be accepted.

- (iii) The amount will be refunded to the unsuccessful tenderers on deciding about the acceptance or otherwise of the tender. In case of successful tenderer, it will be refunded on his paying initial Security Deposit and completing the tender documents in form B-1.

1.6 A SECURITY DEPOSIT@ 2 % :Security Deposit Amount @ 2 % of the Tender Estimate rounded to next Rs 1000/- as per Circular of P.W.Deptt, MantralayaDt 19th Sept.2017

- (i) The successful tenderer whose tender is accepted will have to pay **Rs. 32,000/-** towards total Security Deposit @ 2 %
- (ii) @ 1 % i.e. **Rs. 16,000/-** is to be deposited by F.D.R. of the scheduled bank / National Saving Certificate duly pledged in the name of the **Executive Engineer, Thane Elec. Dn. PWD, Thane** towards the initial Security Deposit, valid within the time limit prescribed in clause 1 of B-1 Form, agreement till completion of defect liabilities period failing which his earnest money will be forfeited to Government.
- (ii) @ 1% In addition to the above, an amount of **Rs. 16,000/-** will be deducted from the running bills at 2% of value of the gross bill towards balance security deposit. This is a compulsory deduction .

1.7. B. ADDITIONAL (PERFORORMANCE) SECURITY DEPOSIT :

(G.R. No CAT-2017/C.N.82/Bldg-2 Dated 12 April 2017 corrigendum dt 29.06.2017 and Letter Dt 30.06.2017 and Govt. Circular P.W.Deptt, Mantralaya Mumbal No. Sankirna-2017/C.R.121(Part II)/Building-2 dt 19.09.2017)

If the rate quoted by the bidder in tender is more than 1% below, on the amount put to tender, then proper justification shall be given to the Satisfaction of tender to the Tender Accepting authority, along with detailed work planning Assuring quality and completion within the time period allowed for the work.

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If the rates quoted by bidder in tender are below 1% to 10% of the amount put to Tender, then the bidder must have to provide 1% additional deposit in the form of Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) towards Performance Security as below. The bidder shall upload scanned copy of such Demand Draft / Bank Guarantee/ Fix Deposit Receipt (FDR) in envelope No 2 If the rates quoted by bidder in tender are below more than 10% of the amount put to Tender, then in addition to the Security Deposit mentioned vide Sr, no2, the bidder must have to provide additional deposit in the form of Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) towards Performance Security as below For quoted rates below more than 10% : 1% + the % exceeding 10% of the amount put to Tender . (e.g. if the rate quoted is 14% below, The Bank Guarantees shall be of (1%+14%-10%) that is 1% + 4% = 5% of the amount put to Tender.)

Guidelines for submission and refund etc. of additional Performance Security Deposit: The Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) shall be issued in the name of " **Executive Engineer, Thane Electrical Division, P.W.D. Thane** " The Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) shall be issued from Nationalized or Scheduled Bank

The bidder shall upload scanned copy of such Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) in envelope No 2 of the e-Tender.

The Demand Draft / Original Bank Guarantee / Fix Deposit Receipt (FDR) shall be submitted with Hard copy of bid document as per Government of Maharashtra Public Works Deptt, Mantralaya, Mumbai GR No CTA-2017/Pr.Kra.8/ Building-2 dt 12.04.2018 and corrigendum circular of Government of Maharashtra Public Works Deptt, Mantralaya, Mumbai corrigendum circular No CAT/2017/Pra.Kra.08/Building-2 dt 29.06.2017 , to the office of **Executive Engineer, Thane Electrical Division, P.W.D. Campus, Station Road, Thane-400601** Within the date of Acceptance of the Tender in the sealed envelope mentioning Name of Work and Tender Notice Number

In case of shortfalls in compliance of documents in the Envelope No 1 the Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) will be returned to the Bidder within 7 working days from the date of opening of Tender.

After compliance of documents in Envelope No 1, the Envelope No 2 will be opened and the Demand Draft / Bank Guarantees / Fix Deposit Receipt (FDR) of lowest L1 and L2 Bidders will be retained and remaining bidders Demand Draft / Bank Guarantee / FDR will be returned within 7 working days.

After issuing Work Order to the lowest Bidder. The Demand Draft / Bank Guarantee / Fix Deposit Receipt (FDR) of the L2 Bidder will be returned within 3 working days

In the above procedure, If it is observe that, any document is Fake/invalid, the Bid Security of the bidder will be forfeited and Bidder will be suspended for Bidding of Govt./Semi Government works for 1 year. For which Superintending Engineer will be fully empowered.

The Work Order will be issued only after conformation of Demand Draft / Bank Guarantee./ Fix Deposit Receipt (FDR) From respective bank branch

Note:- Demand Draft / The Bank Guarantee / Fix Deposit Receipt (FDR) shall be submitted to the Tender Clerk/Divisional Accounts Officer in the office of the **Executive Engineer, Thane Electrical Division, P.W.D. Campus, Station Road, Thane-400601** only during office hours.

- 1.7.C Contactor shall be submit a certificate to the effect that " **All the payments to the labour /staff are made in bank accounts of staff linked to Unique Identification Number (AADHAR CARD)** " The certificate shall be submitted by the contactor within 60 days from the commencement of contract If the time period of contract is less than 60 days then such certificates shall be submitted with 15 days from the date of commencement of contract (Ref- G. R. Public Works Deptt. Mantralaya Mumbai G.R. No Nivida – 2016 / F. No.20 / Shikana / bldg. 2 dtd 09.12.2016)

1.8 ISSUE OF FORMS :

Information regarding contract as well as blank tender forms can be downloaded from the e-Tendering website upon providing the details of the payment of cost as detailed in the N.I.T.

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No Of Correction

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1.9 TIME LIMIT:

The work is to be completed within time limit as specified in the N.I.T. which shall be reckoned from the date of written order for commencing the work and shall be inclusive of monsoon period.

1.10 TENDER RATE:

No alteration in the form of tender and the schedule of tender and no additions in the scope of special stipulations will be permitted. Rates quoted for the tender shall be taken as applicable for all leads and lifts.

1.11 TENDER UNITS:

The tenderers should particularly note the units mentioned in the Schedule "B" on which the rates are based. No change in the units shall be allowed. In the case of difference between the rates written in figures and in words, the correct rate will be the one, which is lower of the two.

1.12 CORRECTION:

No corrections shall be made in the tender documents. Any corrections that are to be made shall be made by crossing the incorrect portion and writing the correct portions above with the initials of tenderer.

1.13 TENDER'S ACCEPTANCE:

Acceptance of tender will rest with the **Executive Engineer, Thane Electrical Division, P.W.D. Thane** who reserves the right to reject any or all tenders without assigning any reason therefor. The tenderer whose tender is accepted will have to enter in to a regular B-2 agreement within 10 days of being notified to do so. In case of failure on the part of Tenderer to sign the agreement within the stipulated time, the Bid Security paid by him shall stand forfeited to the Government and the offer of the tenderer shall be considered as withdrawn by him.

CONDITIONAL TENDER:

The tenders who do not fulfill the condition of the notification and the general rules and directions for the guidance of contractor in the agreement form or are incomplete in any respect are likely to be rejected without assigning any reason therefore.

1.15(a) The Tenderers shall be presumed to have carefully examined the drawings, conditions and specifications of the work and have fully acquainted themselves with all details of the site, the conditions of rock and its joints, pattern, river, weather characteristics, labour conditions and in general with all the necessary information and data pertaining to the work, prior to tendering for the work.

1.15(b) The data whatsoever supplied by the Department along with the tender documents are meant to serve only as guide for the tenderers while tendering and the Department accepts no responsibility whatsoever either for the accuracy of data or for their comprehensiveness.

1.15(c) The quarries for extraction of metal, murum etc. provided in the sanctioned estimate are as per survey conducted by the Department. The Contractor should however examine these quarries and see whether full quantity of materials required for execution of the work strictly as per specification are available in these source before quoting the rates. In case the materials are not available due to reasons whatsoever, the contractor will have to bring the materials from any other source with no extra cost to Government. The rates quoted, should therefore be for all leads and lifts from wherever the materials are brought at site of work and inclusive of royalty to be paid to the Revenue Department by the Contractor.

1.16 POWER OF ATTORNEY:

If the tenderers are a firm or company, they should in their forwarding letter mention the names of all the partners together with the name of the person who holds the power of Attorney, authorizing him to conduct all transactions on behalf of the body, along with the tender.

1.17 The tenderer may, in the forwarding letter, mention any points are may wish to make clear but the right is reserved to reject the same or the whole of the tender if the same becomes conditional tender thereby.

Contractor sign.

No Of Correction

Executive Engineer

- 1.18 The contractor or the firms tendering for the work shall inform the Department if they appoint their authorized Agent on the work.
- 1.19 No foreign exchange will be released by the Department for the purchase of plants and machinery for the work by the Contractor.
- 1.20 Any dues arising out of contract will be recovered from the contractor as arrears of Land Revenue, if not paid amicably. Moreover, recovery of Government dues from the Contractors will be affected from the payment due to the Contractor from any other Government works under execution with them.
- 1.21 All pages of tender documents, conditions, specifications, correction slips etc. shall be initiated by the tenderer. The tender should bear full signature of the tenderer, or his authorized power of Attorney holder in case of a firm.
- 1.22 The Income Tax at 2.00 % including surcharge or percentage in force from time to time or at the rate as intimated by the competent Income Tax authority shall be deducted from bill amount whether measured bill, advance payment or secured advance.
- 1.23 The successful tenderer will be required to produce, to the satisfaction of the specified concerned authority a valid concurrent license issued in his favour under the provisions of the Contract Labour (Regulation and Abolition) Act 1970 for starting the work. On failure to do so, the acceptance of the tender shall be liable to be withdrawn and also liable for forfeiture of the earnest money.
- 1.24 The tenderer shall submit the list of apprentices engaged by the Contractor under Apprentice Act.
- 1.25 Value Added Tax Deduction 2 % from the registered contractors under the MVAT Act, 2005 and 5 % from the unregistered contractor under MVAT Act, 2005, shall be recovered from the contractor from the gross bill amount of every bill, whether for measured works or Advance Payment or Secured Advance.
- 1.26 The tender rates are inclusive of all taxes, rates, cesses and are also inclusive of the leviable tax in respect if sale by transfer of property in goods involved in the execution of a work contract under the provision of Rules 58 of Maharashtra Value Added Tax Act-2005 for the purpose of levy of tax.
- 1.27 **Stamp Duty**
- Contractor shall bear whole required amount of Stamp Duty on Works Contract, as per Mumbai Stamp Duty Act 1958 Clause 34 at the prevailing rates. No claim against this shall be considered and if the contractor fails to bear this amount acceptance of the tender shall be null and void.
- 1.28 **Stamp Duty Condition for recovery of workmen welfare cess Act (Sub cess)**
- As per building and other construction workmen (Regulation of employment and condition of service) Act 1996 and the building and other construction workers welfare cess act 1998 and Government of Maharashtra G.R. No.BCA-2009/C.No. 108/Labour 7-A dated 17.6.2010 cess if 1% on the cost of work shall be recovered from bills payable to the contractor
- 1.29 **VALIDITY PERIOD :**
- The offer shall remain open for acceptance for minimum period of **90 days** from the Date of opening of Envelope No. 2 (Financial Bid) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgment due.
- 1.30. Government of Maharashtra , Finance Deptt. Mantralaya, Mumbai , circular GST 2017/pra. Kr. 81 / kradhan -1 dated 19.08.2017 and , circular GST 2017/pra. Kr. 155 / kradhan -1 dated Dt 11.09.2017 The rates to be quoted by the contractor must be exclusive of GST . As actual GST applicable as per prevailing Govt. Rules

Contractor sign.

No Of Correction

Executive Engineer

FORM B - 1

PERCENTAGE RATE TENDER AND CONTRACT FOR WORKS

DEPARTMENT: PUBLIC WORKS DEPARTMENT

CIRCLE: PUNE REGIONAL ELECTRICAL CIRCLE, PUNE

DIVISION: THANE ELECTRICAL DIVISION, THANE

NAME OF WORK: Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar, Tal. Jawhar Dist. Palghar.

- 1 All works proposed to be executed by contract shall be notified in a form of invitation to tender pasted on a board hung up in the office of the Executive Engineer and signed by the Executive Engineer. This form will state the work to be carried out as well as the date for submitting and opening tenders: and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender and the amount of security deposit to be deposited by the successful tenderer, and the percentage, if any, to be deducted from bills. It will also state whether a refund of a quarry fees, royalties, dues and ground rents will be granted. Copies of the specifications, design and drawings, estimated rates, scheduled rates and any other documents required in connection with the work shall be signed by the Executive Engineer for the purpose of identification and shall also be open for inspection by contractors at the office of the Executive Engineer during office hours.

Where the works are proposed to be executed according to the specifications recommended by a contractor and approved by a competent authority on behalf of the Governor of Maharashtra such specification with designs and drawings shall form part of the accepted tender.

- 2 In the event of the tender being submitted by a firm, it must be signed by each partner thereof, and in the event of the absence of any partner, it shall be signed on his behalf by a person holding a power of attorney authorizing him to do so.

(i) The contractor shall pay along with the tender the sum of **Rs. 15,900/- (Rs. Fifteen Thousand Nine Hundred only)** as and by way of earnest money. ~~The Contractor may pay the said amount by forwarding along with the tender * Treasury challan / term deposit receipt valid for a period of one year of any Scheduled Bank for the like amount in favour of the Executive Engineer, Thane Electrical Division, Thane. The said amount of earnest money shall not carry any interest whatsoever.~~

***Strike out which is not required.**

(ii) In the event of his tender being accepted, subject to the provisions of sub-clause below, the said amount of earnest money shall be appropriated towards the amount of security deposit payable by him under conditions of General Conditions of Contract.

(iii) If after submitting the tender, the contractor withdraws his offer, or modifies the same or if after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit without prejudice to any other rights and powers of the Government, hereunder, or in law, Government shall be entitled to forfeit the full amount of the earnest money deposited by him.

(iv) In the event of his tender being accepted, the amount of earnest money deposited by the contractor shall, unless it is prior there to forfeited under the provisions of sub-clause (iii) above, be refunded to him on his passing receipt there for.

Contractor sign.

No Of Correction

Executive Engineer

- 3 Receipts for payments made on account of any work, when executed by a firm, should also be signed by all the partners except where the contractors are described in their tender as a firm, in which case the receipt shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.
- 4 Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below the rates specified in schedule B' (Memorandum showing items of work to be carried out) he is willing to undertake the work. Only one rate or such percentage on all the estimated rates / Schedule rates shall be named. Tenders which propose any alteration in the works specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions, of any sort will be liable to rejection. No printed form of tender shall include a tender for more than one work but if contractor who wishes to tender two or more works, they shall submit separate tender for each. Tenders shall have the name and number of the work to which they refer, written outside the envelope.
- 5 The Executive Engineer or his duly authorised assistant shall open tenders in the presence of contractors who have submitted tenders or their representatives who may be present at the time, and he will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall for the purpose of identification, sign copies of the specifications and other documents mentioned in rule 1. In the event of a tender being rejected, the competent officer shall authorise the Treasury Officer concerned to refund the amount of earnest money deposited to the contractor making the tender, on his giving a receipt for the return of the money.
- 6 The Officer competent to dispose of the tenders shall have the right of rejecting all or any of the tenders.
- 7 No receipt for any payment alleged to have been made by a contractor in regard to any matter relating to this tender or the contract shall be valid and binding on Government unless it is signed by the Executive Engineer.
- 8 The memorandum of work to be tendered for and the schedule of materials to be supplied by the Department and their rates shall be filed in and completed by the office of the Executive Engineer before the tender form is issued. If a form issued to an intending tenderer has not been so filed in and completed he shall request the said office to have this done before he completes and delivers his tender.
- 9 All works shall be measured net by standard measure and according to the rules and customs of the Department and without reference to any local custom.
- 10 Under no circumstances shall any contractor be entitled to claim enhanced rates for items in this contract.
- 11 All corrections and additions or pasted slips should be initialed.
- 12 The measurements of work will be taken according to the usual methods in use in the department and no proposals to adopt alternative methods will be accepted. The Executive Engineer's decision as to what is the usual method in use in the Department will be final.
- 13 The tendering contractor shall furnish a declaration along with the tender showing all works for which he has already entered into contract, and the value of work that remains to be executed in each case on the date of submitting the tender, in the format Statement No. 1.
- 14 Every tenderer shall furnish along with the tender, information regarding the Income - Tax circle or ward of the district in which he is assessed to Income Tax. The reference to the PAN / G.R. No. and duly acknowledged Income Tax Return for the immediate preceding financial year should be attached.

Contractor sign.

No Of Correction

Executive Engineer

- 15 In view of the difficult position regarding the availability of foreign exchange, no foreign exchange would be released by the Department for the purchase of plant and machinery required for the execution of the work contracted for, (GCB/PWD/CFM/1058/62517 dt. 26-09-59)
- 16 The contractor will have to construct shed for storing controlled and valuable material issued to him under schedule 'A' of the agreement at the work site having double locking arrangement. The materials will be taken for use in the presence of the Departmental person. No material will be allowed to be removed from the site of works
- 17 The contractors shall also give a list of machinery in their possession and which they propose to use on the work in the form of Statement No. III
- 18 Successful tenderer will have to produce to the satisfaction of the accepting authority a valid and current licence issued in his favour under the provision of Contract Labour (Regulation & Abolition Act, 1973) before starting work, failing which acceptance of the tender will be liable for withdrawal and earnest money will be forfeited to Government
- 19 The contractor shall comply with the provision of the Apprentices Act 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the superintending Engineer, may in his discretion cancel the contract. The contractor shall also be liable. For any pecuniary liability arising on account of any violation by him of the provision of the Act
- 20 Every tenderer shall furnish along with the tender information regarding VAT registration and TIN No. duly issued by the Sales Tax Authorities of Govt. of Maharashtra
- 21 The successful tenderer shall pay initial Security Deposit at 50% of total deposit as per Memorandum of Works will be paid in the form of Fixed Deposit Receipt of any Nationalised/ Scheduled Bank only valid upto end of defect liability period as mentioned in clause 20 of B-1 agreement form or other approved security form and the balance in recoverable through running account bills at the percentage stipulated in clause 1 of B-1 agreement form.
- 22 Every registered contractor should produce along with his tender certificate or registration as approved contractor in the appropriate class and renewal of such registration with date of expiry.

Contractor sign.

No Of Correction

Executive Engineer

F

O
R
M
B



Tender for works

Opened by me

Ex. Engr.

I/We hereby tender for the execution for the Governor of Maharashtra (hereinbefore and hereinafter referred to as "Government") of the work specified in the underwritten memorandum within the time specified in

such memorandum at* - _____ Percent below/above the

**In figure as well as in words
(a) If several Sub-works are included they should be detailed in a separate list.*

estimated rates entered in scheduled "B" (memorandum showing items of work to be carried out) and in accordance in all respects with the specifications, designs, drawing and instructions in writing referred to in Rule 1 hereof and in clause 12 of the annexed conditions of the contract and agree that when materials for the work are provided by the Government, such materials and the rate to be paid for them shall be as provided in Schedule "A" hereto.

MEMORANDUM

(a) General Description:

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

(b) The amount of earnest money to be deposited shall be in accordance with the provisions of paras 207 of the M.P.W. Manual

b) Estimated Cost

Rs. 15,86,250/-

c) Earnest Money

Rs. 15,900/-

d) Security Deposit

c) The deposit shall be in accordance with paras 214 (I) of the M.P.W. Manual

(i) FDR 1 % of Tender Cost

Rs. 16,000/-

(Not less than the amount of earnest money)

ii) Remaining 1% of Tender Cost

Rs. 16,000/-

TOTAL :-

**Rs. 32,000/-
2 Percent**

(d) This percentage where no security deposit is taken will vary from 5 percent to 10 percent according to the requirement of the case where security deposit is taken see note to clause of conditions of contract.

e) Percentage, if any to be deducted from bills so as to make up the total amount required as security deposit by the time, half the work, as measured by the cost is done.

(e) Give Schedule where necessary showing dates by which the various items are to be completed

f) Time allowed for the work from the date of written order to commence

2 Months

2. I/We agree that the offer shall remain open for acceptance for a minimum period of Months from the date fixed for opening the same and thereafter until it is withdrawn by me/us by notice in writing duly addressed to the authority opening the tenders and sent by registered post AD or otherwise delivered at the office of such authority, "Treasury - Bank Challan No. and date or term deposit receipt for a period of one year issued by Scheduled/ Nationalised Bank and duly endorsed in the name of **Executive Engineer, Thane Electrical Division, (P.W.D.), Thane** receipt no. date/ /20 in respect to the sum **Rs. 15,900/- (Rs. Fifteen Thousand Nine Hundred only)** representing the earnest money is herewith forwarded. The amount of earnest money shall- not bear interest and shall be liable to be forfeited to the Government should 1 / We fail to (i) abide by the stipulation to keep the offer open for the period mentioned above or (ii) sign and complete the contract documents as required by the Engineer and furnish the security deposit- as specified in item (d) of the memorandum contained in paragraph (i) above within the time limit laid down in clause (1) of the annexed General Conditions of Contract. The amount of earnest money may be adjusted towards the security deposit or refunded to me/us if so desired by me/us in, writing, unless the same or any part thereof has been forfeited as aforesaid.

3. I/We have secured exemption from payment of earnest money after executing the necessary bond in favour of the Govt, a true copy of which enclosed herewith should any occasion for forfeiture of earnest money for this work arise due to failure on my/our part to (i) abide by the stipulations to keep the offer open for the period mentioned above or (ii) sign and complete the contract documents and furnish the security deposit as

specified in item (d) of the Memorandum contained in paragraph 1 above within the time limit laid down in clause (l) of the annexed General Conditions of Contract the amount payable by me/us may at the option of the Engineer be recovered out of the amount deposited in lump sum for securing exemption in so far as the same may extend in terms of the said bond and in the event of the deficiency out of any other moneys which are due or payable to me/us by the Government under any other contract or transaction of any nature whatsoever or otherwise.

4. Should this tender be accepted I/We hereby agree to abide by and fulfill and the terms and provisions of the conditions of contract annexed hereto so far as applicable and in default thereof to forfeit and pay to Government the sum of money mentioned in the said conditions

**Amount to be*

specified in words and figures

Receipt No. _____ dated _____ from the Government Treasury or Sub-Treasury at _____ in respect of the sum of **Rs. 15,900/- (Rs. Fifteen Thousand Nine Hundred only)** is herewith forwarded representing the earnest money (a) the full value of which is to be absolutely forfeited to Government should I/We not deposit the full amount of security deposit specified in the above memorandum in accordance with clause 1(A) of the said conditions, otherwise the said sum of **Rs. 15,900/- (Rs. Fifteen Thousand Nine Hundred only)** shall be refunded.

*Strike out (a) if no cash
security deposit is to be taken*

Contractor

Address

Dated the day of 20

(Witness)

Address

(Occupation)

Signature of contractor

before submission of

Tender.

Signature of witness to

Contractors Signature

The above tender is hereby accepted by me for and on behalf of the Governor of Maharashtra

Dated the day

of 20

**Executive Engineer
Thane Electrical Division
Thane**

CONDITIONS OF CONTRACT

Clause 1 : Security Deposit (PWD Resolution No. CAT/1087/CR-94 Bldg. 2 dt 14-6-89)

The person/persons whose tender may be accepted (hereinafter called the contractor, which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators, and assigns) shall (A) within 10 day (which may be extended by the Superintending Engineer concerned upto

15 days if Superintending Engineer thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Executive Engineer in cash or Govt. securities endorsed to the Executive Engineer, (if deposited for more than 12 months) of sum sufficient which will made up the full security deposit specified in the tender or (B) (Permit Govt. at the time of making any payment to him for work done under the contract deduct such as will amount to **2% (percent)** of all money so payable such - deductions to be held by Govt. by way of security deposit) Provided always that in the event of the contractor depositing a lump: sum by way of security deposit as contemplated at (A) above then and in such case, if the sum so deposited shall not amount to **1% (percent)** of the total estimated cost of work, it shall be lawful for Govt. at the. time of making any payment to the contractor for work done under contract to make up the full amount of percent by deducting a sufficient sum from every such payment as last aforesaid until the full amount of the security deposit is made up. All compensation or other sums of money payable by the contractor to Govt. under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due or may become due by Govt to the contractor under any other contract or transaction of any nature on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the contractor shall within ten days thereafter, make good in cash or Govt. Securities endorsed as aforesaid any sum or sums which may have been deducted from or raised by sale. of his security deposit or, any part thereof. The security deposit referred to when paid in cash may, at the cost of the depositor be converted into interest bearing securities provided that the depositors has expressly desired this in writing.

If the amount of the security deposit to be paid in a lump sum within the period specified at (A) above is not paid the tender/contract already accepted shall be considered as cancelled and legal steps taken against the contractor for recovery of the amounts. The amount of the security deposit lodged by the contractor shall be refunded along with the payment of the final bill, if the date upto which the contractor has agreed to maintain the work in good order is over. If such date is not over only 50% amount of regular security deposit shall be refunded along with the payment of the final bill. Additional security deposit refunded after completion of said liability period.

The amount of security deposit retained by the Govt. shall be released after expiry of period upto which the contractor has agreed to maintain the work in good order is over. In the event of the contractor failing or neglecting to complete rectification work within the period upto which the contractor has agreed to maintain the work in good order, then, subject to provisions of clauses 17 and 20 hereof the amount of Security Deposit retained by, Govt. shall be adjusted towards the excess cost incurred by the department on rectification of work or maintenance & repairs.

Note: * This will be the same percentage as that in the tender at (e)

Clause 2 : Compensation for delay

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall through the stipulated period of the contract proceeded with, all due diligence (time being deemed to be of the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (Whose decision in writing shall be final) may decide, of the amount of the estimated cost of the whole work as shown by the tenderer for every day that the work remains uncommenced, or unfinished after the proper dates. And further to ensure good progress during

execution of the work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month to complete.

1/4 of the work in 1/4 of the time

1/2 of the work in 1/2 of the time

3/4 of the work in 3/4 of the time

Full work will be completed in full time i.e. in **2 month** of the time including monsoon period.

* Note - The quantity of the work to be done within a particular time to be specified above shall be fixed and inserted in the blank space kept for the propose by the officer competent to accept the contracts after taking into consideration the circumstances of each case and abide by the programme of detailed progress laid down by the Executive Engineer. The following proportion will usually be found suitable

In $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of the time

Reasonable progress of earth wrpl. 1/6, 1/2, 3/4 of the total value of the work to be done Reasonable progress of masonry work. 1/10, 4/10, 8/10 of the total value of the work to be done

Clause 3 : Action when whole of security deposit is forfeited

In any case in which under any clause of this contract the contractor shall have tendered himself liable to pay compensation amounting to the whole of his security deposit whether paid one sum or deducted by installments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause: the Executive Engineer on behalf of the Governor of Maharashtra shall have power to adopt any of the following courses, as he may deem best suited to the interest of Government. (a) To rescind the contract (for which rescission notice in writing to the contractor under the hand of Executive Engineer shall be conclusive evidence) and in that case the Security deposit of the contractor shall stand forfeited and be absolutely at the disposal of Government. (b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work - charged establishment employed for getting the unexecuted part of the work complete and crediting him with the value of the work done departmentally in all respects 'in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract. The certificate of the Executive Engineer as to the cost and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor. (c) To order that the work of the contractor be measured up and to take such part there of as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment, and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract, the certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under clause (a) above the contractor shall not be entitled to recover or be paid, any sum for any work therefore actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified in the event of either of the courses referred in clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractors the amount of excess shall be deducted from any money due to the contractors by Govt. under the contract or otherwise howsoever or from his security deposit or the sale

proceeds thereof provided however that the contractor shall have no claim against Govt. even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses provided always that whichever of the three courses mentioned in clause (a), (b), (c) is adopted by me Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on account of or with a view to the execution of the work or the performance of the contract.

Clause 4 : Action when the progress of any particular portion of the work is unsatisfactory

If Progress of any particular portion of the work is unsatisfactory the Executive Engineer shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in clause 2, be entitled to take action under clause 3 (b) after giving the contractor 10 days notice in writing. The contractor will have no claim for compensation, for any loss sustained by him owing to such action.

Clause 5 : Contractor remains liable to pay compensation of action not taken under clause 3 and 4.

In any case in which any of the powers conferred upon the Executive Engineer by clause 3 and 4 hereof shall have become exercisable and the same shall not have been exercised the non - exercise thereof shall not constitute a waiving of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor for which under any clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected in the event the Executive Engineer taking action Under sub-clause (a) or (c) of clause 3 he may if he so desires take possession of all or any tools plant materials and stores in or upon the work or the site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account at the contract rates or in the case of contract, rates not being applicable at current market rates to be certified by the Executive Engineer whose certificate thereof shall be final in the alternative the Executive Engineer may, after given notice in writing to the contractor or his clerk of the work foreman or other authorised agent require

him to remove such tools & plant materials, or stores from the premises within a time to be specified in such requisition the executive engineer may remove them at the contractors expense or sell them by action or private sale on account of the Contractor and at his risk in all respects and the certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

Clause 6 : Extension of Time

If contractor shall desire an extension of the time for completion of work on the ground of his having been unavoidably hindered in its execution or on any other ground he shall apply in writing to the Executive Engineer before the expiration of the period stipulated in tender or before the expiration of

30 days from the date which he has hindered as aforesaid or on which the cause for asking for extension occurred whichever is earlier and the Executive Engineer or in the opinion of Superintending Engineer, or Chief Engineer as the case may be if in his opinion, there were reasonable grounds for granting an extension grant such extension as he thinks necessary or proper the decision of the Executive Engineer in this matter shall be final.

Clause 6(A) :

In case of dealing in handing over the land required for the work due to unforeseen causes the contractor shall not be entitled for any compensation what so ever from Government on the ground that the machinery or labour was for certain period remained idle, contractor may however apply for extension of time limit which may be granted on the merit of the same.

The contractor will not have any claim in case of delay by the Department of removal of trees or /shifting rasing removing of telegraph, telephone or electrical lines (over head or under ground) or other structure if any which may come in the way of work. however suitable extension can be granted to cover soal delay.

Clause 7 : Final Certificate

On the completion of the work the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer - in - charge) of such completion but no such certificate shall be given nor shall work be considered to be complete until the contractor shall have the work be considered to be complete until the contractor shall have removed from the premises on which the work shall have been executed all scaffolding, all surplus materials and rubbish and shall have cleaned of the dirt from all wood work doors, windows walls floor or other parts of any building in or upon which the work, shall have been executed all scaffolding, all surplus materials and rubbish and shall have cleaned of the dirt from all wood work doors, windows walls floor or other parts of any building in or upon which the work, has been executed or of which he may have had possession for the purpose of executing the work nor until the work shall been measured by the Engineer - in - charge or where the measurement have been taken by his subordinates until they have received approval of the Engineer - in - charge the measurement being binding and conclusive against the contractor, if the contractor shall fall to comply with the requirements of this clause as to the removal of scaffolding surplus materials and rubbish and cleaning of dirt on or before the date fixed for the completion of the work the Engineer-in-charge may at the expenses of the contractor remove such scaffolding surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as foresaid and the contract or shall forthwith pay such amount of all expenses so incurred but shall have no claim in respect of any such scaffolding surplus materials as aforesaid except for any sum actually realised by the sale thereof.

Clause 8 : Payment on intermediate certificate to be regarded as advances.

No payment shall be made for any work estimated to cost less than rupees on thousand till after the whole of work shall have been completed and a certificate of completion given but in the case of works estimated to cost more than rupees one thousand the contractor shall on submitting a monthly bill therefore be entitled to receive payment proportionate to the part of the work than approved and passed by the Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed and shall not preclude the Engineer-in-charge from requiring any bad unsound imperfect or unskillful work to be removed or taken away and reconstructed of the due performance of the contract or any part thereof in any respect or the occurring of any claim nor shall it conclude determine or effect in any other way the powers of the Engineer-in-charge as to the final Settlement and adjustment of the accounts or otherwise or in any other way very or affect the contract. The final bill shall be submitted by the contractor within one month of the date for completion of work otherwise the Engineer-in-charge's certificate of the measurements and of the total amount payable for work shall be final and binding on all parties.

Clause 9 : Payment at reduced rates on account of items of work not accepted as completed, to be at the direction of the Engineer-in-charge.

The rates for several items of work estimated to cost more than Rs. 1000 agreed to within, shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of work are not accepted as so completed by the Engineer-in-charge he may make payment on account of such at such reduced rates as he may consider reasonable in the preparation of final or on account bills.

Clause 10 : Bill to be submitted monthly.

A bill shall be submitted by the contractor in each month or before the date fixed by the Engineer-in charge for all work executed in the previous month, and the Engineer-in charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible shall be adjusted, if possible, within ten days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in -charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorized agent whose counter signature to the measurement list shall be sufficient warrant, and Engineer-in-charge may prepare a bill from such list which shall be binding on the contractors in all respects.

Clause 11 : Bills to be on printed forms.

The contractor shall submit all bills on the printed forms to be on had on .application at the office of the Engineer-in -charge. The charges to be made in the bill shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender at the rates hereinafter provided for such work.

Clause 12 : Stores supplied by Government

If the specification or estimate of the work provides for the use of any Special description of material to be supplied from the store of the Dept. store or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge ,(such material and stores and the prices to be charged therefor as hereinafter mentioned being so as practicable for the convenience of the' contractor but not so as in any way to control the meaning or effect of this contract specified in the; schedule or memorandum hereto annexed), contractor shall be supplied with such materials and stores as may be required from time to time to be used by him for the purpose of the contract only, and value of the full quantity or the materials and stores so supplied shall be set off or deducted from any sums then due, or thereafter to become due to the contractor under the contract, or otherwise, or from the security deposit or the proceeds of sale thereof. If the security deposit is held in Government securities, the same or sufficient portion thereof shall in that case be sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Government and shall on no account be removed from the site of the work, and shall at all times be open for inspection by the Engineer - in - charge. Any such materials unused and in perfectly good condition at the time of completion or termination of the contract shall be returned to the Departmental store if the Engineer - in - charge so requires by a notice in writing given under his hand but the contractor shall not be entitled to return any such materials except with consent of the Engineer-in-charge and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or for any wastage in or damage to any such materials.

Clause 12(a) :All stores of controlled materials such as cement, steel etc. supplied to the contractor by

Government should be kept by the contractor under lock & key and will be accessible for inspection by Executive Engineer or his agent at all the time.

Clause 13 : Works to be executed with specifications, drawings, orders etc

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike-manner, and both regards material and every other respect in strict accordance with specifications. The contractor shall also conform exactly fully and faithfully to the designs, drawing and instructions in writing relative to the work signed by the Engineer-in -charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site of the work during office hours. The contractor will be entitled to receive three sets of contract drawings and working drawing as well as one certificate copy of the accepted tender along with the order free of cost. Further copies of the contract drawings and working drawings if required by him, shall be supplied at the rate Rs.....per set of contract drawings and Rs.....per work drawing except where otherwise specified.

Clause 14 : Alterations in specifications and designs not to invalidate contracts Rates for works not entered in estimate or schedule of rates of the district. Extensions of time in consequence of additions of alteration.

The Engineer-in-charge shall have power to make any alteration in or additions to the original specification, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same condition in all respects on which he agreed to do the main work and at the same-rates as are specified in the tender for the main work. And if the additional and altered work includes any class of work for which no rate is specified in this contract then such class of work shall be carried out at the rates entered in the Schedule of Rates of the Division or at the rates mutually agreed upon between the Engineer-in-charge and the contractor whichever are lower. If the additional or altered work for which no rate is entered in the schedule of Rates of the Division is ordered to be carried out before the rates are agreed upon then the contractor shall within seven days of the date of receipt by him of the order to carry out the work inform the Engineer - in - charge of the rate which it is his intention to charge for such class of work. And if the Engineer-in-Charge does not agree to this rate he shall by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry out in such manner as he may consider advisable provided always that if the contractor shall commence work or incur any expenditure in regard thereto before the rates shall have been determined as lastly herein before mentioned, then in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of determination of the rate as foresaid according to such rate or rate as shall be fixed by the Engineer-In-charge in the event of a dispute, the decision of the Superintending Engineer of the circle will be final.

Where, however, the work is to be executed according to the designs drawings and specification recommended by the contractor and accepted by the competent authority the alteration above referred to shall be within the scope of such designs, drawings and specifications appended to the tender.

The time limit for the completion of the work shall be extended in the proportion that the increase in its cost occasioned by alternations or additions bears to the cost of the original contract work and the certificate of the Engineer-in-charge as to such proportion shall be conclusive.

Clause 15 : (1) No claim to any payment of compensation for alteration in or restriction of work.

If at any time after the execution of the contract documents the Engineer shall for any reason what - so - ever (other than default on the part of the contractor for which the government is entitled to rescind the contract) desires that the whole or any part of the work specified in the tender should be suspended for any period or that the whole or part of the work should not be carried out at all he shall give to the contractor a notice in writing of such desire and upon the receipt of such notice the contractor shall forthwith suspend or stop the work wholly or in part as required after having due regard to the appropriate stage at which the work should be stopped or suspended, so as not to cause any damage or injury to the work already done or endanger the safety thereof provided that the decision of the Engineer as to the stage at which the work or any part of it could be or would have been safely stopped or suspended shall be final and conclusive whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension stoppage or curtailment except to the extent specified herein after 2) Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer within 30 days of the expiry of the said period of 90 days of such intention and requiring the Engineer to record the final measurement of the work already done and to pay final bill. Upon giving such notice the Contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days from the receipt of such notice in respect of the work already done by the contractor. Such payment shall not in any manner prejudice the right of the contractor to any further, compensation under the remaining provisions of this clause. 3) Where the Engineer required the contractor to suspend the work for a period in excess of 30 days. at any time or 60 days in the aggregate the contractor shall be entitled to apply to the Engineer within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained idle on the

site or on the account of his having had to pay the salary or wages of labour engaged by him during the said period of suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part; The decision of the Engineer in this regard shall be final and conclusive against the contractor. 4) In the event of - i) Any total stoppage of work on notice from the Engineer under sub clause (1) in that behalf ii) Withdrawal by the contractor from the contractual obligation to complete the remaining unexecuted work under sub-clause (2) on account of continued suspension of work for a period exceeding 90 days

OR

iii) Curtailment in the quantity of item or items originally tendered on account of any alteration omission or substitution. in the specifications drawings, designs or instruction under clause 14 (1) where such, curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25% at the rates for the item specified in the tender is more than Rs. 5.000/- It shall be open to the contractor, within 90 days from the service of (i) the notice of stoppage of work or (ii) the notice of withdrawal from the contractual obligations under the contract on account of the continued suspension of work or (iii) Notice under clause 14 (1) resulting in such curtailment to produce to the Engineer satisfactory documentary evidence that he had purchased or agreed to purchase material for use in the contracted work .before receipt by him of the Notice of stoppage suspension or curtailment and required the Government to take over on payment such materials at the rates determined by the Engineer provided however such rates shall in no case exceed the rates at which the same was acquired by the contractor. The Government

shall there after take over the materials so offered, provided the quantities offered, are not in excess of the requirements of the unexecuted work as specified in the accepted tender and are of Quality and specifications approved by the Engineer.

Clause 15 : (A) No claim to compensation on account of loss due to delay in supply of materials by Government.

The Contractor shall not be entitled to claim any compensation from Government for the loss suffered by him on account of delay by Government in the supply of materials entered in Schedule A where such delay is caused by i) Difficulties relating to the supply of railway wagons. ii) Force - majeure iii) Act of God iv) Act of enemies of the State or any other reasonable cause beyond the control of Government.

In the case of such delay in the supply of materials. Government shall grant such extension of time for the completion of the works as shall appear to the Executive Engineer to be reasonable in accordance with the circumstances of the case. The decision of the Executive Engineer as to the extension of time shall be accepted as final by the contractor.

Clause 16 : Time limit for unforeseen claims

Under no circumstances whatsoever shall the Contractor be entitled to any compensation from Government on any account unless the contractor shall have submitted claim in writing to the Engineer-in-charge within one month of the case of such claim occurring.

Clause 17 : Action & compensation payable in case of bad work.WD Resolution No. CAT-1087/CR-94/Bldg-2 dt. 14-6-89

If any time before the security deposit or any part thereof is refunded to the contractor it shall appear to the Engineer - in - charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quantity, or that any materials or articles provided by him for the execution of the work are unsound, or of a quantity inferior to that contracted for or are otherwise not in accordance with the contract it shall be lawful for the Engineer - in - charge to intimate this fact in writing to the contractor and then notwithstanding the fact that the work materials or articles complained of may have been inadvertently passed, certified and paid for, the contractor shall be bound forthwith to rectify, or remove or reconstruct the work so specified in whole or specified and provide other proper and suitable materials or articles at his own charge and cost and in the event of his failing to do so within period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rates of one percent on the amount of the estimate for every day not exceeding 10 days, during which the failure so continues and in the case of any such failure the Engineer - in - charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor. Should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted or made use of it shall be within his discretion to accept the same at such reduced rates as he may fix therefor. in part as the case may require or if so required, sha

Clause 18 : Work to be open to inspection Contractor or responsible agent to be present

All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer - in - charge and his subordinates and the contractor shall at all times during the usual working hours and at all other times at

which reasonable notice of the intention of the Engineer - in - charge and his subordinate to visit the work shall have been given to the contractor either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractors duly authorised agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

Clause 19 : Notice to be given before work is covered.

The contractor shall give not less than five days notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof taken before the same is so covered and or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained the same shall be uncovered at the contractors expense and in default thereof no payment or allowance shall be made for such work or for materials with which the same was executed.

Clause 20 : Contractor liable for damage done and for imperfections for three months after certificate. PWD Resolution No. CAT - 1087/CR-94/Bldg. - 2 dt. 14/6/89

If during the period of 14 from the date of completion as certified by the Engineer - in - charge pursuant to clause-7 of the contract or 12 after commissioning the work (for LED street light fittings 36 months), whichever is earlier in the opinion of the Executive Engineer, the said work is defective in any manner whatsoever the contractor shall forthwith on receipt of notice in that behalf from the Executive Engineer duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying & setting right the defects specified therein including dismantling and reconstruction of unsafe portion strictly in accordance with and in the manner prescribed and under the supervision of the Executive Engineer. In the event of the contractor failing or neglecting to commence execution of the said rectification work within the period prescribed therefor in the said notice and /or to complete the same as aforesaid as required by the said notice, the Executive Engineer may get the same executed and carried out departmentally or by any other agency at the risk on account and at the cost of the contractor. The contractor shall forth with, on demand pay to the Govt. the amount of such costs, charges and expenses sustained or incurred by the Government of which the certificate of the Executive Engineer shall be final and binding on the contractor, Such costs, charges and expenses shall be deemed to be arrears of land revenue and in the event of the contractor failing or neglecting to pay the same on demand as aforesaid without prejudice to any other rights and remedies of the Government, the same may be recovered from the contractor as arrears of revenue. The Government shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter become payable by the Government to the contractor either in respect of the said work or any other work whatsoever or from the amount of security deposit retained by Government.

Clause 21 : Contractor to supply plant, ladders, scaffolding etc. And is liable for damages arising from non provisions of light fencing etc.

The contractor shall supply at his own cost all materials (except such special materials, if any as may, accordance with the contract be supplied from the PWD stores) plant tools, appliances implements ladde cordage, tackle scaffolding and temporary work requisite for the proper execution of the work, whether in original, altered or substituted from and whether included in the specification-or other documents forming p of • the contract or referred to in these conditions or not and which may be necessary for the purpose satisfying or complying with the requirement of

the Engineer - in - charge as to any matter as to which on these conditions he is entitled to be satisfied or which he is entitled to require together with the carrier therefor to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting the measurement or examination at any time & from time to time of the work or materials, failing which the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof of a sufficient portion thereof. The contractor shall provide all necessary fencing and lights required to protect the public from accident and shall also be bound to bear the expenses defence of every suit, action or other legal proceeding that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in a such suit, action or proceedings to any such person or which may with the consent of the contractor be paid compromising any claim by and such person.

List of machinery in contractor's possession & which they propose to use on the works should be submitted along with the tender.

Clause 21 (A) : The contractor shall provide suitable scaffolds and working platforms gangways and stairways and shall comply with the following regulations in connection therewith.

a) Suitable scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means..

b) A scaffold shall not be constructed, taken down or substantially altered except - i) under the supervision of a competent and responsible person and

ii) as far as possible by competent workers possessing adequate experience in this kind of work. c) All Scaffolds and appliances connected therewith and all ladders shall

i) be of sound material

ii) be of adequate strength having regard to the loads and strains to which they will be subjected and be maintained proper condition

d) Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use

e) Scaffolds shall not be over-loaded and so far as practicable the load shall be evenly distributed.

f) before installing lifting gear on scaffolds special precautions shall be taken to ensure the strength and stability of the scaffold.

g) Scaffolds shall be periodically inspected by a competent person.

h) Before allowing a scaffold to be used by his workmen the contractor shall ensure whether the scaffold has been erected by his workmen or not take steps to ensure that it complies fully with the regulation

here-in-specified.

i) Working platform, gangways, stairways shall be - j) Working platform, gangways, stairways shall be -

1) so constructed that no part thereof can sag unduly or unequally.

2) be so constructed and maintained having regard to the prevailing conditions as to reduce as far as practicable risks of persons and slipping or tripping, and

- 3) be kept free from any unnecessary obstruction.
- j) In the case of working platforms, gangways, working place and stairways at a height exceeding 3 metres.
 - 1) every working platform and every gangways shall be closely boarded unless other adequate measures are taken to ensure, safety.
 - 2) every working platform and gangways shall have adequate width and
 - 3) every working platform, gangways, working place and stairway shall be suitable fenced.
- k) Every opening in the floor of a building or in a working platform shall except for the time and to the extent required to allow the excess of persons or the transport or shifting of material be provided with suitable means to prevent the fall of persons or material.
- l) When persons are employed on roof where there is a danger of falling from a height exceeding 3 meters suitable precautions shall be taken for prevent the fall of persons or materials.
- m) Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.
- n) Safe means of access shall be provided to all working platforms & other working places.
- o) The contractor (s) will have to make payments to the labourers as per Minimum Wages Act.

Clause 21 (B) : The contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him -

- a) Hoisting machines and tackle, including their attachments, an charges and supports shall
 - 1) be of good mechanical construction, sound material and adequate strength and free from patent defect and 2) be of good repair and in good working order.
- b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.
- e) Every crane driver or hoisting appliance operator shall be properly qualified.
- f) No person who is below the age of years shall be in control of any hoisting machine, including any scaffold which or give signals to the operator.
- g) In the case of every hoisting machine and or every chain, ring, shackle swivel pulley block used in hoisting or lowering or as a means suspension the safe working load shall be ascertained by adequate means.
- h) Every hoisting machine and all gear referred to in proceeding regulation shall be plainly marked with the safe working load.
- i) In the case of a hoisting machine having a variable safe working load, each safe working load the conditions under which it is applicable shall be clearly indicated.
- j) No part of any hoisting machine or of any gear referred to in regulation (g) above shall be loaded beyond the safe working load except for the purpose of testing.
- k) Motors gearing, transmission, electric wiring and other dangerous part of hoisting appliances shall be provided with efficient safeguards.

l) Hositing appliances shall be provided with such means as will reduce to minimum & the risk of the accidental descent of the load.

m) Adequate precaution shall be taken to reduce to a minimum the risk at any part of a suspended load becoming accidentally displaced.

Clause 22 : Measures for prevention of fire

The contractor shall not set fire to any standing jungle, trees brush wood or grass without a written permit from the Executive Engineer When such permit is given and also in all cases when destroying out or dug up trees, brushwood, grass etc. by fire, the contractor shall take necessary measures to prevent such fire spreading to or to otherwise damaging surrounding property. The contractor shall make his own arrangements for drinking water for the labours employed by him.

Clause 22 : Measures for prevention of fire

The contractor shall not set fire to any standing jungle, trees brush wood or grass without a written permit from the Executive Engineer When such permit is given and also in all cases when destroying out or dug up trees, brushwood, grass etc. by fire, the contractor shall take necessary measures to prevent such fire spreading to or to otherwise damaging surrounding property. The contractor shall make his own arrangements for drinking water for the labours employed by him.

Clause 23 : Liability of contractor for any damage done in or outside work area

Compensation for all damage done intentionally or unintentionally by contractor's labour whether in or beyond the limits of Government property including any damage caused by the spreading of fire mentioned in clause 22 shall be estimated by the Engineer-in-charge or such other officer as he may appoint and the estimates of the Engineer-in-charge subject to the decisions of the Superintending Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the contractor as damages in the manner prescribed in clause 1 or deducted by the Engineer-in-charge from any sums that may be due from Government to contractor under this contract or otherwise. The contractor shall bear the expenses of defending any action or other legal proceeding that may be brought by any persons for injury sustained by him owing to neglect of precautions to prevent the spread of fire and shall pay any damages and cost that may be awarded by the court in consequence.

Clause 24 : Employment of female labour

The employment of female labours on work in neighborhood of soliders barracks should be avoided as far as possible.

Clause 25 : Work on Sunday

No work shall be done on Sunday without the sanction in writing of the Engineer - in -charge.

Clause 26 : Work not to sublet.

Contract may be rescinded and security deposit forfeited for subletting it without approval or for bribing a public officer or if contractor becomes insolvent.

Contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the contractor shall assign or sublet his contract or attempt so to do or become insolvent or commence any proceedings to get himself adjudicated insolvent or make any compositions with his creditors or attempt so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents to any public officer or person in the employ of Government in any way relating to his office or employment or if any such officer or person shall become in any way directly or indirectly interested in the contract the Engineer-in-charge may there upon by notice in writing rescind the contract and the security deposit of the contractor shall there upon stand forfeited and be absolutely at the disposal of Government and same. consequences shall ensue as if the contract had been rescinded under clause 3 here of and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

Clause 27 : Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss

All sums payable by a contractor by way of compensation under any of these condition shall be considered as a "reasonable" compensation to be applied to the use of Government without reference to the actual loss or damage sustained and whether any damage has or not been sustained.

Clause 28 : Changes in the constitution of firm to be notified.

In the case of tender by the partners any change in the constitution of a firm shall be forthwith notified by the contractor to the Engineer - in - charge for his information.

Clause 29 : Direction and control of the Superintending Engineer.

All work to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the Circle for the time being who shall be entitled to direct at what point or points and in what manner, they are to be commenced and from time to time carried on.

Clause 30 : Direction and control of the Superintending Engineer.

(1) Except where otherwise specified in contract and subject to the powers delegated to him by Government under the code, rules then in force the decision of Superintending Engineer of the Circle for the time being shall be final, conclusive and binding on all parties of the contract upon all questions relating to the meaning of the specification, design, drawing and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question claim, right matter or thing whatsoever if any way arising out of or relating to the contract, designs, drawings specification, estimates, instructions, orders or these

conditions or otherwise concerning the works, or the execution or failure to execute same. whether arising during the progress of work or after the completion or abandonment thereof.

(2) The contractor may within 30 days of receipt by him of any order passed by the Superintending Engineer of the Circle as aforesaid .appeal against it to the Chief Engineer concerned with contract work or project provided that- a) The accepted value of the contract exceeds Rs. 10 Lakhs (Rs Ten Lakhs). b) Amount of claim is not less than Rs. 1.00 Lakh (Rs. One Lakh).

(3) If the contractor is not satisfied with the order passed by the Chief Engineer as aforesaid the contractor may within 30 day of receipt by him of any such order appeal against it to the concerned Secretary, Public Works Department/Irrigation Department who, convinced that prima-facia the contractor's claim rejected by Superintending Engineer/Chief Engineer is not frivolous and that there is some substance in the claim of contractor as would merit a detailed examination .and decision by the standing committee shall put up to the standing committee at Government level for suitable decision (vide PW Circle No. CAT-1086-CR-110/Bldg-2 dt. 7-5-86)

Clause 31 : Stores of European or American manufacture to be obtained from Government.

The contractor shall obtain from the Departmental stores all stores and articles of European or American manufacture which may be required for the work or any part thereof or in making up any articles required there for/or in connection therewith unless he has obtained permission in writing from the Engineer-in-charge to obtain such stores and articles elsewhere. The value of such stores and articles as may be supplied to the contractor by the Engineer-in-charge will be debited to the contractor in his account at rates shown in the schedule, in form A attached to the contract and if they are not entered in the said schedule, they shall be debited to him at cost price which for the purpose of this contract shall include the cost of carriage and other expenses whatsoever which shall have been incurred in obtaining delivery of the same at the stores aforesaid.

Clause 32 : Lump sums in estimates

When the estimate on which a tender is made includes lumpsums in respect of part of works the contractor shall be entitled to payment in respect of the item of work involved or the part of the work in question at the same rates as are payable under this contract for each item, or if the part of work in question is not the opinion of the Engineer-in-charge capable of measurement of Engineer-i-charge may at this discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

Clause 33 : Action where no specification

In the case of any class of work for which there is no such specification as is mentioned in Rule 1 such work shall be carried out in accordance with the Divisional specifications and in the event of there being no Divisional specification then in such case the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer-in-charge.

Clause 34 : Definition of work

The expression work or works where used in these condition shall unless there be something in the subject or context repugnant to such construction be construed to mean the work or works contracted to be executed under or in virtue of the contract whether temporary or permanent and whether original altered, substituted or additional.

Clause 35 : Contractor's percentage whether applied to net or gross amount of bill

The expression work or works where used in these condition shall unless there be something in the subject or context repugnant to such construction be construed to mean the work or works contracted to be executed under or in virtue of the contract whether temporary or permanent and whether original altered, substituted or additional.

Clause 36 : Quarry fees and royalties

All quarry fees, royalties, octroi dues and ground rent for stacking materials, if any, shall be paid by the contractor.

Clause 37 : Compensation under workmen's compensation Act.

The contractor shall be responsible for and shall pay any compensation to his workmen payable under the workmen Compensation Act 1923 (VIII of 1923) (therein after called the said Act) for injuries caused to the workmen if such compensation is payable and or paid by Government as principal under sub-section (1) of section 12 of the said Act on behalf of the contractor it shall be recoverable by Government from the contractor under sub-section (2) of the said section such compensation shall be recovered in the manner laid down in clause 1 above.

Clause 37 (A) : The Contractor shall be responsible for and shall pay the expenses to providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Govt. the same shall be recoverable from contractor forthwith and be deducted without prejudice to any other remedy of Government from any amount due or that may become due to the contractor.

Clause 37 (B) : The contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulation in connection therewith.

a) The worker's shall be required to use the equipment so provided by the contractor & contractor shall take adequate steps to ensure proper use of equipment by those concerned. b) When work is carried on in proximity to any place where there is a risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for prompt rescue of any person in danger. c) Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

Clause 37 (C) : The contractor shall duly comply with the provision of the Apprentices Act 1961 (III of 1961) the rules made there under and orders that may be issued from time to time under the Act said and the

said Rules and on his failure or neglect to do so he shall be subject to all the liabilities and penalties provided by the said Act and said Rules.

Clause 38 : **Deleted**

Clause 39 : **Employment of famine labour etc.**

The expression work or works where used in these condition shall unless there be something in the subject or context repugnant to such construction be construed to mean the work or works contracted to be executed under or in virtue of the contract whether temporary or permanent and whether original altered, substituted or additional.

Clause 40 : **Claim for compensation for delay in starting the work.**

No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance work on account of delay in according sanction of estimates.

Clause 41 : **Claim for compensation for delay in starting the work.**

No compensation shall be allowed for any delay in the execution of the work on account of water standing in borrow, pits or compartments. The rates are inclusive for hard or cracked soil, excavation in mud sub-soil water or water standing in borrow pits and no claim for an extra rate shall be entertained unless otherwise expressly specified.

Clause 42 : **Entering upon or commencing any portion of work.**

The contractor shall not enter upon or commence any portion of work except with the written authority and instruction of the Engineer-in-charge or of his subordinate incharge of the work failing such authority the contractor shall have no claim to ask for measurement of or payment of work.

Clause 43 : **Minimum age of persons employed, the employment of donkeys and or other animals and the payment of fair wages**

- 1) No contractor shall employ any person who is under the age of 18 years.
- 2) No contractor shall employ donkeys or other animals with breaching of string or thin rope. The breaching must be at least three inches wide and should be of tape nawar.
- 3) No animal suffering from sores, lameness or emaciation or which is immature shall be employed on the work.
- 4) The Engineer-in-charge or his Agent is authorised to remove from the work any person or animal found working which does not satisfy these conditions and no

responsibility shall be accepted by Government for any delay caused in completion of the work by such removal.

- 5) The contractor shall pay fair and reasonable wages to the workmen employed by him in the contract or undertaken by him. In the event of any dispute arising between the contractor and his workmen of the grounds that the wages paid are not fair and reasonable, the dispute shall be referred without delay to the Executive Engineer who shall decide the same. The decision of the Executive Engineer shall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by Government at the sanctioned tender rate.
- 6) Contract shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.
- 7) Contractor to take precaution against accident which take place on account of labour using loose garments while working near machinery.
- 8) All facilities provided in the contract labour (Regulation and Abolition Act 1971 and Contract labour Regulation and Abolition Rules 1971) should be provided to labour.

Clause 44 : Method of payment.

Payment to contractors shall/be made by cheque drawn on any treasury within the division convenient to them provided the amount exceeds Rs. 10.. Amounts not exceeding Rs. 10 will be paid in cash.

Clause 45 : Acceptance of condition compulsory before tendering the work.

Any contractor who does not accept these conditions shall not be allowed to tender for works.

Clause 46 : Employment of scarcity labour

If Government declares a state of scarcity or famine to exist in any village situated within 10 miles of work the contractor shall employ upon such parts of the work as are suitable for unskilled labour any pe certified to him by Executive Engineer or by any person to whom the Executive Engineer may have deleg this duty in writing to be in need of relief and shall be bound to pay to such person wages not below minimum which Government may have fixed in this behalf. Any disputes which may arise in connection the implementation of this clause shall be decided by the Executive Engineer whose decisions shall be final binding on contractor.

Clause 47 : If Government declares a state of scarcity or famine to exist in any village situated within 10 miles of work the contractor shall employ upon such parts of the work as are suitable for unskilled labour any pe certified to him by Executive Engineer or by any person to whom the Executive Engineer may have deleg this duty in writing to be in need of relief and shall be bound to pay to such person wages not below minimum which Government may have fixed in this behalf. Any disputes which may arise in connection the implementation of this clause shall be decided by the Executive Engineer whose decisions shall be final binding on contractor.

Clause 47 (A) : The tendered rates shall be exclusive of all taxes, rates and cesses.

Clause 48 : The rates to be quoted by the contractor must be exclusive of GST . As actual GST applicable as per prevailing Govt. Rules.

Clause 49 : In the case of materials that may remain surplus with the contractor from those issued for the work contrac for the date of ascertainment of the materials being surplus will be taken as date of the sale for the purpose sales tax and the sales tax will be recovered on such sale.

Clause 50 : The contractor shall employ unskilled labour to be employed by him on the said work from out of the pers ordinarily residing in the district in which site of the said work is located.

Provided however, that if the required number of unskilled labour from that district is not available, contractor shall in the first instance employ such number of persons as is available and there after may with previous permission in writing of Executive Engineer-in-Charge of the said work obtain the rest of requirement of unskilled labour from outside district.

Clause 51 : Wages to be paid to the skilled and unskilled labourers engaged by the contractor.

1) The contractor shall comply with the provisions of the Apprentices Act 1961 and the rules and orders issued thereunder from time to time. If he fails to do so his failure will be a breach of the contract and the Superintending Engineer may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising an account of any violation by him of the provisions of the Act.

2) The contractor shall pay the labourers skilled and unskilled according to the wages prescribed by the Minimum Wages Act of 1948 applicable to the area in which the work of the contractor is located.

All amounts whatsoever which the contractor is liable to pay to the Government in connection with the execution of the work including the amount payable in respect of (i) materials and or stores supplied / issued hereunder by the Government to the contractor (ii) hire charges in respect of heavy plant machinery and equipment given on hire by the Government to the contractor for execution by nm of the work and/or on which advances have been given by the Government to the contractor shall be deemed to be arrears of the Land Revenue and the Government may without prejudice to and other rights and remedies of the Government recover the same from contractor as arrears of land revenue.

Clause 52 : All amounts whatsoever which the contractor is liable to pay to the Government in connection with the execution of the work including the amount payable in respect of (i) materials and or stores supplied / issued hereunder by the Government to the contractor (ii) hire charges in respect of heavy plant machinery and equipment given on hire by the Government to the contractor for

execution by him of the work and/or on which advances have been given by the Government to the contractor shall be deemed to be arrears of the Land Revenue and the Government may without prejudice to and other rights and remedies of the Government recover the same from contractor as arrears of land revenue.

Clause 53 : P.W. Dept. No. CAT/ 1284 (120) Building - 2 dated 14-8-85

The contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act 1970(37 of 1971) and Maharashtra Contract Labour (Regulation and Abolition) Rules 1971 as amended from time to time and all other relevant statutes and statutory provisions concerning payment of wages particularly to workmen employed by the contractor and working on the site of the work. In particular the contractor shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour regulation and Abolition) Rules

1971. If the contractor fails or neglects to pay wages at the said rates or make short payment and the Government makes such payment of wages in full or part thereof less paid by the contractor as the case may be, the amount so paid by the Government to such workers shall be deemed to be arrears of Land Revenue and the Government shall be entitled to recover the same as such from the contractor or deduct same from the amount payable by the Government to the contractor hereunder or from any other amounts payable to him by the Government.

Clause 54 : The contractor shall engage apprentices such as bricks layer, carpenters, wiremen, plumber as well as blacksmith as recommended by the State Apprentices Advisor Director of Technical Education, Dhobi Talav, Mumbai-1, on the construction work.

**Clause 55 : Govt. of Maharashtra Education Department No. TSA - 5170/T-56689 Dt. 7-7-72.
Govt, of Mah P.W.D. Resolution No. CAT-1086/CR-243/K/Buld. 2 Bombay - 32. dt. 11-9-87.**

A) The anti-malaria and other health measures shall be as directed by the Joint Director (Malaria and Filariasis) of Health Services, Pune. B) Contractor shall see that mosquito breeding conditions are not created so as to keep vector population to minimum level. C) Contractor shall carry out anti malaria measures in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director (M&F) of Health Services, Pune. D) In case of default in carrying out prescribed anti malaria measures resulting in increase in malaria incidence, contractor shall be liable to pay Govt. the amount spent by Government on anti malaria measures to control the situation in addition to fine. E) Relations with Public Authorities : The contractor shall make sufficient arrangements for draining away the sullage water as well as water coming from the bathing and washing places and shall dispose of this water in such a way as not to cause any nuisance. He shall also keep the premise clean by employing sufficient sweepers.

The contractor shall comply with all rules, regulations, bye-laws and directions given from time to time by any local or public authority connection with this work and shall pay fees or charges which are leviable on him without any extra cost to Government.

- Clause 56 :** The Contractor shall comply with all the provisions of the Apprentices Act. 1961 and the Rules and Orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Suprintending Engineer may, in this discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act (vide Govt. Circular No. CST- 1086/CR-243 Ka-Building-2/Mantralaya, Bombay 400032 dated 11 Sept 1987)
- Clause 57 :** The tendered rates are inclusive all of taxes rats and cases and shall also inclusive all of taxes leviable in respect of contract under the provision Rule 15 Maharashtra Value Added Tax Act 2005 for the purpose of levy of Tax.
- case of material which become surplus with the contractors from those issued for the work contracted for the date of ascertainment of the materials as being surplus will be taken as the date of sale for the purpose of sales tax and sales tax will be recovered on such sale
- Clause 58:** In case of materials which become surplus with the contractors from those issued for the work contracted for the date of ascertainment of the materials as being surplus will be taken as the date of sale for the purpose of sales tax and sales tax will be recovered on such sale.
- Clause 59 :** **Quality Assurance and Maintenance Manual**
- ANNEXURE "A":(Annex. to the PWD,Circular No.CAT-1091/CR-60-Bldg-2 Dt. 14/10/1991,regarding incorporating additional condition for Quality Assurance and Maintenance Manual).**
- 1) To ensure the specified quality of work which will also include necessary survey temporary works etc. the contractor shall prepare a quality assurance plan and get, the same provided from the Engineer-In-Charge within one month from the date of work order. For this contractor shall submit an organization chart of his technical personnel to be deployed on the work along with their qualification, job descriptions defining the functions of reporting supervising inspecting and approving. The contractor shall also submit a list of tools equipment and the machinery and instrumentation which he proposes to use for the construction and for testing in the field and/or in the Laboratory and monitoring. The contractor shall modify/ supplement the organization chart and the list of machinery/ equipment etc. as per the direction of the Superintending Engineer and shall deploy the persons and equipment on the fields as per the approved chart and the list respectively. The Contractor shall submit written method statements dealing his exact proposal of execution of the work in accordance with the specification. He will have to get these approved from the Engineer-In-Charge. The quality of the work shall be properly documented through certificate, records, checks list, and Log Book of results etc. such records shall be complied from the beginning of the work and be continuously updated the supplementary and this will be the responsibility of the contractor. The forms should be got approved from the Executive Engineer-In-Charge.
 - 2) Where the work is to be done on lump-sum basis on contractors designs. The contractor shall also submit a maintenance manual giving procedure. For maintenance, with the periodicity of maintenance works including inspection tools of the equipments to be used means of accessibility for all parts of the structure. He shall also include in the manual, the specification for maintenance works that would be appropriate for his design the technique of construction. This manual shall be submitted within the contract period.

Clause 60: CONDITIONS RELATING TO INSURANCE OF CONTRACT WORK :

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

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

Add: Contractor shall take out necessary Insurance Policy/Policies (viz. Contractors All Risks)

All Risks Insurance Policy etc. as decided by the Directorate of Insurance) so as to provide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period compulsorily from the, "Directorate of insurance, Maharashtra State, Mumbai" only. Its postal address for correspondence is "264, MHADA, First Floor, Opp. Kalanagar, Bandra (E) Mumbai-400 051". (Telephone Nos. 265904403/26590690 and Fax Nos. 26592461/26590403. similarly all workmens' appointed to complete the contract work are required to insure under workmen's compensation insurance Policy. Insurance Policy/Policies taken out from any other Company will not be accepted. If any Contractor has effected insurance with any insurance Company, the same will not be accepted and the amount of premium calculated by the Government Insurance Fund will be recovered directly from amount payable to the Contractor for the executed contract work and paid to the Directorate of insurance Fund Maharashtra State, Mumbai. The Director of insurance reserves the right to distribute the risks of insurance amount to the other insurers.

Clause 61: Condition for recovery of workmen welfare cess Act (Sub cess)

As per building and other construction workmen (Regulation of employment and condition of service) Act 1996 and the building and other construction workers welfare cess act 1998 and Government of Maharashtra G.R.No.BCA-2009/C.No.108/Labour 7-A dated 17.6.2010 cess if 1% on the cost of work shall be recovered from bills payable to the contractorPage No.34 of 52

Cluse 62 : ***Goverenment of Maharashtra , Finance Deptt. Mantralaya, Mumbai ,*** circular GST 2017/pra. Kr. 81 / kradhan -1 dated 19.08.2017 and , circular GST 2017/pra. Kr. 155 / kradhan -1 dated Dt 11.09.2017 The rates to be quoted by the contractor must be exclusive of GST . As actual GST applicable as per prevailing Govt. Rules.

<u>Additional conditions and Technical Specifications</u>	
ne of work :-	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.
A	<u>GENERAL</u>
1.	<u>POWER SUPPLY :</u> Electric Power supply for carrying out his work shall be arranged by contractor on his own cost at the site and energy charges shall be borne by the contractor.
2.	<u>COMPLIANCE OF SAFETY CODE :</u> Successful tenderer shall ensure compliance with statutory provision of Safety regulation & departmental requirements of safety codes in respect of labor employed on the work by the Tenderer. In the event of the contractor fails to observe the same, the Department will be at liberty to make the necessary arrangement at the cost of the contractor and recover this cost from him. The contractor shall be responsible for any compensation to the workmen payable under the Workmen Compensation Act 1923 duly amended as on date or any other statutory Regulations in force. In case of fatal or non-fatal accident occurred to the workers during erection and maintenance of system, the Department will not be liable to pay for any compensation and it is duty of Contractor to observe all Labour Acts and Rules.
3.	<u>CO-ORDINATION WITH OTHER AGENCIES :</u> Successful tenderer shall co-ordinate his work with other agencies engaged in, the construction of Building. And submit weekly progress report of the work carried out by him
4.	<u>COMPLETION OF TENDER SPECIFICATION :</u> All fittings, unit, assemblies, accessories, hardware, foundation bolts, terminal lugs for electrical connection, cable glands and miscellaneous materials or accessories or items of work which are useful and necessary for efficient assembly and working of the equipment shall be deemed to be included in the tender within the over-all cost quoted. The equipment shall be completed in all details whether such details have been mentioned or not.Further I have certified that, I had gone through the detail Specification included in the tender and fully conversant with the Specification laid down for concerned items along with IS code, IE rules & NEC.
5.	<u>TOOLS :</u> The offer shall also include a set of tools required for operation and maintenance as are considered necessary by the tenderer. Details of tools offered shall be stated clearly in the Schedule of the tender.
6.	<u>WORKMANSHIP</u> The entire work of fabrication, manufacture assembly and installation of equipment shall conform of high grade workmanship. All the equipment supplied and erected must be able to withstand the Atmospheric condition of Maximum ambient temperature 45 D.C. Maximum relative humidity 98% Corrosive atmosphere Hot and humid climate closer to sea coast. The Contractor has to carryout holes by chipping/core cuts in the floor slab if necessary for laying pipeline as per the requirements
7.	<u>SITE VISIT BEFORE SUBMISSION OF TENDER.</u> Contractor has to be visit the site, before submission of tender.
8.	<u>CIVIL WORKS:</u> 1) Major Civil works is excluded from the scope however necessary excavations if required, making, closing of cutouts/Core cuts in the wall/Floor, necessary supports and grouting, drilling etc

	<p>with finishing the same to match the background in all respect are included in the scope.</p> <p>2) All Civil works like chasing & making good the chases making pockets for grouting if necessary, grouting of panels etc. with finishing the same to match the background in all respect are included in the scope.</p> <p>3) Fabrication and fixing of supports, with finishing the same to match the background in all respect are included in the scope.</p>
9.	<p><u>DRAWINGS</u></p> <p>The contractor shall prepare necessary drawings such as panel drawing, single line diagram etc and gets approved from concerned Executive Engineer (Electrical) within seven days after receiving layout of the work. The three sets of hard copy and one soft copy of approved drawings shall be submitted by the contractor and obtaining necessary permissions & licenses if any from the competent authority. The applicable charges/fess if any from the authority shall be borne by the contractor</p> <p>After Completion Of the Work , the Contractor has to submit 6 Sets of As Built Drawings in Hard copy & one Soft copy in autocad +pdf Format</p>
10.	<p><u>ACTIVITY BAR CHART</u></p> <p>The contractor should submit activity bar chart for the work tendered to the engineer-in-charge within two days</p>
11.	<p><u>MATERIAL TESTING</u></p> <p>I] The material in schedule B / brought at site/ erected at position will be tested from the Government Owned Regional Testing Laboratory.</p> <p>If the accepted tender cost is 10% or more than 10% below the Amount put to Tender then material brought on site will be tested as per direction of Tendering Authority</p> <p>If the report of the material sent for testing is found unsatisfactory, same will have to be replaced by the contractor at his own cost even though already erected. The material to be replaced needs to be brought at site & will have to be get tested before erection.</p> <p>The testing fee/charges and all other associated charges like transportation etc. will be entirely borne by the contractor. However the sampled quantity will be considered in the measurements for first time testing only.</p> <p>II] The necessary testing of the Main panels/machinery/Electrical Appliances etc. shall be done at factory in presence of engineer-in-charge before delivery of the Materials and the factory test reports shall be submitted , the necessary charges and all other associated expenses like transportation etc. will be entirely borne by the contractor.</p>
12	The Contractor has to co ordinate with necessary follow up with the Electric power supply Company as directions of the engineer in charge
13	For commissioning of electrical installations any statutory Permissions required Shall be Born by the Contractor at his own Cost.

B. GENERAL TECHNICAL SPECIFICATIONS

Name of Work :-	Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.
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1 SCOPE OF WORK

Scope of work covered under this tender shall be as mentioned but not limited to following :-

Dismantling & erecting, Testing & Commissioning of Electrical Overhead line & substation & it's components .

2.Applicable Standards/ Statutory Requirement

All works shall be carried out in accordance with the following standards

Recommended Standards:

The following list is for Indian Standards which are acceptable as good practice and accepted standards;

Development Control Rules : Of concerned Corporation or Local Authority

5613 (PART 2/SEC 2) : 1985 CODE OF PRACTICE FOR DESIGN, INSTALLATION AND MAINTENANCE OF OVERHEAD POWER LINES PART 2 LINES ABOVE 11 kV AND UP TO AND INCLUDING 220 kV.

The Safety Regulation 2010 amended up to date

STANDARDS 2.1 The Conductor shall also comply in all respects with the IS:398 (Part-II) 1996 with latest amendments unless otherwise stipulated in this specification or any other International Standards which ensure equal or higher quality material.

2.2 The ACSR Conductor shall also conform to the following standards.

TESTING :

a AT MANUFACTURER'S WORKS

The routine tests on Electrical materials Like overhead line components

HT/LT Cables, switchgears shall be carried out at manufacturer's work in accordance with applicable Indian standards in front of Supply company's representative & Engineer In Charge during Factory visit

b SITE TESTING

Following tests shall be conducted at site in the presence of the Supply company's representative before energization. The contractor shall provide all testing equipment, labour and consumables required for the testing.

Checking the safety alignment by the manufacturer's representative and obtaining approval.

Insulation resistance test on Electrical Installation,.

Checking all the safeties for satisfactory operation.

5 GUARANTEE

The Complete Electrical Installation shall be guaranteed for satisfactory operation for a period of 12 months from the date of commissioning or. Any defects noticed during this period shall be rectified free of cost.falling which compensation for delay at Rs.500/-Per day shall be Proposed.

The Agency shall indicate the type of records to be maintained so that the warranty claims if any are honored by the manufacturer.

. DOCUMENTATION

As a part of the equipment supply, following documentation shall be furnished.

Schematic diagram

Complete Electrical Installation drawing.

Test certificates for All materials & Equipment's listed in Schedule B.

Spare parts list.

. TAKING OVER

The clients will take over the Entire Electrical installation for operation on completion of the following.

The Entire Installation shall be tested and commissioned as per the specifications.

Original test certificates are furnished for all other bought out items.

6 sets of AS BUILT documentation, maintenance chart and operation and maintenance manual are to be submitted.

g. The Contractor submit some important events video clips before, during the execution of the work including Training, till the final handing over of the work

Electrical Items Specification

Specification for Electrical Installation

Est. No. KESD / O.W. / 507 / 2017-18 Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar, Tal. Jawhar Dist. Palghar.

Schedule- B Item No.	Specification No.	Specification
1.	SW-SWR/MFP	<p>Fabrication of feeder pillar with CRCA sheet, fixing of aluminium strips/bars, with necessary painting and complete erection on provided cement concrete foundation.</p> <p><u>Material:</u> <i>Incoming Isolator:</i> 200 A Four Pole MCCB with 35 kA SC rating <i>CRCA Sheet:</i> 14 gauge <i>Fabrication:</i> Angle iron of required size. <i>Bus bar strip:</i> Aluminium strips with colour coding heat shrinkable sleeves <i>Insulators:</i> Bus bar insulators (Porcelain/Epoxy) <i>Gasket:</i> Rubber / Neoprene gasket Red Oxide: Red oxide paint /Primer Paint: Superior quality Enamel paint <i>Hardware:</i> MS nut bolts of required size and length. MS Hinges, Self locks for door. <i>Danger Board:</i> Danger notice in Marathi & English Foundation material: Cement, Sand, water.</p> <p><u>Method of Construction</u> The mini feeder pillar shall be fabricated from 14 SWG CRCA sheet. The size of the chamber shall be 75 cm in height, 50 cm in width and 35 cm in depth. The top cover (50 cm in width and 30 cm in depth) shall be fabricated in such a manner so as to have slope on all four sides. The slope shall start at the centre of the chamber. Front door of the feeder pillar shall have self locking arrangement (minimum two) and shall be fixed as directed by the site engineer. The door shall be made water proof by fixing the rubber / neoprene gasket on the inner side. Necessary provision for ventilation shall be made on both side of feeder pillar chamber. These shall be complete with welded non ferrous metallic mesh so as to make it vermin proof. The entire fabricated chamber shall be fixed frame made from 50x50x5 mm angle iron. Dimensions of the frame shall be as per the size of the frame and the depth of the legs shall be 50 cm. The extended portion of the leg of frame shall be covered on all four sides with 14 SWG CRCA sheet duly fixed with suitable size of MS bolts & nuts. The chamber shall have removable bottom plate PVC insulation tapes with colour coding, shall be fixed inside the chamber on porcelain / epoxy insulators in staggered manner so as to facilitate the connections of cable leads. (Minimum two insulators shall be provided), with main cable socket to each bar. The provided Four Pole MCCB of 500 V 200 A rating, shall be fixed on mounting made from CRCA sheet at the bottom for terminating the</p> <p>The feeder pillar chamber door shall be fixed with enamel iron G.I. Sheet 18 gauge caution board of size 200 mm x150 mm or have sticker pasted, as per I.S.2551 of 1982. The entire feeder pillar thus fabricated shall be erected in cement concrete foundation (with excavation of soil) with 4 numbers of suitable size foundation bolts. The minimum dimensions of the cement concrete foundation shall be 60 cm in width, 50 cm in depth and 30 cm height.</p> <p><u>Mode of Measurement:</u> Executed quantity shall be counted on number basis. (i.e. each)</p>
2.	---	As Per Schedule-B Item No.2 Description.
3.	---	As Per Schedule-B Item No.3 Description.
4.	---	As Per Schedule-B Item No.4 Description.
5.	CB-LT/AL	<p>Providing armoured cable of specified voltage level, size & specified conducting material (Aluminum / Copper) as per Table no. 7/3 including required material, hardware's for erection and erecting on wall, ceiling, RCC slab or drawing the same through pole, pipe, laying in provided conduit, trench, ducts, trays as per approved method of construction including glands, lugs, etc.</p> <p><u>4. Material:</u> <u>Cables:</u></p>

Cables shall be PVC for LT/MP and XLPE for HT as per Table no. 7/3 and of required construction, colour, shall carry ISI mark, IS No, manufacturer's name, size, duly embossed / screen printed at every metre and having the total count of progressive length in meter at each mark.

Earth wire: Galvanized Iron (G I) wire of appropriate gauge as per Table No 7/1.

Glands: As per specification **(CB-GL)**

Lugs: As per specification **(CB-CL/AL, CB-CL/CU)**

Saddles: Saddles fabricated from GI sheet of required gauge and size depending on dia of cable either galvanized or painted with superior quality enamel black paint with necessary shearing mechanical strength, semi circular shaped with extended piece having suitable holes for fixing.

G I Strip: 22 g x 25 mm width G I Strip.

Clamps: MS Clamps fabricated of required length and shape, having the size of 3/6 mm thick mild steel having 25/50 mm width (as per size of cable), rounded ends with wooden / resin cast grip for holding the cable.

Identification tags: For identifying root, connection position GI strip with identification mark / name embossed / painted with arrangement to tie should be fix on cable or arrangement of ferrules to be done.

Hardware: Sheet Metal (SM) screws of required sizes, plugs / wooden gutties, etc.

Method of Construction: General:

Irrespective of method of construction the cable ends shall be terminated with appropriate size & type of glands with lugs duly crimped, as directed by Site engineer. b) Wherever the cable has to be bent, the turning radius shall be as mentioned in Table No. 7/2. Grouping of cables shall be done with adequate distance between cables as mentioned in IS so as to minimize de-rating. Cables shall be tagged/ferruled with identification name / mark at the point from where distribution starts and at ends. Bare earth wire of appropriate size as per Table no. 7/1 shall run along with the cable. Earth wire running with the cable shall be terminated at the earth terminal nearest to cable termination.

5.1 Erection of Cable on Surface:

Erection shall be done as per the routes and layout finalized, in perfect level and in plumb. Before fixing the cable shall be straightened as far as possible for good aesthetics look, continuous bare GI earth wire of required gauge as per Table No 7/1 shall be run. Cable with G I wire shall be fixed by saddles firmly clipped on cable and shall be fixed to wall with minimum 50 x 8 mm SM screws with plugs/wooden gutties, etc. (Distance between two supports / saddles shall be maximum 450 mm). Wooden gutties shall be used wherever required (Especially for stone wall). The entries made in wall, floor slab, etc for laying the cable shall be made good by filling and finishing with plastering the same.

5.2 Erection of Cable on Trusses:

Cable along with bare GI earth wire, while erecting on trusses, shall be firmly clamped by wrapping GI strip of 22 g, 25 mm width of required length fixed to truss with nuts and bolts.

5.3 Erection of Cable on Pole:

Cable along with bare GI earth wire, while erecting on pole, shall be firmly clipped by suitable wooden / epoxy resin cast grips, clamped with 25 x 3 mm or 50x6 mm MS strip of required length and fixed to pole with nuts and bolts.

5.4 Laying of Cable in provided Trench/Pole:

While laying Cable along with bare GI earth wire, utmost care shall be taken to prevent damage to the insulation of the cable and to the open end. Cable shall be brought out from trench vertically straight (minimum 1.0 metre above G L). Care shall be taken to inspect the trench so that depth of cable shall not be less than as shown in Table No 7/4. Suitable size of cable loops shall be provided near termination point at adequate depth.

5.5 Erecting cable in constructed Trench / duct:

Erection of cable/s in constructed trench / duct, shall be as per guide lines of IS 1255.

5.6 Erection of cable/s on trays:

Cable/s shall be tied with PVC tags on GI trays. At bending point care shall be taken so that sharp edges of sheet will not damage insulation of cable.

5.7 Mode of Measurement: Executed quantity shall be measured on the basis of

6. Dismantling

Cable laid underground, or fixed on any surface shall be dismantled carefully without damaging complete with all its accessories, making coil and stored as directed. The surface of the dismantled cable shall be made clear by removing of unwanted material, cement mortar, etc. When cable is dismantled from trench refill back the trench and making the surface

proper.

7. Mode of Measurement: Executed quantity shall be measured on the basis of

Table No 7/1

Size of Bare GI Earth wire to be used with LT Cables upto 1.1 kV

Sr. No.	Size of cable	Size of bare GI Earth wire to be used with cable
1	2.5 Sq. mm to 50 Sq. mm of all cores.	12 SWG
2	70 Sq. mm to 95 Sq. mm of all cores.	10 SWG
3	120 Sq. mm and above of all cores.	8 SWG

Minimum bending Radius for Cables

Sr. No.	Voltage level of cables	Single core	Multi core Unarmored	Multi core Armored
1	Up to 11 kV	20 D	15 D	12 D
2	Up to 22 kV	25 D	20 D	15 D
3	Up to 33 kV	30 D	25 D	20 D

Note: D diameter of cable.

Wherever possible, 25 percent larger radii than the specified above should be used.

Table No 7/3

Current Rating (In Ground) for PVC/ XLPE Insulated 1.1 kV Grade Cables

Nominal area of conductor	Aluminum Conductor				Copper Conductor			
	Single Core		Multi Core		Single Core		Multi Core	
Sq. mm	PVC	XLPE	PVC	XLPE	PVC	XLPE	PVC	XLPE
10	51	55	46	50	65	71	60	65
16	66	74	60	68	85	95	77	87
25	86	98	76	90	110	125	99	115
35	100	118	92	108	130	150	120	138
50	120	137	110	126	155	175	145	161
70	140	172	135	158	190	220	175	202
95	175	204	165	187	220	260	210	239
120	195	234	185	215	250	301	240	276
150	220	262	210	240	280	336	270	308
185	240	298	235	273	305	381	300	350
240	270	344	275	316	345	441	345	405
300	295	387	305	355	375	496	385	455
400	325	458	335	420	400	586	425	538
500	345	495	-	-	425	635	-	-

630	390	555	-		470	710	-	-
800	440	625	-	-	-	-	-	-
1000	490	685	-	-	-	-	-	-

Rating Factors for Variation in Ambient Air Temperature			
Air Temperature ($^{\circ}\text{C}$)	40	45	50
Rating Factor (XLPE)	1.00	0.94	0.88
Rating Factor (PVC)	1.00	0.90	0.81

Minimum laying Depth of cables (IS: 1255)

Sr. No.	Voltage level of cables	Minimum depth from top of the cable
1	Up to 1.1 kV	750 mm
2	3.3 kV to 11 kV	900 mm
3	22 kV to 33 kV	1050 mm
4	At road crossing	1000 mm
5	At railway crossing (from Bottom of sleepers to Top of pipe)	1000 mm

Notes below Table No 7/4:

1.	PVC Insulated electrical cable for voltage grade up to 1.1 kV is based on 8 volts drop.			
2.	The distances are given in meters and after rounding.			
3.	The distances are given in meters and after rounding.			
For Temperature Correction please see as detailed below:				
Ground temp.	20 degree C	25 degree C	30 degree C	35 degree C
Rating factors:	0.95	0.90	0.85	0.80

Distance up to which different sizes of UG Aluminum Conductor Cables 1.1 kV grade, can be used for different current ratings of 8 Volts drop. (PVC insulated, PVC Sheathed, 3 cores or 4 cores)

- | | | |
|-----|------------------|--|
| 6. | CB-LT/AL | As Per Sr. No. 5 |
| 7. | CB-LT/AL | As Per Sr. No. 5 |
| 8. | CB-LT/AL | As Per Sr. No. 5 |
| 9. | CB-LT/AL | As Per Sr. No. 5 |
| 10. | CB-LT/AL | As Per Sr. No. 5 |
| 11. | OH-PL/RSJ | Supply and erection of Rolled Steel Joist (Girder) pole as per IS 2713, including painting in provided foundation as per method of construction. |

Material:

Pole: Rolled Steel Joist (Girder) As per Table No 8.1/2

Base plate: MS Base plate of 30x30x0.6 cms.

Hardware: Nut and bolts for fixing earth wire

Paint: Bituminous paint, Aluminium paint, Red oxide paint.

Method of construction:

Before erection of pole base plate of size 30x30x0.6 cm shall be full length welded at the bottom of pole, a suitable hole of required diameter and at specified height shall be drilled for earth stud. The pole shall be then painted by 2 coats of red oxide paint as primer for full length and then by one coat of bituminous paint before erection for min.1/6 length which is to be buried in ground & after erection remaining portion to be painted by two coats of aluminium paint. The pole shall be erected in provided pit with cement concrete foundation and mufing in perfect plumb.

Mode of Measurement:

Executed quantity will be measured on number basis. (i.e. each.)

Table No. 8.1/2

Weight of various sizes of RSJ Poles with 8.5 meter length

RSJ POLE	Size	Weight per Meter
Rolled steel Joist	150x80 / 150x75mm	14.9 Kg/meter
Rolled steel Joist	200x100 mm	25.4 Kg/meter
Rolled steel Joist	175x90 mm	19.3 Kg/meter
Rolled steel Joist	100x116 mm	23.0 Kg/meter
Rolled steel Joist	125x75 mm	12.42 Kg/meter
Rolled steel Joist	152x152 mm	37.0 Kg/meter

12. **OH-PL/RSJ**

As Per sr. No. 11

13. **OH-PL/BKT**

Supply and erection of MS Pole Bracket for erection of L T insulators on provided pole.

Material:

Pole Bracket: MS pole bracket fabricated as per specifications in Table 8.4/1. Thickness and size of channel is to be checked from the steel table.

Table No 8.4/1

Details of Pole Brackets

Item No	Material of bracket	Length	No of insulator	No of insulator	Guarding Extension piece	Remark
8-4-1	Angle iron 50x50x6 mm	550 mm	2	2		For LT guarding for vertical formation
8-4-2	Angle iron 50x50x6 mm	750 mm	2	2		For LT guarding for horizontal formation
8-4-3	ISMC Channel 75x40x 6.8 mm	550 mm	4	4		For LT 3 phase 4 wire vertical formation
8-4-4	ISMC Channel 75x40x 6.8 mm	750 mm	5	5		For LT 3 phase 5 wire vertical formation
8-4-5	ISMC Channel	550 mm	2	2		
8-4-6	ISMC Channel	1100 mm	4	4		
8-4-7	ISMC Channel 75	550 mm	2	2	300mm of same channel	
8-4-8	ISMC Channel 75	1100 mm	4	4	300mm of same channel	

D' type Clamps: MS Flat of 50x6mm, 15 mm MS nut bolts

Paint: Silver paint, Red oxide paint

Method of construction:

The cross arm shall be made up of size of channel mentioned in above table. The length shall be as stated above table. The cross arm shall be complete with pole clamp of size 50X6 mm MS flat and holes required for pin / shackle insulator. For MS pole bracket with guarding extension, an extension piece of same size of length 300 mm shall be welded to bracket as per drawing attached herewith. The cross arm and pole clamp shall be painted with one coat of red oxide and two coat silver enamel paint any other colour paint (as per the instructions of engineer in-charge).

Cross arm shall be fabricated **as per drawing no. OH-PL/BKT-1 (Fig.2 & Fig.3)**

Mode of Measurement: Executed quantity will be measured on number basis. (i.e. Each)

14. **OH-CON/AAC**

Supply and erection of All Aluminium Conductors for overhead line.

Material:

Conductor: All aluminium stranded conductor (As per table 8.5/1)

Binding wire: 12 SWG aluminium binding wire

Clamps: PG clamps as per requirement

Method of construction:

At first the conductor is removed from bundle/drum straighten without knots, bends, etc. Stringing of conductor shall be done with draw vice. Conductor shall not be twisted while stringing. Shackle insulators shall be used if the line deviates by 30 degrees or more, at terminal pole and at junction/ cut pole. Parallel double groove clamp having two nut bolts designated to carry full line current shall be used for making Jumper wire connections.

On straight line the conductor shall be bounded on top groove of insulator and at angular position binding shall be done in side groove. Binding wire of 12 SWG shall be of the same metal as that of conductor.

Mode of Measurement:

For measurement purpose, sum of the total conductor including jumper connections shall be considered. (i.e. per km)

15. **OH-CON/AAC**

As Per Sr. No. 14

16. **HO-CON/ACSR**

Supply and erection of aluminium conductor steel reinforced for overhead line.

Material:

Conductor: All aluminium conductor steel reinforced (As per table 8.5/1)

Binding wire: 12 SWG aluminium binding wire

Clamps: PG clamps as per requirement

Method of construction:

At first the conductor is removed from bundle/drum straighten without knots, bends, etc. Stringing of conductor shall be done with drawing vice. Conductor shall not be twisted while stringing. Disc insulators shall be used if the line deviates by 30 degrees or more, terminal pole and tri-pole or four pole structure at terminal pole and at junction/ cut pole. Parallel double groove clamp having two nut bolts designated to carry full line current shall be used for making Jumper wire connections. Universal parallel double groove clamp having two nut bolts shall be used for Tap Off point. On straight line the conductor shall be bounded on top groove of insulator and at angular position binding shall be done in side groove. Binding wire of 12 SWG shall be of the same metal as that of conductor.

Mode of Measurement:

For measurement purpose, sum of the total conductor including jumper connections shall be considered. (i.e. per km)

Table No. 8.5/1
Conductor Specifications As Per I.S. 398/1961

Code Name of Conductor	Resistance at 20 ⁰ ohm /km.	Approx. Current Carrying Capacity in Amperes.		Number of Strands / Diameter of each Strand in mm	Overall Diameter of Conductor in mm	Weight of Conductor (kg/km)
		At 40 ⁰ C	At 45 ⁰ C			

All Aluminium Conductor						
Rose	1.361	116	108	7/1.96	5.88	58
Gnat	1.071	133	123	7/2.21	6.63	73
Irish	0.850	150	138	7/2.48	7.44	92
Pansy	0.677	178	165	7/2.78	8.34	116
Ant	0.544	204	189	7/3.10	9.30	144
ACSR Conductor						
Squirrel	1.374	115	107	6+1/2.11	6.33	85
Weasel	0.911	150	139	6+1/2.59	7.77	128
Ferret 4.04	0.679	181	618	6+1/3.0	9.00	171
Mink 0.06	0.456	234	217	6+3.66	10.98	255
Raccoon	0.365	270	250	6+1/4.09	12.27	318
Dog 0.1	1.137	520	482	30+7/3.0	21.00	976

Table No 8.5/2
Minimum Clearance between Conductors
(IS: 4237-1967)

S.No.	Voltage level (kV)	Clearance in mm	
		Between Phases	Between Phase & Earth
7.	11	460	305
8.	22	610	460
9.	33	915	610
10.	110	1675	1000
11.	230	3350	1675
12.	400	4000	3500

17. --- As Per Schedule-B Item No.17 Description.
18. --- As Per Schedule-B Item No.18 Description.
19. **OH-INS/DI** Supplying porcelain disc type insulator, suitable for 11/22/33KV and necessary ancillary materials and complete erection on provided cross arm / bracket and connected to the over-head line as per instructions from the site engineer
Material:
Insulator: Distribution class Disc type insulator made from porcelain, suitable for specified voltage level, having ISI mark, with necessary hardware.
Hardware: Nuts, washers, etc.
Binding wire: Bare Copper wire or conductor.
Clamps: MS clamps.
Method of construction:
Distribution class porcelain disc type insulator, suitable for specified voltage level, erected on provided cross arm or bracket with clamps, ancillary materials, and connected to the over-head line. Connection shall be made with bare copper wire of specified gauge.
Mode of Measurement: Executed quantity will be measured on number basis (i.e. each)
20. **OH-INS/PN** Supplying porcelain Pin type insulator, suitable for 11/22/33KV and necessary ancillary materials and complete erection on provided cross arm / bracket and connected to the over- head line as per instructions from the site engineer
Material:
Insulator: Distribution class Pin type insulator made from porcelain, suitable for specified voltage level, having ISI mark, with necessary hardware.
Hardware: Nuts, washers, etc.
Binding wire: Bare Copper wire or conductor.
Clamps: MS clamps.

Method of construction:

Distribution class porcelain pin type insulator, suitable for specified voltage level, erected on provided cross arm or bracket with clamps, ancillary materials, and connected to the over-head line. Connection shall be made with bare copper wire of specified gauge.

Mode of Measurement: Executed quantity will be measured on number basis (i.e. each)

21. **OH-INS/LA**

Supplying porcelain Thyrite type lightning arrestor, suitable for specified voltage level and necessary ancillary materials and complete erection on provided cross arm / bracket and connected to the over-head line as per instructions from the site engineer.

Material:

Arrestor: Distribution class Thyrite type lightning arrestor made from porcelain, suitable for specified voltage level, having ISI mark.

Hardware: Nuts, washers, etc.

Binding wire: Bare Copper wire or conductor.

Clamps: MS clamps.

Method of construction:

Distribution class porcelain Thyrite type lightning arrestor, suitable for specified voltage level, erected on provided cross arm or bracket with clamps, ancillary materials, and connected to the over-head line. Connection shall be made with bare copper wire of specified gauge.

Mode of Measurement: Executed quantity will be measured on number basis (i.e. each)

DRAWINGS

OH-1 : Overhead Line Distribution System

OH-2 : Overhead Line Distribution System

22. --- As Per Schedule-B Item No.22 Description.

23. --- As Per Schedule-B Item No.23 Description.

24. --- As Per Schedule-B Item No.24 Description.

25. **EA-EP**

Supplying and erecting galvanised cast iron / copper earth plate type / G.I. pipe type earthing with / without C.I. cover as per instructions from the site engineer.

Material:

Earth Plate: Galvanised cast iron / Copper earth plate or G.I. pipe as per specifications given in Table No 9.1/1.

CI Cover: As per specifications given in Table No 9.1/1.

Earthing Conductor: Copper/G.I strip/Annealed bare copper wire/G.I. earth wire of size as per specifications given in Table No 9.1/1.

GI Pipe: As per specification **(CW-PLB/GP)** mentioned chapter no. 17.5 for watering, and as enclosure for Earth wire, refer specifications given in Table No 9.1/1.

Hardware: Screw / nut bolts with required washer of dimensions, Rawl plug / clip/ 'U' nails and material as per specifications given in Table No 9.1/1.

Filling material: Coal /Charcoal/ salt as per specifications given in Table No 9.1/1. as per specifications given in Table No 9.1/1.

Lugs: As per specification **(CB-LG/AL, CB-LG/CU)** mentioned chapter 7.9 & 7.10 Copper/ Aluminium lugs as per specifications given in Table No 9.1/1.

Method of construction:

Pit is to be dug of required dimension and depth for the earthing at site, and laying of Galvanised cast iron / Copper earth plate or G.I. pipe shall be as per Table No 9.1/1. The earth connection to equipment/ switch gear and earthing electrode shall be connected as shown in the diagram and as per IS 3043 amended up to-date. The connections shall be made either by strip or double run of earth wire with drilling, welding, riveting, brazing and nut bolting to plate or pipe, where ever required in an approved manner. As far as possible continuous strip shall be used, but where ever jointing of strip is unavoidable, the overlap portion must not be less than $2\frac{1}{2}$ times the width of the strip either welded/ brazed/soldered by all sides or 6 inches overlap with two nut bolts/ riveting of adequate size with required washer and covered by anti-corrosive paint as per approved jointing practice in the industry and as per directives from site engineer in charge.

Pit shall then be filled with screened soil with alternate layer of coal and salt, and if, necessary brick masonry work (Where ever applicable) shall be done as specified in IS: 3043, with laying wires in PVC/ G.I. pipe and watering arrangement as per [drawing no EA-1](#) and covered with C.I. Cover (Where ever applicable).

Where ever requires or as specified by Site Engineer, a Test link shall be provided for facilitating the testing of resistance of earth electrode.

Testing:

The value of each earth electrode shall be measured by earth tester in presence of site Engineer and record to be submitted.

Mode of Measurement: Executed quantity will be measured on number basis (i.e. each)

Table No 9.1/1
Detailed Specifications of various types of Earthing

Type of earthing ----- >		Galvanised cast iron earth plate type without C.I cover	Copper earth plate type with C.I cover	Galvanised cast iron earth plate type with C.I cover	Pipe type earthing with out C.I cover
Sr. No.	Particulars				
1)	Depth from top of plate Up to Ground level	1.5 m	1.5 m	1.5 m	1.5 m
2)	Size & type of material for pipe / Plate type earthing.	Cast iron earth plate size 60x60x0.6 cms	Copper earth plate size 60x60x0.6 cms	cast iron earth plate size 60x60x0.6 cms	'B' grade G.I. pipe 40mm. dia. 2.5 mtr. Long or 20 mm dia. G.I. Rod
3)	Salt/charcoal	30 Kg. charcoal and salt each	30 Kg. charcoal and salt each	40 Kg. charcoal and salt each	N A
4)	Type of Wire	Double G.I. wire 8 SWG	Double G.I. 8 SWG	Double G.I. 6 SWG	double G.I. 8 SWG
5)	Wire enclosure	12mm. dia. G. l. pipe 2 mtr. Long	12mm. dia. G. l. pipe 2 mtr. Long	12mm. dia. G. l. pipe 2.5 mtr. Long	N A
6)	Nut bolts	12 mm dia. Cadmium / GI	12 mm dia. Cadmium / GI	12 mm dia. Cadmium / GI	N A
7)	Washers	GI	GI	GI	N A
8)	Watering pipe	19mm. dia. G.I. pipe	19mm. dia. G.I. pipe	19mm. dia. G.I. pipe	N A
9)	Lugs	Yes	Yes	Yes	Yes
10)	funnel	No	yes	yes	N A
11)	Brick Masonry	No	yes	yes	N A

26.
27.

EA-EP
SS-TR

As Per Sr. No. 25

As per Description Sr. no-27 and also Supplying and erecting AC three phase 11or 22 kV/0.44 kV, 50 Hz, oil immersed and naturally cooled indoor/outdoor type copper wound distribution transformer of specified capacity, connected delta on HV side and star on LV side with additional neutral brought out on load side.

Recommended standards:

The following list shows Indian Standards which are acceptable as good practice and accepted standards.

IS 335: 1963 Dielectric Strength IS 2026 part I 1977 Specification for Transformer IS 2026 part II 1977 Specification for type of cooling and permissible temp. rise of transformer IS 2026 part III 1981 Specification for insulation level and dielectric strength of transformer IS 2026 part IV 1977 Specification for terminal marking tapping and connections IS 1180 part I 1989 Specification for outdoor type three phase distribution transformer IS 10028 Part I 1985 Code of practice for selection installation and maintenance of transformers CBIP/TAC

Manuals

Material:

1. Copper wound Transformer with Delta connection on HV side and star connection on LV side complete with Manufacturer's test certificates 2. Standard mountings required for transformer are shown below. The mountings are to be selected from them and any additional if required.

- ☐ Off load tap changing
- ☐ Oil conservator with fitting holes and cap and plain oil level gauge
- ☐ Silica gel dehydrating breather
- ☐ Oil drain valve
- ☐ Thermometer pockets
- ☐ Oil filter valve
- ☐ Lifting arrangement
- ☐ Two earthing terminals
- ☐ Diagram and rating plate
- ☐ Four bi directional plain rollers
- ☐ Air vent
- ☐ Explosion vent
- ☐ Terminal arrangement
- ☐ Bushing with lugs and/or cable end box on LV side
- ☐ HV cable end box and/or HV bushing

The transformer losses shall be as mentioned in Table No 10.1/1

Method of Construction:

The contractor should intimate name of manufacturer and make of the Transformer and location of the manufacturer factory to engineer in charge prior to delivery of the transformer. After manufacturing of the transformer, the agency/contractor shall intimate the engineer-in-charge for carrying out the inspection. After receipt of intimation engineer-in-charge or his representative should inspect the Transformer at manufacturer factory and shall carry out the following tests jointly in presence of concern contractor.

- 1) Open Circuit test
- 2) Short Circuit test
- 3) Specific Resistance Test
- 4) Insulation Resistance of HV, LV, in between HV and LV, Winding and Body.
- 5) Dielectric Strength and acidity test of Transformer oil

The test results of joint inspection shall be recorded on the test report of Transformer with its Sr. No. prior to delivery of the Transformer to site. Necessary work of plinth and or for D.P. structure with D.O. set, L.A., A.B. switch should be completed before dispatch of the transformer. The channel arrangement on plinth is to be done. Earthing arrangement should be completed. The Transformer should be installed on plinths / double pole structure/floor by arranging chains pulley block, crane etc as per IS Norms. After installation of Transformer the stopper/lock should be provided to rollers of the Transformer. The connection of H.T/L.T. side should be completed by provided Copper wire/ cable with necessary lugs to avoid loose connection. The earthing (2 Nos for Neutral & 2 Nos for Body) should be connected from distinct electrodes. The earthing should be connected by lugs/proper size of strip. The Engineer in charge or his representative should check all connections on H.T. side, L.T. side and earths and insulation and earth resistance test should be carried out and results obtained shall be recorded. .

Statutory Permissions to be obtained by the Agency/Contractor:

Before commencement of work, the drawings of installation shall be got approved from the Electrical Inspector, I E & L Department. The installation should be got inspected from Electrical Inspector and obtain written permission to charge the Transformers.

Commissioning:

After above formalities the Transformer, should be charged/commissioned in presence of Engineer in charge or his representative along with load trials and shall be handed over to the department for beneficial use After charging the Transformer, line, phase voltages and line current shall be measured, and the same shall be submitted.

Following test certificates shall be submitted:

1. Manufacturer's original certificate of Transformer as stipulated in IS.
2. Test certificate for dielectric strength of oil as per IS.
3. Test results of IR values.

4. Test results of all earth electrodes.
5. Readings of Voltages & currents at the time of commissioning.

Table No 10.1/1**Capacity wise maximum losses of Transformers**

Sr. No.	Transformer Rating kVA	Voltage Ratio in kV	Winding	(At 75°C) Losses at No Load (Watts)	(At 75°C) Losses at 50 % Load	(At 75°C) Losses at 100 % Load (Watts)	Short Circuit Current Amp
1	63	11/0.433	Cu	155	380	1250	
2	63	22/0.433	Cu		362	1193	
3	63	11/0.433	Al	180		1235	84
4	63	22/0.433	Al				
5	100	11/0.433	Cu	220	520	1800	
6	100	22/0.433	Cu		495	1717	
7	100	11/0.433	Al	260		1765	133.34
8	100	22/0.433	Al				
9	160	11/0.433	Cu	400		2400	
10	160	22/0.433	Cu				
11	160	11/0.433	Al				
12	160	22/0.433	Al				
13	200	11/0.433	Cu	500		3000	
14	200	22/0.433	Cu				
15	200	11/0.433	Al	500		3000	266.67
16	200	22/0.433	Al		819	2415	
17	250	11/0.433	Cu	550		3600	
18	250	22/0.433	Cu				
19	315	11/0.433	Cu	580		4200	420.02
20	315	22/0.433	Cu				
21	500	11/0.433	Cu				
22	500	22/0.433	Cu				
23	630	11/0.433	Cu	1000		7000	840.04
24	630	22/0.433	Cu				

28. --- As Per Schedule-B Item No.28 Description.
29. --- As Per Schedule-B Item No.29 Description.
30. --- As Per Schedule-B Item No.30 Description.
31. --- As Per Schedule-B Item No.31 Description.
32. --- As Per Schedule-B Item No.32 Description.
33. **SS-AS/FSG** Supplying and erecting fencing of section having size **2450 mm** in height from ground level and **1200 mm** width with angle iron frame work, erected in foundation, and painted.

Material:

Fabrication material: ISI mark 50x50x6 mm angle iron, Iron studs/Spikes 10 mm thick with arrow head, 25x6 mm MS flat iron.

Chain link Jali: Jali made from hard GI wire 10 SWG/3.26 mm dia.

Foundation material: Cement, Sand, Water.

Paint: Aluminium paint, Red oxide.

Method of Construction:

The fencing shall be fabricated **as per drawing no.** The fencing section shall be **2450 mm in height from finished ground level and 1200 mm** in width. The square jali shall be welded from inside of the angle iron frame measuring 2200mm (1800 mm for fencing frame + 400 mm for embedding in cement concrete foundation) in height and 1200 mm in width. On top the frame iron studs of minimum 150 mm in height with arrow head shall be welded with spacing of minimum 300 mm. Supports made from MS flat iron shall be welded width wise on the top the jali from inside the frame at top, middle and at the bottom. The entire structure shall be erected in plumb. After the entire fabrication, fencing shall be painted with

one coat of red oxide and two coats of aluminium paint. (Overall size of doors shall be 1800 mm height x 3000 mm wide)

Mode of Measurement: Executed quantity will be measured on number basis. (i.e each)

34. --- As Per Schedule-B Item No.34 Description.
35. **SS-AL/DLD** Supplying and erecting double leaf hinged door each 1500 mm in width x 1800 mm in height using B Class GI pipe with angle iron supports, chain link jali, complete supported on channel iron, erected in foundation, and painted.
- Material:**
GI Pipe: ISI mark, 25 mm diameter as per **(CW-PLB/GP)** for chapter 17.5
Fabrication material: ISI mark 45x45x5 mm angle iron, Iron studs/Spikes 10 mm thick with arrow head.
Channel iron: ISI mark 100x 50mmx 5mm.
Chain link Jali: Jali made from hard GI wire 10 SWG/3.26 mm dia.
Foundation material: Cement, Sand, Water.
Paint: Aluminium paint, Red oxide.
Method of Construction:
 The door shall be fabricated **as per drawing no.** The door section shall be **1800 mm in height from finished ground level and 1500 mm** in width. The door frame shall be fabricated from B class GI pipe 25 mm in diameter, with chain link jali welded into the frame. The jali shall be supported with cross bracing the 45x45x5 mm angle. The door shall be supported to the channel with hinges welded to door frame and the channel. On top the frame iron studs of minimum 150 mm in height with arrow head shall be welded with spacing of minimum 300 mm. The total length of the channel shall be minimum 2200 mm. The channel shall be embedded in cement concrete foundation. The doors shall have locking arrangement for restricting unauthorized entry and the lock shall be with minimum 6 levers with duplicate keys. The entire structure shall be erected in plumb. After the entire fabrication, fencing shall be painted with one coat of red oxide and two coats of aluminium paint.
Mode of Measurement: Executed quantity will be measured on number basis. (i.e each)
- DRAWINGS**
 SS-1 : 22kv Plinth mounted substation
 SS-2 : 22kV Pole mounted substation
 SS-3 : Layout of Plinth mounted substation with feeder pillar
 SS-4 : Layout of Plinth mounted substation with LT panel room
 SS-5 : Layout of Plinth mounted substation with 4 pole structure for 2 transformers
 SS-6 : Layout of Partial outdoor substation
 SS-7 : Layout of Indoor substation for one transformer SS-8 : Layout of Indoor substation for two transformers SS-9 : 22kV Metering cum isolator panel
 SS-10 : 11kV Earth pits & connections
36. **CW-EXN-CTR** As Per Schedule-B Item No.36 Description.
37. --- As Per Schedule-B Item No.37 Description.
38. --- As Per Schedule-B Item No.38 Description.
39. --- As Per Schedule-B Item No.39 Description.
40. --- As Per Schedule-B Item No.40 Description.
41. --- As Per Schedule-B Item No.41 Description.
42. --- As Per Schedule-B Item No.42 Description.
43. --- As Per Schedule-B Item No.43 Description.

STANDARDS AND SPECIFICATIONS

1. All the Electrical Works shall be carried out as per
 - a) Relevant B.I.S. specification
 - b) Indian Electricity Rules, 1956.
 - c) National Electricity Code.
 - d) Chapter 16 of PWD Hand-book.
2. All ISI Licence mark materials are generally approved by Chief Engineer (Electrical) for use on Government works. The Engineer-in-charge while using materials on works should check-up the validity of ISI licence mark issued by "BUREAU OF INDIAN STANDARD" before allowing the materials to be used on site.
3. If necessary the Engineer-in-charge should get the materials tested from ERDA, CPRI or Any State/Central Government approved laboratory for confirmation of its parameter as per relevant BIS.
4. All other materials which do not bear ISI mark but are manufactured conforming to relevant BIS specification, should be approved for use on works by Chief Engineer (Electrical), P.W.D. Mumbai. The validity period shall be confirmed prior to use on Government work.

GENERAL CONDITIONS OF CONTRACT

1) Authority of the Engineer-in-charge.

The contractor shall execute, complete and maintain the works in strict accordance with the contract under the directions and to the entire satisfaction of the Engineer-In- Charge and shall comply with and adhere strictly to the Engineer-In-Charge's instructions, and directions on any matter (whether mentioned in the contract or not pertaining to this works)

The Engineer-In-Charge shall decide all questions which may arise as to quality and acceptability of materials furnished and work executed, manner of execution, rate of progress of the works, interpretation of the plans and specifications and acceptability of fulfillment of the contractor on the part of the contractor. He shall determine the amount and quality of the work performed and materials furnished and his decision and measurements shall be final. In all such matters and in any technical questions which may arise touching the contract, his decision shall be binding on the contractor. The Engineer-in-charge shall have the power to enforce such decision and orders if the contractor fails to carry them out promptly. If the contractor fails to execute the work ordered by the Engineer-in-charge may give notice to the contractor specifying a reasonable period therein and on the expiry of the period proceed to execute such work as may be deemed necessary and recover the cost thereof from the contractor.

In case of any conflict within the specifications, conditions in the Tender Document, the contractor shall bring into notice of Engineer-in-charge immediately whose decision in that regard will be final.

1.1 **Authorities of the Engineer-in-charge's Representative:**

- 1.2 The duties of the representative of the Engineer-in-charge are to watch and supervise the work and to test and examine and materials to be used for workmanship employed in connection with the works.
- 1.2 The Engineer-in-charge may from time to time, in writing, delegate to his representative any of the powers and authorities vested in the Engineer-in-charge and shall furnish to the contractor a copy of all such delegations of powers and authorities. Any written instruction of approval given by the representative of the Engineer-on-charge to the contractor within the terms of such delegations (but not otherwise) shall bind; the contractor and the department as through, it had been given by the Engineer-in-charge, provided always as follows:
- 1.3 Failure of the representative of the Engineer-in-charge to disapprove any work or materials shall not prejudice the power of the Engineer-in-charge thereafter to disapprove such work or materials and to order to pulling down, removal or breaking up thereof.
- 1.4 If the contractor is dissatisfied with any decision of the representative of the Engineer- in-charge, he shall be entitled to refer the matter to the Engineer-in-charge, who shall there upon confirm, reverse or vary such decision.

The Engineer-in-charge has the unquestionable right to ask for changes in the quality and strength of Contractors supervisory staff and to order removal from work of any of such staff. The contractor shall comply with such order and effect replacements of the satisfaction of the Engineer-in-charge.

2) **Initial measurement for record:**

Where for proper measurement of the work it is necessary to have an initial set of levels or other measurement taken the same as recorded in the authorized field book or M.B. of Government by the Engineer or his authorized representative will be signed by the contractor who will be entitled to have a true copy of same made at his cost. Any failure on the part of the contractor to get such level etc. recorded before starting the work will tender him liable to accept the decision of the Engineer as to the basis of taking measurements. Likewise the contractor will not cover any work which will render its subsequent measurement difficult or impossible without first getting the same jointly measured by himself and the authorized representatives of the Engineer. The record of such measurements on the Government side will be signed by the contractor and he will be entitled to have a true copy of the same made at his cost.

3) Custody of work:

All work and materials before being finally taken over by Government will be the entire liability of the contractor for guarding, maintaining and making good any damages of any magnitude. It is however, to be understood that before taking over such work, Government will not put it to regular use as distinct from casual or incidental use, except as specially mentioned elsewhere in this contract or as mutually agreed to.

4) Co-ordinations:

When several agencies for different sub works of the project are to work simultaneously on the project site, the contractor shall render full co-ordination for achieving proper co-ordination between different contractors to ensure timely completion of the whole project smoothly. The scheduled dates for completion specified in each contract shall, therefore, be strictly adhered to- Each contractor may make his independent arrangements for water, power, access, housing etc. but if they so desire he will be at liberty to come to mutual agreement with other contracting agencies in this behalf and make joint agreement with the approval of the Engineer-in-charge. The contractor shall not take or cause to be taken any steps or action that may cause disruption, discontent, disturbance to work, labor or other arrangements etc. of other contractors in the project localities. Any action by the Contractors which the Engineer-in-charge in his unquestioned discretion may consider infringement of the above would be considered as a breach of the contract conditions and shall be dealt with as such.

In case of any dispute or disagreement between the various contractors, the Engineer-in-charge decisions regarding the coordination, co-operation and facilities to be provided by any of the contractor shall be final and binding on the contractor concerned & such a decision or decisions shall not vitiate contract nor absolve the contractor of his obligations under the contract, nor form the grounds for any claim or compensation.

5) Relation with Public Authorities:

The contractor shall comply with all rules, regulations, by law and directions, given from time-to-time by any local or public authority or body in connection with this work and shall himself pay fees or charges which are leviable on him without any extra cost to Government.

6) Indemnity:

The contractor shall indemnify the Government against all action, suits, claims and demands brought or made against it in respect of anything done or committed to be done by the contractor in execution of or in connection with the work of this contract any against any loss or damage to the Government or consequences of anything done or committed to be done in the execution of the work of this contract. The Government may, at its discretion and entirely at the cost of contractor, defend such suit either jointly with the contractor or singly, in case the contractor chooses not to defend the case.

7) Stacking, Storage and guarding of materials:

- 7.1) The stacking and storage of materials at site shall be in such a manner as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality, properties and fitness for the work. Suitable precautions shall be taken by the contractor to protect against atmospheric actions, fire and other hazard. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likelihood of subsidence of soil, heavy materials shall be stored on paved platforms. Suitable separating barricades and enclosures as directed shall be provided to separate materials brought by contractor and obtained from different sources of supply.
- 7.2) Contractor shall at his own expenses, engage watchmen for guarding the materials and plant and machinery and the work during day and night against any pilferage or damage and also for prohibiting trespassers.
- 7.3) No materials brought to the site shall be removed from the site without the prior approval of the Engineer-in-charge.

8) Inspection of work.

- 8.1) The contractor shall inform the Engineer-in-charge in writing when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspect the same without affecting the further progress of the work.
- 8.2) The contractor shall provide at his cost necessary ladders and such arrangements as are considered safe by the Engineer-in-charge for proper inspection of all parts of the work.
- 8.3) The contractor shall extend his full co-operation and make all necessary arrangements when needed for carrying out inspection of the work or any part of the work by the local representatives, M.L.A's, M.P.s and officers and dignitaries/delegates of various Government departments, local bodies, private sectors etc. No compensation shall be paid to the contractor on this account.

9) Precaution to be taken by contractor:

- 9.1) The work shall be carried out by the contractor. Without causing damage to the existing Government property and/or private property. If any such damage are caused, the contractor shall pay for restoration of (the property to the original conditions, and any other consequent damages.)
- 9.2) In the event of an occurrence of an accident, involving serious injured or death of any person, at site of work or quarry or at any place in connection with the work the same shall be reported in writing within twenty four hours of the occurrence to the Engineer-in-charge and the commissioner of Workmen's compensation.

10) Clearance of site on completion of works

The contractor after completion of work shall clean the site of all debris and remove all unused materials other than those supplied by the department and all plant and machinery, equipment, tools etc., belonging to him within one month from the date of completion of the work, or otherwise the same will be removed by the department at his cost or disposed off as per departmental procedure. In case the material is disposed off by department, the sale proceeds will be credited to the 'contractor's' account after deducting the cost of sale incurred. However, no claim of contractor regarding the price of amount credited will be entertained afterwards.

11) Completion Certificate:

The 'completion' will also apply for part completion which is monthly service to be rendered.

- 11.1) The work / service shall not be considered to have been completed in accordance with the terms of the contract until the Engineer-in-charge satisfies in accordance with additional specifications, conditions. No approval of material, service or workmanship or approval of part of work during the progress of execution shall bind the Engineer-in-charge or in any way prevent him from even rejecting the work which is claimed to be completed, until such alteration and modification or reconstruction have been effected at the cost of the contractor as shall enable him to certify that the work has been completed to his satisfaction.
- 11.2) After the work is completed the contractor shall give notice of such-completion to the Engineer-in-charge immediately in the form of service report and within 30 days of receipt of such a notice the Engineer-in-charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a certificate indicating the date of completion. However, if there are any defects which in the opinion of the Engineer-in-charge are rectifiable he shall inform the contractor the defects noticed. The contractor after rectification of such defects shall then inform the Engineer-in-charge and Engineer-in charge on his part shall inspect the work and issue the necessary completion certificate within 30 days if the defects are rectified to his satisfaction, and if not, he shall inform the contractor indicating defects yet to be rectified. The time cycle as above, shall continue.

- 11.3) In case of timeouts, breakdown periods, or defects noticed by the Engineer-in-charge which in his opinion are not rectifiable but otherwise work is acceptable at reduced payment, work shall be treated as completed. The timeouts, un-rectifiable defects for which reduction in payment will be done.

12) Safety measures and Amenities :

Safety Measures

The contractor shall take all necessary precautions for the safety of the workers and preserving their health while working on such jobs as required special protection and precaution where ever required. The contractor shall also comply with the directions issued by the Engineer-in-charge in this behalf from time to time at all times.

The following are some of the requirement (The list is not exhaustive)

- i) Providing protective footwear to workers in situations like mixing and placing of mortar or concrete, in quarries and place where the work is to be done under too much wet conditions as also for, movements over surfaces infested with oyster growth.
 - ii) Providing protective hardware to working in quarries etc. to protect them against accidental fall of materials from above.
 - iii) Providing handrails at the edge of the floating platforms, barges walkways, ladder etc.
 - iv) Providing workmen with safety belts, ropes etc. when working on any masts cranes, cribs, hoists, dredgers etc.
 - iv) Taking necessary steps towards training the workers concerned on the use of machinery before they are allowed to handle ii independently and taking all necessary precautions in and around the areas where machines, hoists and similar units are working. M/herever required, the persons handling the machinery shall have requisite licenses, certificate etc.
 - v) Preventing over loading and over crowding of floating and **land** based machinery and equipment.
 - vi) Providing life belts to all men working at such situations from where they may accidentally fall into water or on the ground, Equipping the ooats with adequate numbers of life buoys etc.
 - vii) Avoiding bare live wires etc. as would cause electrocutions.
 - ix) Making platforms, staging's and temporary structures sufficiently strong and not causing the workmen and supervisory staff to work under risks.
 - x) Providing sufficient first-aid trained staff and equipment to be available quickly at the worksite to render immediate first-aid treatment in case of accident due to suffocation, drowning and other injuries.
- 13) The Contractor shall famish sufficient plant, equipment and labor as may be necessary to maintain the progress schedule. The working and shift hours restricted to one shift a day for operations to be done under the Government supervision shall be such as may be approved by the Engineer-in-charge. They shall not be varied without prior approval of the Engineer.
- 14) The contractor shall submit report on progress of work in forms and statement etc. as periodical intervals in the form of progress charts, forms, statements and/or reports as may be approved by the Engineer. Forms for sending reports about progress will be supplied by the Executive Engineer.
- 14) The contractor shall maintain Performa, chart, details regarding machinery equipment, labor, material, periodical returns thereof in Performa to be approved from the Engineer-in-charge.

15) Payment:

The contractor must understand clearly that the rates quoted are for completed work and include all cost due to labor, all leads and lifts involved and if further necessitated scaffolding plants, supervision, service works, power etc. and to include all to cover the cost of night and round the clock work as and when required and no claim for additional payment beyond the prices or rates quoted will be entertained and the tenderers will not be entitled subsequently to make any claim on the ground of any representation or on any promise by any person (whether tender in the employment of any Public Works Deptt. or not) or on the ground of any failure on his part to obtain all necessary

information for the purpose of making his tender and fixing the several prices and rates therein relieve him from any risks or liabilities arising out of or consequence upon the submission of the tender. Payment will be made after receipt of allotment.

16) Bill and Payments:

- 16.1) The final bill shall be submitted by the contractor immediately from the date of issue of completion certificate.
- 16.2) Recovery of timeouts shall be effected through bills proportionately.
- 16.3) The contractor can have true copy of the bills paid to him after paying charges for photo copying the same.

17) Assistance in procuring priorities, permits etc.:

- 17.1) The Engineer-in-charge on written request by the contractor, will if in his opinion the request is reasonable and in the interest of work and its progress, assist the contractor in securing the police protection and the priorities for deliveries, transport, permits, for controlled materials permits including labor license etc. Where such are needed. All cost in this behalf shall be borne by the contractor. The department will not, however, be responsible for the non-availability of such facilities or delays in the behalf and no claims on account of such failure or delays shall be allowed by the department.
- 17.2) The contractor will have to make his own arrangement for machinery required for the work. However, if such machinery is conveniently available with the department it may be spared on hire as per department's rules in force if requested by the contractor in writing. For such arrangement a separate agreement in the prescribed form will have to be signed by the contractor. Such an agreement shall be independent of this contract and the supply or non-supply of machinery shall not form a ground for any claim or extension of time limit for this work.

SECTION II ADDITIONAL CONDITIONS

1. Contractor shall visit the site & get himself thoroughly conversant with the actual site conditions before tendering. No extra item shall be admissible on this ground.
2. Contractor shall prepare the bar chart of activities submit it to engineer in charge & strictly follow the time schedule.
3. The Scope of work includes supply, installation testing and commissioning & keeping the installation in good healthy, safe working condition upto the end of the counting procedure or as directed by Engineer-In-Charge.
4. The system provided shall be complete in all respect inclusive of all components ancillaries to give the desired results & as per design parameters. All material supplied shall confirm the technical specifications.
5. Material used must be out of approved brands as per list.
6. Contractor shall produce manufactures certificate in regard with components specifications for all equipments along with catalogs & manuals. Free Replacement warranty/ Guaranty of defective equipments for the period of 1 **year** from the date of installations. (for LED street light fitting warranty should be for 3 years)
7. After completion of work as build drawing of work carried out shall be submitted by the tenderer by the Engineer in charge.
8. The Site shall be cleaned after completion to the satisfaction of Engineer in charge.
9. Electrical work shall comply CEA Regulations -2010 & other related statutory provisions.
10. The Electrical wiring, accessories, fittings shall be suitable to perform at their desire standard.
11. Any Tests if required to be carried out for confirmation of performance of any equipments will be at contractors cost & risk.
12. If the accepted tender cost is 10% or more thane 10% below the Amount put to Tender then material brought on site will be tested as per direction of Tendering Authority .
13. Successful Tenderer should be get approved the list of Material before execution of actual work by Engineer-in-Charge.

SCHEDULE - A

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

Schedule showing (approximately) the materials to be supplied from the Departmental stores for work contracted to be executed and preliminary and ancillary work and the rates at which they are to be charged for

Sr.No.	Particulars	Quantity	Unit	Rate	Remark
1	2	3	4	5	6
	<u>NIL</u>				

NOTES :

- The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Executive-in- charge on the issue of the form prior to the submission of the tender.
- The rates mentioned in Schedule 'A' are inclusive of all taxes and storage charges.
- No claim for extra payment on account of delay in supply of these materials will be entertained.
- The quantities indicated in the above schedule are approximate and may vary as per actual requirement as ascertained by the Engineer-in-charge.
- The charges for loading, un-loading, conveyance etc. for the material shown above from the place of delivery to the site of work will be borne by the contractor and deemed to be included while quoting for the tender. All the materials shall be made available for delivery on working days during the office hours.
- The contractor will have to construct a shed with double locking arrangements at his own cost.
- If the controlled materials viz. Cement, steel lie unused with the contractor after completion of the work and if they are not returned, the contractor shall pay for such material at double rate @ which the materials were issued to him. Recovery of S.T. & G.T. on cost of surplus materials which are not returned by the contractor will be levied.
- Proper account of day to day consumption of materials per Schedule 'A' be maintained by the contractor or his authorised representative on site and it shall be checked by the departmental officer every day in token of its correctness.

SCHEDULE - B						
Estimate No. :		KESD/O.W./507/2017-18				
		Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.				
Sr. No.	Qty.	Description	Rate	Rs in word	Unit	Amount
1	2	Supplying and erecting mini feeder pillar triple pole with 300A FPMCCB as incomer and 3 outgoing circuits with HRC Fuse base and Cartridge of 100A consists of aluminium bus bar 500V 300A complete erected in 14 gauge CRCA sheet box with supporting angles, self locks, gasket and slanting top to be erected on provided foundation as per specification No. SW-SWR/MFP.	46898.25	Rupees forty-six thousand eight hundred ninety-eight and paise twenty-five only	Each	93796.50
2	2	Supplying and erecting enamel iron G.I. sheet 1.25mm (18 gauge) caution board of size 200 x 150 mm. as per I.S. 2551 of 1982 in Marathi and Hindi erected at position.	92.40	Rupees ninety-two and paise forty only	Each	184.80
3	1	Supplying and erecting Intelligent flush mounted Maximum Demand Controller panel meter three phase four wire 50-550 V Phase to phase Aux Supply 90- 300VAC/DC CT secondary site selectable 1A/5A, CT /PT site programmable, class 1 Flush mounted 96 x 96 mm meter, Datalog 8MB, 4 realy output Time of Day (TOD) 6 slots available, block / sliding window site selectable with V, A, F, kW, kVA, kVAr, kWh, kVAh,kVArh, PF, run hr, Onhr, Intr, Phase angle, THD, events, neutral current, Max Demand (with RTC) viewing in LCD multi function meter with LCD display complete class -1 accuracy with RS 485 communication protocol with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	20746.95	Rupees twenty thousand seven hundred forty-six and paise ninety-five only	Each	20746.95
4	18	Providing & erecting Hot dipped Galvanised Ladder type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 150 mm width & 100 mm height comprising all required standard accessories. (for 3 Building only)	672.00	Rupees six hundred seventy-two and paise nil only	Meter	12096.00
5	100	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm aluminium conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-T/AL.	153.30	Rupees one hundred fifty-three and paise thirty only	Meter	15330.00
6	500	Supplying, erecting & terminating PVC armoured cable 4 core 25 sq mm aluminium conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL.	229.95	Rupees two hundred twenty-nine and paise ninety-five only	Meter	114975.00

7	140	Supplying, erecting & terminating PVC armoured cable 4 core 35 sq mm aluminium conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL.	281.40	Rupees two hundred eighty-one and paise forty only	Meter	39396.00
8	180	Supplying, erecting & terminating PVC armoured cable 4 core 70 sq mm aluminium conductor with continuous 8.35 sq mm (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL.	467.25	Rupees four hundred sixty-seven and paise twenty-five only	Meter	84105.00
9	160	Supplying, erecting & terminating PVC armoured cable 3½ core 120 sq mm aluminium conductor with continuous 12.97 sq mm (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL.	648.90	Rupees six hundred forty-eight and paise ninety only	Meter	103824.00
10	20	Supplying, erecting & terminating PVC armoured cable 3½core 240 sq mm aluminium conductor with continuous 12.97 sq mm (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL.	1189.65	Rupees one thousand one hundred eighty-nine and paise sixty-five only	Meter	23793.00
11	27	Supplying and erecting Rolled steel Joist (Girder) pole 125 x 70 mm (13.3 kg/m) with provided base plate in provided foundation as per specification No. OH-PL/RSJ (LT POLE 9 X3 =27 Mtrs).	829.50	Rupees eight hundred twenty-nine and paise fifty only	Meter	22396.50
12	22	Supplying and erecting Rolled steel Joist (Girder) pole 152 x 152 mm (37.1 kg/m) with provided base plate in provided foundation as per specification No. OH-PL/RSJ (HT Poles 11 x 2 =22 Mtrs).	1998.15	Rupees one thousand nine hundred ninety-eight and paise fifteen only	Meter	43959.30
13	8	Supplying 100 x 50 mm with 4.7 mm thick web and 7.5 mm thick flange channel iron cross arm of suitable length for 2.4m wide DP structure and erecting on DP with 50x6 mm clamp as per approved method of construction and complete as per specification No. OH-PL/BKT.	1838.55	Rupees one thousand eight hundred thirty-eight and paise fifty-five only	Each	14708.40
14	0.10	Supplying and erecting all aluminium stranded conductors 7/2.21 mm.complete. (Gnat) (73.77kg/km) as per specification No. OH-CON/AAC.	22871.10	Rupees twenty-two thousand eight hundred seventy-one and paise ten only	Km	2287.11
15	0.30	Supplying and erecting all aluminium stranded conductors 7/3.10 mm. complete. (Ant.) (145.0 kg/km) as per specification No. OH-CON/AAC.	32244.45	Rupees thirty-two thousand two hundred forty-four and paise forty-five only	Km	9673.34
16	0.10	Supplying and erecting ACSR conductor of size - 6/1-4.72 mm (Dog) complete. (394.00 kg/km) as per specification No. OH-CON/ACSR.	80164.35	Rupees eighty thousand one hundred sixty-four and paise thirty-five only	Km	8016.44
17	9	Supplying and erecting porcelain shackle type LT medium insulator 75x115 mm dia. with G.I. strips, nuts and bolts, complete.	52.50	Rupees fifty-two and paise fifty only	Each	472.50
18	3	Supplying and erecting aluminium bobbin with G.I. strip, nuts complete.	81.90	Rupees eighty-one and paise ninety only	Each	245.70

19	12	Supplying and erecting porcelain disc type insulator suitable for 22kV line, complete as per specification No. OH-INS/DI	1426.95	Rupees one thousand four hundred twenty-six and paise ninety-five only	Each	17123.40
20	3	Supplying and erecting porcelain pin type insulator suitable for 22kV line, complete as per specification No. OH-INS/PN.	312.90	Rupees three hundred twelve and paise ninety only	Each	938.70
21	3	Supplying and erecting Distribution class, 22 kV thyrite type lightening arresters, on provided cross arm as per specification No. OH-INS/LA.	1134.00	Rupees one thousand one hundred thirty-four and paise nil only	Each	3402.00
22	4	Supplying and erecting G.I. stay set for poles, including loop insulators at inaccessible height complete with anchor plate 300 x 300 x 6 mm., straining screws, G.I. stay wire 7/8 SWG, G.I. stay rod 20 mm x 1.8 m length and pole clamps duly erected in provided cement concrete foundation. (2 for DP Structure and 2 for LT Line)	1516.20	Rupees one thousand five hundred sixteen and paise twenty only	Each	6064.80
23	6	Supplying and erecting fibre/ PVC spacers for L.T. overhead line 3 to 5 conductors complete erected.	107.10	Rupees one hundred seven and paise ten only	Each	642.60
24	3	Supplying and erecting pole clamp made from 50 x 6 mm MS flat for pole or pipe, post complete erected with 15 mm bolts and nuts, complete duly painted with one coat of red oxide and two coats of aluminium paint.	222.60	Rupees two hundred twenty-two and paise sixty only	Each	667.80
25	9	Providing earthing with Galvanised cast iron earth plate size 60 x 60 x 0.6 cm complete with all materials, testing & recording the results as per specification No. EA-EP (Pole structure -1, LA -1 ,GOD-1 ,Neutral -2, Transformer body -2, meter panel-1, fencing -1,)	3974.25	Rupees three thousand nine hundred seventy-four and paise twenty-five only	Each	35768.25
26	5	Providing pipe type earthing with 40mm. dia. G.I. pipe or 20 mm dia. G.I. Rod complete with all materials as per specification No. EA-EP (for 3 LT Poles and 2 Mini feeder pillar)	1278.90	Rupees one thousand two hundred seventy-eight and paise ninety only	Each	6394.50
27	1	Supplying and Erecting approved make 200 kVA, 3 phase, 50 c/s Oil immersed and naturally cooled outdoor type, Copper wound transformer with Energy Efficiency Level -2, BIS Standard with delta connected. on HV side & star connection on LV side with additional neutral brought out on load side, Temp rise should not Exceeding 4000 C by thermometer in oil and 4500C by the resistance in winding at full load rating, voltage rating 22/ 0.433 kV with HV tapping(with off load tap changer) Tappings on Transformer For Off Load +5 to -10 in Steps of 2.5% ,with standard accessories complete with Test Certificate with losses below 819 watts at 50% load, 2415 watts at 100% load as per IS:1180 - 2014 Level II as per specification No SS- TR.	584489.90	Rupees five lakhs eighty-four thousand four hundred eighty-nine and paise ninety only	Each	584489.90

28	1	Supplying and erecting approved make 22 kV out door type gang operated air break, triple pole switch 200A, capacity with 3 post pin type insulator per phase, mounted in horizontal or vertical position with necessary channels on provided cross arm with adequate length of "C" class G.I. pipe for operating handle erected on extended square shaft. The operating handle provided with lock and key at suitable height from ground level with necessary clamp.	26133.45	Rupees twenty-six thousand one hundred thirty-three and paise forty-five only	Set	26133.45
29	1	Supplying and erecting approved make, 22 kV out door type drop out fuse with insulator complete with fuse holders, fuse barrel with metal fitting, fuse element mounted on M.S. channel with working current of 15 Amps capacity complete erected on provided cross arm.	17048.85	Rupees seventeen thousand forty-eight and paise eighty-five only	Set	17048.85
30	1	Supplying and erecting extra thick alkathene pipe 10mm. dia erected to enclose bare conductor wires. (use shall be restricted to H.T.)	44.10	Rupees forty-four and paise ten only	Meter	44.10
31	5	Supplying and erecting anticlimbing devices, fabricated from pole clamps of MS Flat 40x5 mm, with drooping spikes 15 cm. in length, welded to it and erected on pole.	156.45	Rupees one hundred fifty-six and paise forty-five only	Each	782.25
32	14	Supplying and erecting fencing of section having size 2450 mm in height from ground level and 1200 mm width with angle iron frame work erected in C C foundation and painted as per specification No SS-AS/FSG (Right side 1200MM X 4 Nos=4800 MM,Left Side 1200MM X 4 =4800 MM , Back Side 1200 MM X 4 = 4800MM,Front Side= 1200MM X 2 = 2400 MM)	5447.40	Rupees five thousand four hundred forty-seven and paise forty only	Each	76263.60
33	1	Supplying and erecting fencing of section having size 2450 mm in height from ground level and 1200 mm width with angle iron frame work erected in C C foundation and painted as per specification No SS-AS/FSG (2450 MM Height & 900 MM) Note.	4847.40	Rupees four thousand eight hundred forty-seven and paise forty only	Each	4847.40
34	8	Supplying and erecting 50 x 50 x 6 mm. angle iron as corner support 2m long fixed at the middle of the fencing frame and the other side inclined at 30 degree angle, in C.C. foundation of 15 x 15 x 40cm complete duly painted with one coat of red oxide and two coats aluminum paint.	1106.70	Rupees one thousand one hundred six and paise seventy only	Each	8853.60
35	1	Supplying and erecting double leaf hinged door each 1500mm in width x 1850 mm in height using B class ,GI pipe with angle iron supports, chain link wiremesh (jali) complete supported on channel iron, erected in foundation, and painted as per specification no SS-AS/DLD.	16455.60	Rupees sixteen thousand four hundred fifty-five and paise sixty only	Each	16455.60
36	300	Making the trench in Hard murum/Tar road of suitable width and depth as per IS for laying provided L.T cable of 25 sq mm & above and covered with Half round hume pipe complete. As per specification no. CW-EXN-CTR.	321.30	Rupees three hundred twenty-one and paise thirty only	Meter	96390.00

37	28.50	Excavating hard Rock or bituminous road (B.T.) by chiseling for preparing pit for poles stay or earth plates or for laying cables, pipes & clearing the site by removing debris & making the site good (80mtr x 0.5mtr x 0.3 mtr = 12 mtr ³ for 70 sq.mm cable) + (110 mtr x 0.5mtr x 0.3 mtr=16.5 mtr ³ for 25 sq.mm cable)	910.35	Rupees nine hundred ten and paise thirty-five only	Cu. Meter	25944.98
38	1	Providing transformer plinth 1.5 x 1.5 x 1.5 m in size with necessary excavation in ground at the bottom with 150 mm. thick M-10 PCC at the bottom and top and 250 mm. thick burnt brick wall constructed at periphery and remaining hollow portion shall be filled with 60mm Hard broken aggregate, external surface duly plastered 15 mm thick including watering etc. complete.	15028.65	Rupees fifteen thousand twenty-eight and paise sixty-five only	Each	15028.65
39	34.56	Providing and spreading stone metal 25mm size for 100 mm depth above the ground level. (1.2 x 4 =4.8 Mtr) + (1.2 x 3 =3.6Mtr) (4.8 Mtr x 3.6 mtr =17.28 Sq.mm x 2 = 34.56 Sq.mm)	76.65	Rupees seventy-six and paise sixty-five only	Sq. Meter	2649.02
40	3	Providing cement concrete foundation including excavation for the poles 60 cm x 60 cm x 1.5 m deep in 1:3:6 cement concrete (20 x 25 mm stone metal) and 45 cm x 45 cm x 45 cm /45 cm dia. x 45 cm height plinth duly plastered and with necessary curing and finishing in an approved manner. (for 8.5 to 9 m poles)	2675.40	Rupees two thousand six hundred seventy-five and paise forty only	Each	8026.20
41	2	Providing cement concrete foundation including excavation for the poles 60 cm x 60 cm x deep 1/6 of pole length in 1:3:6 cement concrete (20 x 25 mm stone metal) and 45 cm x 45 cm x 45 cm /45 cm dia. x 45 cm. height plinth duly plastered and with necessary curing and finishing in an approved manner. (for above 9 m poles)	3167.85	Rupees three thousand one hundred sixty-seven and paise eighty-five only	Each	6335.70
42	4	Providing C.C. foundation including excavation for stay 60 cm x 60 cm x 1.5 m deep in 1:3:6 cement concrete (20x25mm stone metal) with necessary curing and finishing in an approved manner.	2533.65	Rupees two thousand five hundred thirty-three and paise sixty-five only	Each	10134.60
43	1.2	Providing cement concrete for foundation or for concrete filling in 1:3:6 ratio with 20 to 25 mm. stone metal duly plastered with necessary curing for pole muffing or any other purposes..(0.75x0.5x0.4) =0.15 x2 =0.3 m ³ x 2 =0.6 m ³ x 2 mini feeder pillar =1.2 m ³)	4844.70	Rupees four thousand eight hundred forty-four and paise seventy only	Cu. Meter	5813.64
Total Amount In Words Rupees Fifteen Lacs Eighty Six Thousand Two Hundred Fifty And Paise Nil Only.				Total Rs...		1586250.12
				SAY Rs.		1586250.00

NOTE : - 1) I/ We have seen PWD Specifications.

2) I/ We agree to carry out the work as per specifications.

- 3) I/ We hereby tender for execution of work specified in schedule B at - % ABOVE / BELOW / AT PAR of the estimated rates in schedule of rates on the work to be carried out as enclosed duly signed by contractor.

Contractor's Signature

LIST OF APPROVED MATERIALS TO BE USED ON WORK.

1	PVC cables(Copper)/ Allum	Excell,CCI,Finolex,Energycab, RR Cables,Supreme,Vishal, Polycab, ,HMT or ISI MarkedApprovedby C.E. (Elect.)PWD Mumbai.
2	PVC insulated Aluminum/Copper WireWithstranded conductors.(FRLS/FRGrade)	Finolex R.R.cable Greatwhite Excell EnergycabElectroliteorISIMarkedApprovedbyC.E.(Elect.) PWD Mumbai.
3	ELCB/RCCB/MCB/RCBO	MDS,Legrand,Hager,(L&T),Siemens,Havells,HPL,Standard,Indokupp,C&S or ISIMarkedApprovedbyC.E.(Elect.)P W D Mumbai.
4	HRC switch fuse unit	GEC, L&T, Siemens or ISI Marked ApprovedC.E.(Elect.) PWD Mumbai.
5	All RSJ Pole	Maha maya, concernd, Jindal ,ISI Mark approved by MSEDCL
6	HT/ LT Alluminium Conductor	approved by MSEDCL
7	All type Insulators, LA, G.O.D., D.O Fuse	approved by MSEDCL
8	Cable, gland & lugs	Siemens, Dowels, Braco. or ISI Marked Approved by C.E.(Elect.) PWD Mumbai.
9	MCCB's	L & T, Siemens, Crompton, Schneider Electric(MG), ABB, MDS Legrand, Havells, HPL, Standard, C & S or ISI Marked Approved by C.E.(Elect.) PWD Mumbai.
10	Isolators, Distribution Boxes	C & S, L & T, Joshika, Standard, Indo Asian or ISI Marked Approved by C.E.(Elect.) PWD Mumbai.
11	MCCB(All poles)	Havells,Merlin-Gerin,Schneider,L&T, Standard ,HPL,C&S,SiemensorISI
12	MCCB Distribution boards	Havells,Merlin-Gerin,Schneider,Standard ,C&S,Siemensor ISI Marked Approvedby C.E.(Elect.)PW D Mumbai.
13	HT Cable	RR Cables,Finolex,polycab ,ISI MARK
14	HT Switchgears	Simens,Schneider,CromptonGreaves,ABB,L&T, ,ISI MARK
15	Transformer	Voltamp,UPC,Static,Mahati,Pactil ,Urja, Deltron ,Gajendra,approved by
16	M.D. Controller panel	HPL, L & T, Simens, MSEDCL Approved

The Contractor shall execute the work with all the material from above specified makes only. Any Deviation & or additions to any of above material make shall be get approved from Engineer-in-charge prior to commencement of work.

2. Before commencement of work the layout of work shall be get approved from Engineer-in-charge.
3. The Contractor has to submit the test report of installed material at his own cost.
4. The authority of Engineer-in-charge will be final in case of any deviation or change of layout at the time of actual carry out of work and no representation from contractor shall be accepted

DECLARATION OF CONTRACTOR

(Format to be given on Letter Head.)

NAME OF WORK : **Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type-I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.**

I / We hereby declare that I / We have made myself / ourselves thoroughly conversant with the sub -soil conditions, the local conditions regarding all materials necessary for the work and labour of which I /we have based my/our rates for this work. The specifications, conditions, bore results and lead of materials on this work have been carefully studied and understood by me/us before submitting this tender. I/We undertake to use only the best materials approved by the Executive Engineer, or his duly authorized assistant, before starting the work and to abide his decision

I/We hereby further declare that my/our tender is unconditional in every manner of whatsoever in nature. I/We hereby undertake to pay the labour engaged on the work as per Minimum Wages Act, 1948 applicable to the zone concerned.

TO BE FILLED BY THE CONTRACTOR

I/We have quoted my/our offer in percentage rate in words as well as in figures. I/We further undertake to enter into contract in regular "B-1" form in Public Works Department.

Name and Signature of Contractor(s) / Power of attorney holder with complete address.

Self-Declaration

(Format to be given on Letter Head.)

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

Applicants Photo

I ----- Son / Daughter of-----aged -----, occupation-----resident of-----with UID No. ----- hereby declare that the information provided in this tender document is true and correct to the best of my personal knowledge, information and belief. I fully understand the consequences of giving false information. If the information is found to be false, I shall be liable for prosecution and punishment under Indian Penal Code and / or any other law applicable thereto.

Place :

Applicant's Signature

Date :

Applicant's Name :

(Shall be matching with the period of tender between uploading and closing)

Self-Declaration for Self-Attestation

(Format to be given on Letter Head.)

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

Applicants Photo

I ----- Son / Daughter of-----aged -----, occupation-----resident of-----with UID No. ----- authorized signatory of hereby declare that the copies attested by me in this tender documents are true copies of original documents. I am well aware of the fact that if the copies are found to be false, I shall be liable for prosecution and punishment under Indian Penal Code and / or any other law applicable thereto.

Place :

Applicant's Signature

Date :

Applicant's Name :

(Shall be matching with the period of tender between uploading and closing)

UNDERTAKING

(Format to be given on Letter Head.)

Name of Work :- **Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type-I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.**

I / We hereby give the undertaking that:-

- I) I/ we have never been Black Listed / Banned / Suspended by any Govt.-Semi Govt. Department or any other institution / organization.
- II) In Case Validity of any license / registration required for this work expires , I/we will get it renewed before such expiry occurs.

Name of Contractor. :

Contractor Signature

ON LETTER HEAD

(Format to be given on Letter Head.)

ADDITIONAL (PERFORMANCE) SECURITY DEPOSIT

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

I/We Shri/M/s(Name of Tenderer) hereby declare that I/ We have enclosed Additional Performance Security Deposit in the form of D.D/F.D.R./B.G. No.....(Strike out which ever is not applicable) dated..... of Bank.Which is Scheduled / a Nationalized Bank along with the tender for the work of in Financial envelope NO.2. I am aware of the condition in the tender about the rejection of my offer in case of non-submission of Additional Performance Security.

Date.....

Place.....

Contractor's signature

DRAWINGS

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

CONTRACT DRWINGS:-

The contract drawings provided for tendering purpose with the tender documents shall be used as a reference only. Contractor should visualize the nature of type of work contemplated and to ensure that the rates and prices quoted by him in the bill of quantities take due consideration of the complexities of work involved during actual execution/construction as experienced Contractors in the field.

The tendered rates/prices for the work shall be deemed to include the cost of preparation, supply and delivery of all necessary drawings, prints, tracings and negatives which the Contractor is required to provide in accordance with the contract.

DOCUMENTATION :-

If so ordered by the Engineer in charge the Contractor will prepare drawings of the work at constructed and will supply original and three copies to the Engineer who will verify and certify these drawings. Final as constructed drawings shall then be prepared by the Contractor and supplied in triplicate along with a micro film or Soft copy in CD/DVD of the same to the Engineer for record and reference purposes at the Contractor's cost.

Details to be furnished by tenderer :-

1. Name of Agency
2. Bank Account No
3. IFSC
4. E mail ID
- 5 Phone No
6. Postal Address
- 7 PAN

BAR CHART

Estimate No. KSED/ O.W. / 507 / 2017-18, Providing 200 KVA ,22/0.433KV Distribution Transformer and L.T. Supply Distribution Arrangement at Patangshah Rural Hospitals Quarters (Type- I,II,IV) Jawhar,Tal. Jawhar Dist. Palghar.

(Format of Bar chart to be given on Letter Head.)

STATEMENT NO.I

(To be enclose in Envelope No.1)

Details of works tendered for and works in hand as on the date of submission of the tender

SrNo.	Nameof work	Placeand Country	WorkIn Hand		Anticipateddate of completion	WorkTenderedfor			Remarks
			Tendered Cost	Costingof remainingwork		Estimated Cost	Date whendecision is expected	Stipulateddateof periodof completion	
1	2	3	4	5	6	7	8	9	10
		SAMPLEFORM							

Note:Attestedcopies of certificate issued by concerned office should be attached in supportof abovestatement.

STATEMENT NO. II

(To be enclosed in Envelope No. 1)

Details of works similar type and magnitude of the work carried by the contractor

SrNo.	Name of work	Cost of work	Date of Starting	Stipulated date of period of completion	Actual date of completion	Remarks
1	2	3	4	5	6	7
		SAMPLE FORM				

Note: Attested copies of certificate issued by concerned office should be attached in support of above statement.

similar type and magnitude of the work carried by the contractor

STATEMENTNO.III**Details of plant and machinery immediately available with the tenderer for the work**

SrNo.	Detailof Equipment	No.of Units	Kindof Make	Capacity	AgeandCondition	PresentLocation	Remarks
1	2	3	4	5	6	7	8
		SAMPLEFORM					

STATEMENTNO.IV

(To be enclose in Envelope No.1)

Details of Technical Personnel available with the Contractor

SrNo.	Nameof work		Qualification	Whetherworking in fieldorin office	Experienceof executionof	Periodforwhichthe personis workingwith	Remarks
1	2		3	4	5	6	7
		SAMPLEFORM					

STATEMENT NO.V

(To be enclosed in Envelope No.1)

Details of works executed in the inter or backward and hilly areas during the preceding years

SrNo.	Name of work	Cost of work	Date of Starting	Stipulated date of completion	Actual date of completion	Remarks
1	2	3	4	5	6	7
		SAMPLE FORM				

Note: Attested copies of certificate of work done issued by concerned office to be attached in support of above statement