TRANSMISSION CORPORATION OF TELANGANA LIMITED

Tender No: CE/MZ/O&M/ew-07/2020-2021
OF METRO ZONE/HYDERABAD

Name of the Work:

| Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA |

CHIEF ENGINEER, METRO ZONE
OPP. CTI, GTS COLONY
ERRAGADDA, HYDERABAD.
TEL No: 040 – 23836703.
NOTICE INVITING TENDER (NIT)

1. Department Name: Transmission Corporation of Telangana Limited
2. Tender Subject: Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA.
3. Estimated Contract value: Rs.82,63,025/-
4. Period of Contract: 3 months from date of handing over of site
5. Form of Contract: LS
6. Tender Type: Open
7. Tender Category: Works
8. EMD/BID SECURITY: 2% of Estimated Contract Value i.e., Rs.1,65,261/-
9. Bid Security Payable to: In the shape of Demand draft or online payment or challan generation in favour of Superintending Engineer/OMC/Metro-West/Hyderabad payable at Hyderabad and shall cover a period of 30 days over and above the period of bid validity.
10. Transaction fee: Rs.2926/-
11. Transaction fee payable along with tender to: Payable on line to MD, TSTS, Hyderabad.
12. Schedule Available Date: 10.08.2020 from 05.00 PM
13. Schedule Closing Date: 09.09.2020 at 1.00 PM
14. Bid Submission closing Date & time: 09.09.2020 at 3.00 PM
15. Bid Submission: Online
16. Bid Opening Date & Time: 09.09.2020 at 4.00 PM (IST)
17. Place of bid opening: At the office of Chief Engineer/ Metro Zone /TSTRANSCO/ Hyderabad.
18. Officer Inviting Bids: Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad.
19. Address: Chief Engineer, Metro Zone ,TSTRANSCO, Opp. CTI, GTS Colony, Erragadda, Hyderabad – 500 045.
20. Contact details / Telephone, Fax: Phone No. 040-23836705, Fax No. 040-23836703.

1. ELIGIBILITY CRITERIA:

PHYSICAL EXPERIENCE:

1. The Bidder should have valid registration with TSTRANSCO.
2. The bidder should have valid ‘A’ Class electrical license issued / recognized by Government of TS for executing the electrical works related to Extra High voltages.
3. The bidder should have Goods and Service tax registration.
4. Bidder should have achieved an annual turnover equal to 100% of value of the works proposed in the bid specification in any continuous period of 12 months during the last five financial years including current financial year duly certified by competent authority.
5. The bidder should enclose documentary evidence of works executed in the name of bidder equal to 100% value of works in any consecutive 12 months during last five financial years including current financial year duly certified by competent authority for the turnover claimed.
Technical Qualification:
The bidder in his name should have executed the following quantity of works mentioned below against each type of notified work.

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<th>Notified Work</th>
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<td>The bidder should have executed at least the following works in the last 10 years as a prime contractor / as a lead partner for qualifying the notified work.</td>
<td>The following works done by the bidder should be in successful operation for at least one year. The bidder shall enclose the proof of successful operation of 1 year.</td>
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Part-II 220 KV Line

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<td>50% of 220KV or higher voltage line of notified KM (or) 100% of 110 KV or higher voltage line of notified KM.</td>
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i) Responsibility for correctness of the information submitted in the bid lies with bidder. If any information furnished in the bid is proved to be false at a later date, the bid will not only be rejected but the bidder will be BLACKLISTED.

In case of any bidders who are already having one or more works awarded to them by TSTRANSCO which are under execution at the time of bidding and who fails to execute the works already awarded as per the stipulated time schedule of completion, bids of such bidders will not be considered.

The bids shall be treated as non-responsive in case of not uploading the above mandatory documents. However TSTRANSCO decision is final in this regard.

2. GENERAL TERMS & CONDITIONS: AS PER TENDER’S DOCUMENT.

To qualify for consideration of award of contract, each tenderer should fulfill the following criteria:

The details and all Certificates are to be furnished as per the proforma available in the tender schedules.

The bidders is subjected to disqualified and is liable for black listing and forfeiture of E.M.D., if he is found to have mislead or furnished false information in the forms / statements / certificates submitted in proof of qualification requirements.

Even while execution of the work; if it is found that the contractor had produced False/fake certificates of experience he will be liable for black listing and the contract will be liable for termination and forfeiture of E.M.D. / Performance Security and also the amounts due to him.

3. a. The e-Procurement application is PKI enabled and supports the digital certificates issued by TSTS for signing the bids at the time of submission by bidder. The bidder has to procure the digital certificates issued by TSTS Ltd., Hyderabad following the procedure laid for the same. Digitally signed bids are to be submitted electronically through e-procurement without which the tender will not be considered for opening.

b. If the bidders intend to know the procedure of bid submission on e-procurement platform, suitable training will be given by M/s. Vupadhi Techno Services Pvt. Ltd., Hyderabad.

c. TSTRANSCO reserves the right to cancel/alter the bid conditions at any time.

d. In the process, if the works are stalled due to legal intervention or due to natural calamities, no compensation will be paid

4. PROCEDURE FOR BID SUBMISSION:

4.1 Detailed procedure for bid submission is described in the bid document.

4.2 Bidders shall submit a declaration without any reservation whatsoever that the submitted eligibility and qualification details and bid is without any deviations and are strictly in conformity with documents issued by the Employer.

4.3 Declaration should be given by the bidders for the correctness of the credentials submitted by him.

4.4 For registration and online bid submission, bidders may contact HELP DESK of M/s Vupadhi Techno Services Pvt. Ltd., Hyderabad on eproc-itic@tlocker.gov.in or http://tender.telangana.gov.in

5. The bidders shall submit a written Power of Attorney authorizing the signatory of the bid to commit on behalf of the bidder.
6. **SCOPE OF THE WORK:**

Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy.No.5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA.

7. **CONTENTS OF THE SPECIFICATION:**

- Notice Inviting Tender.
- Instructions to bidders.
- General
- Financial terms & conditions.
- Technical
- Special conditions of the contract
- Schedules I to IX
- Check list.
- Proforma I to III
- Price schedule /Detailed Estimate enclosed in separate excel sheet.
- Schedule B

**Formats:**

A) Bid form  
B) Format for Bank’s Certificate for credit facilities.

8. Completion Period : As specified in NIT & Specification i.e. 6 months from the date of handing over of site subject to availability of L/C

9. Terms of payment : As in Clause (2.4) of Section-II (Financial)

10. **SCHEDULES:**

To be filled up and furnished along with the bid. In case of joint venture, Schedules are to be filled up by both the partners

A) Particulars of Registration : Schedule-I  
B) Details of Technical personnel : Schedule-II  
C) Details regarding Financial standing and Financial Turnover : Schedule-III(A&B)  
D) Details of contracts similar executed : Schedule-IV  
E) Details of ongoing works under execution in TSTRANSCO/APTRANS/DISCOMS : Schedule-V  
F) Undertaking to be given by the bidder : Schedule-VI  
G) Declaration for taking up awarded works : Schedule-VII  
H) Bank account details : Schedule-VIII  
I) Experience certificate : Schedule-IX  
J) Check List  
K) Price Schedules of Works : Schedule-A  
L) Completion Period : Schedule-B

**NOTE:**

1. This office is not responsible for any omissions in the bid specification downloaded by the bidders from the web site.
2. The bidders can verify the accuracy of the downloaded bid specification with the master copy available at the office.
3. The bidders are requested to check the web site before schedule closing date for any changes in the tender.
4. ON EPROCUREMENT PLAT FORM TL&SS / ZONE READ AS METRO ZONE.

2. **INSTRUCTIONS TO TENDERERS:**

**Name of work**  
Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA

The Chief Engineer / Metro Zone /TSTRANSCO/Hyderabad invites bids for the above work during the period, for which dates and time specified in the NIT and will be opened by (him) or his nominee at this office on the date and time mentioned in the NIT.

2.1 The intending Tenderers would be required to enroll themselves on the ‘e’-procurement market place at [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in)

2.2 The Tenders should be in the prescribed form invited on e-procurement by the Chief Engineer / Metro Zone/TSTRANSCO/Hyderabad (As specified in NIT) that can be downloaded free of cost from the website [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in)

2.3 The dates stipulated in the tender notice are firm and under any circumstances they will not be relaxed unless officially extended.
2.4 The Tenderer should upload scanned copies as specified in checklist and all enclosures required for the schedules and Appendices and produce copies (Bid security, & Transaction Fee) before the date of opening of bid. Contractor should produce the originals of all documents for verification if asked for by the Competent Authority within 3 (Three) days/as Specified.

2.5 The Tender opening Authority will not consider any tender received after expiry of date and time fixed (As specified in NIT) for receipt of tenders.

2.6 Transaction fee: The Transaction fee at 0.03% on ECV (Estimate Contract value) of work and 18% on transaction fees as GST shall be payable by electronic Payment on e-procurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee from the platform by using their credit cards.

The Payment Gateway accepts all Master and VISA credit cards issued by any bank to conduct the transaction. The payment of transaction fee on line is mandatory for participating in the bidding.

2.7 Successful Tenderer shall pay the Corpus fund to TSTS @ 0.04% on ECV in the form of DD payable at Hyderabad and drawn in favour of MD, TSTS, Hyderabad to sustain ‘e’ procurement initiatives, research and development of software application for automation for process in user departments.

2.8 The successful Tenderer is expected to complete the work within the time period specified in the NIT and specification.

3 TENDERERS / FIRMS ELIGIBLE TO TENDER:

3.0 The Tenderers / Firms who

i) Possess the valid registration as mentioned in the NIT and satisfies all the conditions therein.

ii) Are not blacklisted or debarred or suspended by the Government for whatever the reason, prohibiting them not to continue in the contracting business

iii) Have complied with the eligibility criteria specified in the NIT are the eligible Tenderers / Firms.

3.1 TENDERERS / FIRMS INELIGIBLE TO TENDER:

(i) A retired officer of the Govt. of Telangana /Govt. of India executing works is disqualified from tendering for a period of two years from the date of retirement without the prior permission of the Government.

(ii) The Tenderer who has employed any retired officer as mentioned above shall be considered as an ineligible tenderer.

(iii) The contractor himself or any of his employee is found to be Gazetted Officer who retired from Government Service and had not obtained permission from the Government for accepting the contractor’s employment within a period of 2 years from the date of his retirement.

(iv) The Contractor or any of his employees is found at any time after award of contract, to be such a person who had not obtained the permission of the Government as aforesaid before submission of the tender or engagement in the Contractor’s service.

(v) Contractor shall not be eligible to tender for works in TS Transco where any of his near relatives are employed in the rank of Assistant Engineer or Assistant Executive Engineers and above on the Engineering side and Assistant Accounts Officer and above on the accounts side. The Contractor shall intimate the names of persons who are working with him in any capacity or are subsequently employed. He shall also furnish a list of Gazetted /Non-Gazetted State Government Employees related to him. Failure to furnish such information tenderer is liable to be removed from the list of approved contractors and his contract is liable for cancellation.

Note: Near relatives include

Sons, stepsons, daughters and stepdaughters.
Son-in-law, and daughter-in-law.
Brother-in-law, and sister-in-law.
Brothers and Sisters.
Father and Mother.
Wife / Husband.
Father-in-law and Mother-in-law
Nephews, nieces, uncles and aunts
Cousins and
Any person residing with or dependent on the contractor.
4.0 QUALIFICATION REQUIREMENTS OF THE TENDERERS:

4.1 The tenderer shall furnish the following particulars in the formats provided online and supported documentary evidence shall be uploaded. Attested copies of documents relating to registration of the firm. Registration as Electrical Licensed Contractor. Partnership deed, Articles of Association, Commercial Tax Registration, Latest Income Tax Clearance certificate/Latest IT return, Goods and Service Tax and PAN number from IT Department etc. including the following mandatory documents.

4.1.1 The bidder should have valid registration with TSTRANSCO. Registration issued prior to the bifurcation of APTRANSCO of Telangana region and having validity can be considered.

4.1.2 The bidder should have valid ‘A’ grade Electrical License for executing the works exceeding 33KV or 132KV all voltages.

4.1.3 The bidder should have Goods and Service tax registration.

4.1.4 Bidder should have achieved an annual turnover equal to 100% of value of the works proposed in the bid specification in any continuous period of 12 months during the last five financial years including current financial year duly certified by competent authority.

4.1.5 The bidder should enclose documentary evidence of works executed in the name of bidder equal to 100% value of works in any consecutive 12 months during last five financial years including current financial year duly certified by competent authority for the turnover claimed.

Technical Qualification:

The bidder in his name should have executed the following quantity of works mentioned below against each type of notified work.

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Part-II 220 KV Line

| 220 kV Line | 50% of 220KV or higher voltage line of notified KM (or) 100% of 110kV or higher voltage line of notified KM. | 50% of 220KV or higher voltage line of notified KM (or) 100% of 110kV or higher voltage line of notified KM. |

Note: The Partnership firms, which are registered as Contractors shall intimate the change in partnership deed, if any, as per GO Ms No.58, I & CAD, dt.23.4.2002 within one month of such change. Failure to notify the change to the registration authority in time will entail the firms to forfeit their registration and their tender will be rejected. The intimation of change of partners if any and the acceptance by the Registration authority may be enclosed.

Availability of key personnel for administration/site management and execution viz., technical personnel required for the work.

4.2 Tenders from Joint Ventures are not acceptable unless specifically stated otherwise.

4.3 Qualification criteria for opening of the price bid: Should upload all the mandatory documents.

4.4 Even though the tenderers meet the above qualification requirements, they are liable to be disqualified / debarred / suspended / blacklisted if they have

4.4.1 Furnished false / fabricated particulars in the forms, statements and /annexures submitted in proof of the qualification requirements and/or

4.4.2 Not turned up for entering into agreement, when called upon with in the time specified in the letter of acceptance

4.4.3 Record of poor progress such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
4.4.4 Participated in the previous bidding for the same work and had quoted unreasonably high tender percentage and

4.4.5 A history of criminal record in which the tenderer is involved if any.

4.4.6 Even while execution of the work, if found that the work was awarded to the Contractor based on false /fake certificates of experience, the Contractor will be blacklisted and work will be taken over invoking clause 61 of PS to TSSS.

4.4.7 History of litigation with Govt. during the last 5 years in which the tenderer is involved.

4.5 The rate quoted by the bidder less by more than 10% of the TSTRANSCO’s total estimated cost will be considered as abnormally low rate. In the case of abnormally low quoted rates i.e. less than 10%, additional security deposit (ASD) to be paid for the less percentage below 10% i.e., if the bidder quotes 20% below the total estimated cost then he has to pay ASD equivalent to 10% of the total estimated cost. This ASD amount will not be accepted by Bank Guarantee, Cheque, Cash or money order. It shall be paid by way of crossed demand draft on any scheduled/Nationalized bank drawn in favour of Superintending Engineer/OMC/Metro-West/Hyderabad which will be released after the completion of work in full shape.

4.6 If the percentage quoted by a tenderer is found to be either abnormally high or within the permissible ceiling limits prescribed if any but under collusion or due to unethical practices adopted at the time of tendering process, such tenders shall be rejected.

B) OTHER CONDITIONS:

Responsibility for correctness of the information submitted in online bid lies with bidder. If any information furnished in the bid is proved to be false at a later date, the bid will not only be rejected but the bidder will be BLACKLISTED.

The bids not complying with the stipulated completion period will be treated as non-responsive.

While being equal or compatible in other aspects preference will be given to those bidders who have experience in works similar to that given in the specification or of higher voltages during the last five financial years.

If a bidder quoting for the bid is having more than one work on hand, at the time of bidding/tendering and if the performance in these works is poor and not commensurate with the agreement, the bid of such bidder will not be considered for award of contract.

C) PERFORMANCE BASED EXPERIENCE:

In case of any bidders who are already having one or more works awarded to them by T.S.Transco which are under execution at the time of bidding and who fails to execute the works already awarded as per the stipulated time schedule of completion, bids of such bidders will not be considered.

5 ONE TENDER PER TENDERER:

5.1 Each Tenderer shall submit only one Tender for the work. A Tenderer who submits more than one Tender will cause dis-qualification of all the Tenders submitted by the Tenderer.

6. COST OF TENDERING.

6.1 The Tenderer shall bear all costs associated with the preparation and submission of his Tender and the tender inviting authority will in no case be responsible and liable for those costs.

i. SITE VISIT.

The Tenderer, at the Tenderer’s own responsibility and risk is advised to visit and examine the Site of Work and its surroundings and obtain all information that may be necessary for preparing the Tender for entering into a contract, for construction of the work. The costs of visiting the site shall be at the Tenderer’s own expense.
SECTION –I (GENERAL)

The Transmission Corporation of Telangana Limited, herein after referred to as TSTRANSCO invites bids for “Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA” as given in the NIT.

1.1 DEFINITION OF TERMS:

In the contract, the following expression shall, unless the contract otherwise requires, have the meanings hereby respectively, assigned to them.

I. The 'Purchaser' shall mean the Transmission Corporation of Telangana Limited and shall include its successors and permitted assigns.

II. The 'Contractor' shall mean the bidder whose bid has been accepted by the purchaser and shall include the bidder's heirs, legal representatives, successors and permitted assigns.

III. The 'Sub-Contractor' shall mean the person, firm/company named in the contract for any part of the work or any person, to whom any part of the contract has been sublet with the consent in writing of the Engineer, and the heirs, legal representatives, permitted successors and assigns of such persons.

IV. The 'Engineer' shall mean the officer placing the order for the work with the Contractor and such other officer as may be authorised and appointed in writing by the Purchaser to act as Engineer for the purpose of the Contract and in case no such officer has been so appointed, the purchaser or his duly authorized representative.

V. The 'Supervising Engineer' shall mean such officer as may be duly appointed from time to time by the Purchaser or his Engineer to take general control and supervision of work.

VI. The 'Inspector' shall mean any person or persons nominated by the Purchaser and/or the Engineer to inspect stores or works under the agreement and/or his duly authorized representative appointed to act as the Inspector.

VII. The 'Contract' shall mean and include the bid and acceptance thereof, the general conditions, special conditions, Specifications, Schedules, drawings, Form of Bid, covering letter, schedules of prices, the final General conditions and the format Agreement executed on the stamped paper.

VIII. The 'Specification' shall mean collectively all the terms, stipulations, and conditions of contract, technical provisions and annexures thereto and list of corrections and amendments mutually agreed upon from time to time in writing.

IX. 'Tests on completion' shall mean such tests, as are prescribed by specification, to be made by the Contractor to the satisfaction of the purchaser before the work is taken over by the Purchaser.

X. 'Commissioning' shall mean the satisfactory operation of the equipment/work as specified, after all necessary initial tests, checks and adjustments required at site, if any, have been satisfactorily completed and the equipment / works have been in continuous and uninterrupted commercial use for at least 30 days.

XI. 'Commercial use' shall mean the use of the work, which the contract contemplates or of which it is commercially capable.

XII. 'Approval' shall mean the written approval of the Engineer and of the statutory authorities wherever such authorities are specified by any codes or otherwise.

XIII. 'Month' shall mean calendar month.

XIV. 'Writing' shall include any manuscript, typewritten or printed, statements, under or over signature or seal as the case may be.

XV. 'Letter of Intent' shall mean the purchaser's letter conveying his acceptance of the bid, subject to such reservations as may have been stated therein.

XVI. ECV: Shall mean Estimated Contract Value.

XVII. RTGS: Shall mean Real Time Gross Settlement.
1.2 PREPARATION OF TENDERS

1.2.1. Language of the Tender

a. All documents relating to the tender shall be in the English Language only.

1.2.2. Documents comprising of the Tender

The tender comprise the following:

(a) Bid Documents, drawings and price bid (Schedule - A). [Available online at www.tender.telangana.gov.in]

(b) Qualification information and supporting documents [to be uploaded by the tenderer]

1.2.3. Bid Offer:

(a) Bill of Quantities called “Schedule - A” and the bid offer accompanies the tender document. It shall be explicitly understood that the Tender Inviting Officer does not accept any responsibility for the correctness or completeness of this Schedule ‘A’ and this Schedule ‘A’ is liable to alterations by omissions, deductions or additions at the discretion of the tender inviting authority or as set forth in the conditions of the contract. The Schedules “A” shall contain the description of items of work and the approximate quantities and unit rates for all items. The percentage quoted by the contractor shall be applicable to all items of work mentioned in the Schedule-A. The tenders will have to state clearly their willingness to execute the work at certain specific percentage of excess or less or at par of the ECV indicated. The tenderer should quote his lumpsum tender based on the schedule of quantities. He should quote his offer as a overall tender percentage. The overall tender percentage should be written both in works and figures legibly and free from errors.

(b) The Schedule – A (or Price-bid) contains not only the quantities but also the rates worked out by the Department and the amount for each item and total value of the estimated contract. The tenderer should workout his own rates keeping in view the work, site conditions and quote his overall tender percentage with which he intends to execute the work. The rates shall be inclusive of maintenance till the completion of Defects liability period.

(c) The bid offer shall be for the whole work and not for individual items / part of the work.

(d) All taxes and other levies payable by the contractor as per State / Central Government rules shall be included in the tender percentage quoted by the tenderer.

(e) The tendered contract amount as computed based on overall tender percentage is subject to variation during the performance of the Contract in accordance with variation in quantities etc.

2. DISCREPANCIES: In case of difference in e-procurement lump sum amount and the amount arrived from the schedules the following will be adopted:

i) Where there is a discrepancy between the total lump sum rate quoted in the e-procurement platform web page and in the schedules uploaded, the total lump sum rate quoted in the e-procurement platform will govern for deciding L1.

ii) If any discrepancies arises after applying the tender percentage on the schedules:-

(a) If the amount arrived is less than the e-procurement lump sum amount, then the lesser amount shall be taken for award of contract.

(b) If the amount arrived is more than the e-procurement lump sum amount, the e-procurement lump sum amount shall be taken for award of contract. The unit rates shall be adjusted to match the e-procurement lump sum amount.

3.0 EVALUATION OF BIDS:

3.1 The bids will be opened on-line by bid inviting authority or assignee at the time and date specified in the Bid documents.

Physical and Financial capacities of all the bidders will be evaluated based on the documentary evidence furnished along with the bid. Evaluation of Technical/ Commercial and Price bids will be made based on the available documentary evidence submitted along with the bid. However, the Tender opening Authority may seek clarification with the bidder as per clause 8.2, if required. If any information furnished in the bid is proved to be false later, the bid will not only be rejected but the bidder will be black listed.
If any significant discrepancies are observed in the Technical/Price schedules of any bid, due to which the bidder becomes lowest and withdraws the bid, the bid will be liable for rejection and forfeiture of Bid security and also liable for black listing of the bidder. They are liable for rejection for any of the deviations mentioned below.

a) No Bid Security or Insufficient Value or Validity of Bid Security
b) Insufficient Validity of the Bid.

c) Non-uploading of the required documents, schedules, forms, supporting documents for Qualifying Requirement. Insufficient or illegible supporting documents, schedules, forms.

d) Deviation from the Delivery schedule of the Specification.
e) Deviation from the Payment terms of the Specification.
f) Deviation from the General terms and conditions
g) Deviation from the Technical Specification.
h) Non-Compliance with the Qualifying Requirements.
i) Record of Poor Performance in the previous / on-going works. Record of poor progress i.e. abandoning the work, not properly completing the contract, inordinate delays etc.
j) Record of Black listing in any other Power Utilities / Government Department.
k) Record of financial failures if any.
l) History of litigation with Government/TSTRANSCO during the last 5 years.
m) History of criminal record in which the Bidder is involved.
n) Non-uploading of the Price schedules. Insufficient or illegible Price Schedules. Change of Quantities / Description of the work / materials items in the Price Schedule uploaded by TSTRANSCO.
o) Furnishing of false / fabricated particulars in the forms, statements and annexure, submitted in proof of the qualification requirements.
p) Not turned up for entering into agreement, when called upon with in the time specified in the letter of acceptance.
q) Any other deviations of clause mentioned in this specification.

The price bids of qualified bidders in the pre-qualification analysis will only be considered.

While being equal or compatible in other aspects preference will be given to those bidders who have good experience / proven performance, past experience is superior in terms of quality and timely completion in similar works.

It is the sole discretion of TSTRANSCO regarding finalization of the bids. Mere quoting and becoming of L1 (Lowest quoted) bidder shall not automatically entitle any rights for any bidder for award of contract. The past performance of the contractor and performance of the contractor in the ongoing works shall be taken in to account while finalizing the bids. The TSTRANSCO reserves its right to reject any or all the bids and not to accept the lowest or any other without assigning reasons. The TSTRANSCO reserves its rights to cancel the tender at any stage without assigning the reasons.

3.2 Clarification on the Bid: “The Tender opening authority may call upon any Bidder for clarification on the statements, documentary proof relating to the bid. The request for clarification and response thereto shall be in writing and it shall be only on the qualification information uploaded online by the Bidder. The clarification called for from the Bidders shall be furnished within the stipulated time, which shall not be more than a week.

The Bidder if so desirous shall agree in writing to furnish the clarification called for within the stipulated time and, for disqualification and rejection of his Tender in the event of failure to do so.”

1.2.4. VALIDITY OF TENDERS:
Tenders shall remain valid for a period of not less than 90 days from the date of opening of Tender specified in NIT.

During the above-mentioned period no plea by the tenderer for any sort of modification of the tender based upon or arising out of any alleged misunderstanding of misconceptions or mistake or for any reason will be entertained.

In exceptional circumstances, prior to expiry of the original time limit, the Tender Inviting Officer may request the bidders to extend the period of validity for a specified additional period. Such request to the Tenderers shall be made in writing. A Tenderer may refuse the request without forfeiting his Bid security. A Tenderer agreeing to the request will not be permitted to modify his Tender, but will be required to extend the validity of his Bid security for a period of the extension.
1.2.5. **BID SECURITY/EMD:**

The Tenderer shall furnish, Bid Security an amount of **Rs. 1,65,261** (Rupees One Lakh Sixty Five Thousand Two Hundred and Sixty One only) (which is equivalent to 2% of ECV along with the tender as specified in NIT). This BID SECURITY shall be in the form of Demand draft or Online payment or Challan Generation from any Nationalized/Scheduled Bank.

The Bid security of the successful tenderer can be adjusted as part of Performance Security by paying balance security deposit @ 3% of total Contract Value (total 5%) at the time of concluding Agreement by the successful tenderer.

The Bid Security deposited by the successful tenderer will not carry any interest and it will be dealt with as provided in the conditions stipulated in the tender. The Demand Draft furnished by the tenderer towards Additional security deposit amount shall be released after the work is completed in all respects.

**The BID SECURITY shall be forfeited**

**The Bid Security will be forfeited in the following cases:**

i. When the successful bidder does not accept the order after issue of preliminary acceptance letter or the Letter of Intent.

ii. When the successful bidder fails to furnish the Performance Security within 15 days from the date of issue of preliminary acceptance letter or the Letter of Intent.

iii. When a bidder withdraws his bid or alters the prices after schedule bid submission closing date and before the expiry of the bid validity period or does not accept the correction of errors made in his bid or Offers post Bid rebates, revisions or deviations in quoted prices and / or conditions or any such offers.

iv. No alteration which is made by the tenderer in the contract form, the conditions of the contract, the drawings, specifications or statements / formats or quantities accompanying the same will be recognized; and, if any such alterations are made the tender will not be considered.

**4 EMPLOYMENT OF TECHNICAL STAFF FOR SUPERVISION, SKILLED AND UNSKILLED LABOUR:**

The contractor shall provide experienced, technically qualified supervising Engineers for the supervision. The Chief Supervising Engineer of the contractor or his agent shall have full power as the representatives of the contractor who can negotiate at site in regard to execution of the contract. The minimum qualification of site Engineer is a degree in Engineering. The contractor must make his own arrangements for recruiting skilled, semi-skilled and unskilled labour in sufficient numbers. The contractor shall engage only competent skilled workers. The Executive Engineer/ In-charge of the work will have the right to remove any skilled worker employed by the contractor, if found not suitable.

The contractor shall employ at least the following Technical Staff indicated against each work.

<table>
<thead>
<tr>
<th>Work</th>
<th>Technical Personnel to be employed by the Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>220kV or 132kV Sub-Station or Switching Station</td>
<td>1 B.Tech / B.E Electrical +1 B.Tech / B.E Civil + 1 Diploma Electrical</td>
</tr>
<tr>
<td>220 KV or 132 kV Line</td>
<td>1 Diploma Electrical +1 Diploma Civil</td>
</tr>
<tr>
<td>220KV/132 kV bays</td>
<td>1 Diploma Electrical / Civil</td>
</tr>
</tbody>
</table>

The contractor shall have one of the above technical staff as a project manager with five year’s experience in executing such contract of comparable nature.

In case of failure of the contractor to employ technical staff during execution as above, recovery shall be made from his bills at Rs. 10,000/- per month for each work, besides other penal action.

The contractor shall make his own arrangements for engagement of all labour, local or otherwise, their transportation, housing, feeding and payment thereof, in accordance with labour law, unless the contract otherwise provides. No idle labour payment will be made to the contractor.
5. **EXECUTION OF WORKS RELATING TO POWER LINE CROSSINGS AND RAILWAY CROSSINGS:**

Works such as erection of towers underneath an existing power line and paving out of conductors and earth wire and stringing the power line crossing span or a railway crossing span, will have to be done only after receipt of approval from the concerned officer, which, sometimes, may not match with the program of the contractor. In such cases, the contractor shall execute such works as and when approvals are received. His rates for tower erection and stringing shall take into consideration, such contingencies also.

6. **ELECTRICITY RULES:**

All works shall be carried out in accordance with the relevant clauses of the Indian Electricity Act and Rules unless modified by this specification. In case of variation between the two, the latter shall be binding on the contractor.

Unless otherwise specified, works shall be carried out in accordance with the Indian Electricity Act, Electricity Rules or any revisions thereof, which may be issued during the currency of the contract and the requirements of any other Regulations and Acts in India to which the TSTRANSCO may be subjected to.

All railway tracks, communication lines or other important track crossings and routing the line through Air field region shall conform to the relevant rules and procedures as may be laid down by Railway, Communications, Aviation or other concerned authorities from time to time.

Aviation signals will have to be provided at the top of the transmission line towers in the vicinity of civil and military aerodromes or airfield regions, if any. Similar provisions will have to be made on the special river crossing towers. The rates for tower erection shall include such works also.

7. **REGULATION OF LOCAL AUTHORITIES AND STATUTES**

   i) The CONTRACTOR shall ensure compliance with all statutes laws of India, rules and regulations of the Central or State Government or any other authority such as the Workmen's Compensation Act 1923, Payment of Wages Act, Minimum Wages Act 1948, Employees State Insurance Act, Employees Provident Fund Act, etc., and any statutory modifications thereof in connection with employees engaged by him in the work. The contractor's offer shall be presumed to include financial liabilities arising from the above and the purchaser shall not be liable for any extra costs on this account.

   ii) The CONTRACTOR shall conform to the provisions of Indian Boiler Regulation, Factory Laws, Indian Electricity Act and rules made there under, and any other acts of legislature relating to the work and to the regulations and bye-laws of any authority and of any matter, lighting and other companies and/or authorities with whose systems the plant/structure proposed to be connected and shall, before making variations from the drawings or specifications may be necessitated by so conforming, give to PURCHASER/ENGINEER written notice, specifying the variations proposed to be made and the reason for making it and apply for instructions thereof.

   iii) The CONTRACTOR shall arrange to give all notices required by the said Acts, Regulations or Bye-laws to be given to any Authority or to any Public Officer and pay all fees that may be properly chargeable in respect of the 'Works' and lodge the receipts with the PURCHASER/ENGINEER, unless otherwise specified. Obtaining all permits and licenses required thereupon shall be the responsibility of the CONTRACTOR.

   iv) All registration and statutory inspection fees, if any, in respect of his work pursuant to this 'Contract' shall be to the account of the CONTRACTOR. However, any registration, statutory inspection fees lawfully payable under the provisions of the Indian Boiler Regulations and any other statutory laws and its amendments from time to time during erection in respect of the plant and equipment ultimately to be owned by the PURCHASER shall be to the account of the PURCHASER. Should any such inspection or registration need to be re-arranged due to the fault of the CONTRACTOR or his VENDOR, the additional fees for such inspection and/or registration shall be borne by the CONTRACTOR.
8. CO-ORDINATION WITH STATUTORY BODIES AND OTHER AGENCIES
The Contractor is fully responsible for carrying out all co-ordination and liaison work to be required with Electrical inspectors, Factory inspector and other statutory bodies for implementation of the work.

The application on behalf of the Purchaser for submission to the electrical inspector and other statutory bodies along with copies of drawings complete in all respects shall be done by the Contractor and approval/ certificates taken well ahead of time so that the actual commissioning of equipment/ materials is not delayed for want of inspection and approval by the inspector and statutory bodies. The actual inspection work by the electrical inspector shall be arranged by the Contractor. However, any fees paid to electrical inspector/ statutory bodies, etc., in this regard shall be borne by the Purchaser. Any modification on the installation suggested by the electrical inspector or any other statutory authority shall also be carried out by the contractor at no extra cost by the Purchaser.

9. CO-OPERATION WITH OTHER CONTRACTORS
The Contractor shall co-operate with all other contractors or tradesmen of the Purchaser, who may be performing other Works on behalf of the Purchaser and the workmen who may be employed by the Purchaser and doing work in the vicinity of the Works under the contract. The Contractors shall also so arrange to perform his work as to minimize, to the maximum extent possible, interference with the work of other contractors and their workmen. Any injury or damage that may be sustained by the employees of the other contractors and the Purchaser, due to the Contractor's work shall promptly be made good at his own expense.

The Purchaser / Engineer shall determine the resolution of any difference or conflict that may arise between the Contractor and other contractors or between the Contractor and the workmen of the Purchaser in regard to their work. If the Works of the Contractor is delayed because of any acts or omissions of another contractor, the Contractor shall have no claim against the Purchaser on that account other than an extension of time for completing his Works. However extension of time will be considered after examination of its merits and at the discretion of the purchaser.

10. CONTRACTOR’S COOPERATION WITH THE PURCHASER
In cases where the performance of the erection work by the CONTRACTOR affects the operation of the system facilities of the PURCHASER/ENGINEER, such erection work of the CONTRACTOR shall be scheduled to be performed only in the manner stipulated to be performed by the PURCHASER/ ENGINEER and the same shall be acceptable at all times to the PURCHASER/ ENGINEER. It will be the responsibility of the CONTRACTOR to provide all necessary temporary instrumentation, measuring devices and all other material/ arrangements required during the work for proper functioning of the equipment.

The CONTRACTOR at all times shall work in coordination with the PURCHASER/Engineer’s staff and offer them all reasonable facilities to become familiar with the erection, operation and maintenance of the equipment. In respect of observations of local rules, administrative orders, working hours etc., the CONTRACTOR and his personnel shall cooperate with the PURCHASER/ENGINEER.

1.3 SUBMISSION OF TENDERS
1.3.1. Submission of Tenders:
The Tenderers who are desirous of participating in 'e'- procurement shall submit their bids etc., in the Standard formats prescribed in the Tender documents, displayed at 'e'- market place. The tenderers should upload the scanned copies in support of their bids. The bidders shall sign on all the statements, documents, certificates, uploaded by him, owning responsibility for their correctness / authenticity. If any bidder uploads the bid without paying BID SECURITY, the bid will be rejected and the bidder will be blacklisted. Similarly, if any of the certificates, documents, etc., furnished by the bidder is/are found to be false / fabricated / bogus, the bidder will be blacklisted and his BID SECURITY forfeited.

The bids shall be submitted with all particulars called for in the schedules enclosed to specification. Bid rates shall be furnished in the enclosed schedules only. There shall not be any deviation from the contents of the schedule. One copy of the schedule enclosed to the price bid shall be marked 'Original' and shall be given precedence and shall govern, should there be any conflict between the original and duplicate.

The information sought-for under schedules regarding qualification, financial status etc., shall be submitted in separate typewritten sheets in the formats attached, without interlineations, alterations or modifications. The bidder shall sign all pages of the bid at the modification.
Standard printed conditions attached to the bid will not be considered or accepted. Deviations from the provisions of the specification will not be considered.

It is the responsibility of the Bidder to submit all the documents in the PDF format required to prove regarding his responsiveness to participate in this bidding as per the Qualification Requirements.

The bids once submitted on e-procurement flat form cannot be withdrawn after schedule bid submission closing date and also during bid validity period.

If any bid is withdrawn during the above period the bidder will be blacklisted apart from forfeiting of bid security.

1.3.2 Submission of Price Bids:

The estimated value of the works is given in the Schedule

(i) As per G.O. Ms. No. 174 dated 01-09-2008 of I&CAD (PWR) submission of original hard copies of the uploaded copies of EMD receipt and other certificates & departments by participating bidders to the tenders inviting authority is dispensed herewith.

(ii) All the bidders shall invariably upload the scanned copies of demand draft or online payment or challan generation in e-procurement system and this will be the primary requirement to consider the bid as responsive.

(iii) The Department shall carry out the technical bid evaluation solely based on the uploaded certificates/documents, EMD receipt in the e-procurement system and open the price bids of the responsive bidders.

(iv) The Department will notify the successful bidder for submission of original hard copies of all uploaded documents, EMD receipt prior to entering into agreement.

(v) The successful bidder shall invariably furnish the original EMD receipt, original certificates/ documents of the uploaded scanned copies to the Tender inviting authority before entering into agreement either personally or through courier or post and the receipt of the same within the stipulated date shall be the responsibility of the successful bidder. The department will not take any responsibility for any delay in receipt/non receipt of payment towards EMD , certificates/documents, from the successful bidder before the stipulated time. On receipt of documents the department shall ensure the Genuinity of the EMD and all other certificates/documents uploaded by the bidder in e-procurement system in support of the qualification criteria before concluding the agreement.

(vi) If any successful bidder fails to submit the original hard copies of uploaded certificates/documents, EMD receipt within the stipulated time or if any variation is notices between the uploaded documents and the hard copies submitted by the bidder, the successful bidder will be suspended from participating in the tenders on e-procurement plat form for a period of 3 years. Besides this, TSTRANSCO the department shall invoke all processes of law including criminal prosecution of such defaulting bidder as an act of extreme deterrence to avoid delays in the tender process for execution of the development schemes taken up by the Government.

1.3.3 Bids will be opened at the time, date and place indicated in the NIT.

1.3.4 The bidders shall carefully examine the specification and all its enclosures and if they have any doubt as to the meaning of any portion of the specification or enclosures thereto, they shall obtain the required clarifications from the officer to whom the bids are to be addressed.

1.3.5 THE BIDS RECEIVED BY, OTHER THAN E-PROCUREMENT PLATFORM SHALL NOT BE ENTERTAINED UNDER ANY CIRCUMSTANCES.

1.3.6 Clarifications, amplifications, and/or any other correspondence from the bidder subsequent to the opening of bid will not be entertained. The bidders are therefore advised to ensure that their bids are sent in complete shape in the first instance itself. Post bid rebates, revisions or deviation in quoted price and/or conditions or any such offers which will give benefit to the bidder over others will not only be rejected straight but the original bid itself will get disqualified on this account and the bidder’s bid security amount will be forfeited.
1.3.7 **COMPLETENESS OF BID:**

a) The bid shall be quoted for all the works & all the items as per the bid specification.

b) Part bids or incomplete bids will not be accepted and will be rejected.

1.3.8 The Department will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online.

1.3.9 The certificates, documents etc., as per clause (1) of eligibility criteria (physical experience) are to be scanned and uploaded on to the ‘e’-procurement platform at www.tender.telangana.gov.in

Any other condition regarding receipt of tenders in conventional method appearing in Tender document may be treated as Non-applicable.

1.3.10 **Last date / time for Submission of the Tenders.**

1. Tenders must be submitted online not later than the date and time specified in NIT.

2. The tender inviting authority may extend the dates for issue and receipt of Tenders by issuing an amendment in which case all rights and obligations of the tender inviting authority and the Tenderers will remain same as previously.

3. If for any reason the last date of submission of tenders offline is declared a holiday, the next working day will be treated as the last date for submission of tenders.

1.3.11 **Late Tenders:**

Tenders will not be received after the last date / time prescribed in NIT.

1.3.12 **Modification to the Tender.**

1. Tenderers can modify their Tender percentage online before the last date/time prescribed in NIT.

2. No Tender shall be modified after the last date /time of submission of Tenders.

1.4 **TENDER OPENING AND EVALUATION**

1.4.1 **Tender opening:**

The bids will be opened online by the Chief Engineer/Metro Zone/TSTRANSCO/HYDERABAD or his assignee at the time and date as specified in the tender documents. All the Statements, Documents, Certificates, EMD receipt etc., uploaded by the Tenders will be verified and downloaded, for technical evaluation. The clarifications, particulars, if any, required from the bidders, will be obtained either online or in the conventional method by addressing the bidders.

1.4.2 **Clarification on the Bid:**

1. The tender opening authority may call upon any tenderer for clarification on the statements, documentary proof relating to the bid. The request for clarification and response thereto shall be in writing and it shall be only on the qualification information uploaded online by the tenderer. The clarification called for from the tenderers shall be furnished within the stipulated time, which shall not be more than a week.

2. The tenderer if so desirous, shall agree in writing to furnish the clarification called for within the stipulated time and, for disqualification and rejection of his tender in the event of failure to do so.

1.4.3 **Examination of technical Bids and Determination of Responsiveness:**

1. The tender opening authority and/or his assignee will evaluate whether each Tenderer is satisfying the eligibility criteria prescribed in the tender document and declares them as an eligible Tenderer.

2. If any alteration is made by the tenderer in the tender documents, the conditions of the contract, the drawings, specifications or statements / formats or quantities the tender will be rejected.

1.4.4 **Bid Opening:**
1. At the specified date and time, the bids of all the bidders will be opened online by the Tender Opening authority and the result will be displayed on the ‘e’-market place which can be seen by all the bidders who participated in the Tenders.

2. Tenders shall be scrutinized in accordance with the conditions stipulated in the Tender document. In case of any discrepancy or non-adherence to the Conditions, the Tender accepting authority shall communicate the same to the tenderer, which will be binding on the Tenderer. In case of any ambiguity, the decision taken by the Competent Authority on the tenders shall be final.

1.4.5 DISCREPANCIES IN THE UNIT RATES:

Difference in e-procurement lumpsum amount and schedules amount:

a. Where there is a discrepancy between the total lumpsum rate quoted in the e-procurement platform web page and in the schedules submitted, the total lumpsum rate quoted in the e-procurement platform will govern for deciding L1.

b. If any discrepancies arise after evaluating the schedules of the lowest bidder by taking into consideration of GST rates and multiplication with scheduled quantities and totaling.

c. If the amount arrived is less than the e-procurement lumpsum amount, then the lesser amount shall be taken for award of contract.

d. If the amount arrived is more than the e-procurement lumpsum amount, the e-procurement lumpsum amount shall be taken for award of contract. The unit ex-works prices shall be adjusted to match the e-procurement lumpsum amount.

1.4.6. Evaluation and Comparison of Bids

1. The Tender Opening authority and/or his assignee will evaluate and compare the price bids of all the qualified Tenderers.

2. Negotiations at any level are strictly prohibited. However, good gesture rebate, if offered by the lowest tenderer prior to finalisation of bids may be accepted by the tender accepting authority.

3. Selection of Tenderer among the lowest & equally quoted tenderers will be in the following order:
   a) The tenderer whose bid capacity is higher will be selected.
   b) In case the bid capacity is also same the tenderer whose annual turnover is more will be preferred.
   c) Even if the criteria incidentally become the same, the past performance of the contractor will be taken into account while awarding the contract.
   d) It is the sole discretion of TSTRANSCO to award the work to any bidder; mere becoming of L1 (Lowest quoted) bidder does not automatically entitle any rights on any bidder for award of contract. The TSTRANSCO reserves the right to reject any bid / bids on account of past performance in the earlier awarded works at any stage of evaluation of bids.

1.4.7. Process to be Confidential:

1. Information relating to the examination, clarification, evaluation and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced by the tender accepting authority. Any effort by a Tenderer to influence the processing of Tenders or award decisions may result in the rejection of his Tender.

2. No Tenderer shall contact the officer inviting tenders or any authority concerned with finalization of tenders on any matter relating to this Tender from the time of the Tender opening to the time the Contract is awarded. If the Tenderer wishes to bring additional information to the notice of tender inviting authority, should do so in writing.

3. Before recommending / accepting the tender, the tender recommending / accepting authority shall verify the correctness of certificates submitted to meet the eligibility criteria.

4. Tenders will be finalized by the authority inviting tenders on the recommendation of the competent technical authority. The authority will scrutinize the tenders in accordance with the conditions stipulated in the tender document. In case of any discrepancy or non-adherence to the conditions, the same shall be communicated to the tenderer, which will
be binding on the Tenderer. The decision taken by the concerned authority on the tender shall be final.

1.5. AWARD OF CONTRACT
1.5.1. Award Criteria:

1. The Chief Engineer/Metro Zone/TSTRANSCO/Hyderabad – will recommend to the competent tender accepting authority for award of the contract to the Tenderer who is found technically qualified as per the Tender conditions and whose bid is lowest.

2. The tender accepting authority reserves the right to accept or reject any Tender or all tenders and to cancel the Tendering process, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the reasons for such action.

1.5.2. Notification of Award and Signing of Agreement:

1. The Tenderer whose Tender has been accepted will be notified of the award of the work by the Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad prior to expiration of the Tender validity period by registered letter. This letter (hereinafter and in the Conditions of Contract called “Letter of Intent”) will indicate the sum that the Corporation (T.S. Transco) will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the “Contract Amount”).

2. When a tender is to be accepted, the concerned tenderer shall attend the office of the Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad on the date fixed in the Letter of acceptance. Upon intimation being given by the Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad, of acceptance of his tender, the tenderers shall make payment of the balance Security Deposit and additional security deposit wherever needed by way of Demand Draft obtained from a Nationalized Bank/Scheduled bank with required validity period and sign an agreement with the Superintending Engineer concerned, in the form prescribed by the department for the due fulfillment of the contract. Failure to attend the office of the Superintending Engineer/OMC/Metro-West/Hyderabad, on the date fixed, in the written intimation, to enter into the required agreement, shall entail forfeiture of the bid security deposited.

3. The written agreement to be entered into between the Contractor and the Superintending Engineer/OMC/Metro-West/Hyderabad as may be authorized, shall be the foundation of the rights and obligations of both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by the contractor and then by the proper officer authorized to enter into contract on behalf of the Transmission Corporation of Telangana Limited (or ‘TS Transco’ or ‘Corporation’).

4. The successful tenderer has to sign and return a copy of the contract award letter within a period of 15 days from the date of issue of contract award letter. On failure to do so his tender will be cancelled duly forfeiting the Bid Security, paid by him without issuing any further notice and action will be initiated for black listing the tenderer.

1.5.3. Corrupt or Fraudulent Practices:

The TSTransco require that the bidders / suppliers / contractors under Government financed contracts; observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Government.

(a) Define for the purposes of the provision, the terms set forth below as follows:

(i) “Corrupt practices” means the offering, giving, receiving or soliciting of anything of value to influence the action of a Government official in procurement process or in contract execution: and

(ii) “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Government and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish in Tender prices at artificial non-competitive levels and to deprive the Government of the benefits of free and open competition.
(b) Will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

(c) Will blacklist / or debar a firm, either indefinitely or for a stated period of time, if at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing a Government Contract.

(d) Furthermore, Tenderers shall be aware of the provisions stated in the General Conditions of Contract.

1.5.4. The decision of Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad to accept any tender and to reject any or all tenders is final:
Not withstanding the Chief Engineer/Metro Zone /TSTRANSCO/Hyderabad, reserves the right to accept or reject any tender and to annul tendering process and reject any or all tenders at any time prior to the award of contract without thereby incurring any liability to the affected tenderer or tenderers on the grounds of its action.

1.5.5. VALIDITY:
The bids shall be valid for acceptance for a period of not less than 90 days from the date of opening of the price bids. Bids giving validity of less than 90 days are liable to be rejected and returned unopened at the discretion of Transmission Corporation of Telangana Limited. Bidder shall super scribe the validity period on the bid cover itself.

1.5.6. COMPLETION PERIOD:
The overall completion period for this work is 3 (Three) months from date of handing over of site. The work shall be taken up subject to availability of line clearances on feeder/equipments.

1.5.7. WORKMANSHIP:
The workmanship shall be of the highest grade and in accordance with the best modern practice and in conformity with this specification.

1.5.8. ELECTRICITY RULES:
All works shall be carried out in accordance with the relevant clauses of the Indian Electricity Act and Rules unless modified by this specification. In case of variation between the two, the latter shall be binding on the contractor.

1.5.9 PROGRAM AND PROGRESS OF WORK:
The successful bidder shall furnish at the beginning of each month three copies of programme of work for the month and the progress of work during the previous month.

1.5.10 JURISDICTION:
All and any disputes or differences arising out of or touching the order based on this specification shall be decided by a panel of arbitrators as detailed below:

<table>
<thead>
<tr>
<th>Value claim</th>
<th>Panel of Arbitrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Disputes involving amounts up to Rs. 10,000/- and below.</td>
<td>Superintending Engineer of the TSTRANSCO other than the circle to which the disputes relate.</td>
</tr>
<tr>
<td>ii) Disputes involving amounts from ranging from 10,000/- to Rs.50,000/-</td>
<td>Any Chief Engineer of the TSTRANSCO.</td>
</tr>
</tbody>
</table>

There shall not be any reference of disputes, the value of which is above Rs.50000/- to arbitration. The parties shall approach the competent Civil Courts situated in Hyderabad/Secunderabad twin cities only, if any such disputes shall arise involving more than Rs.50,000/-.

A reference for adjudication under this clause shall be made by either party to the contract, within one year from the date of intimating the contractor of preparation of final bill or his having accepted the payment.

1.5.11. COMPLETENESS OF BID:
Part bids or incomplete bids will not be accepted and will be rejected outright.

1.5.12. RIGHT TO USE UNSATISFACTORY WORK:
If after completion of a work, the use of such a work proves to be unsatisfactory, the TSTRANSCO shall have the right to continue to use the work until the defects are rectified by the contractor.

1.5.13. POWER TO VARY OR OMIT WORK:
No alterations, amendments, omissions or variations of the works under the contract shall be
made by the contractor except as directed in writing by the TSTRANSCO, but the TSTRANSCO shall have full powers to instruct the contractor by notice in writing to make such variations without prejudice to the contract. The contractor shall carry out such variations and be bound by the same conditions as far as applicable as though the said variations occurred in the contract documents. If any suggested variations would, in the opinion of the contractor, if carried out, prevent him from fulfilling any of his obligations under the contract, he shall notify the TSTRANSCO thereof in writing and the TSTRANSCO shall decide forthwith whether or not, the same shall be carried out and if the TSTRANSCO confirms its instructions, contractor's obligations shall be modified to such an extent as may be mutually agreed. Any agreed difference in cost occasioned by any such variation shall be added to or deducted from the contract price as the case may be.

1.5.14. PENALTIES IMPOSED FOR DEFICIENCIES IN QUALITY OF WORKS:
During execution of works, if any deficiencies in quality of works is found in deviation to the Specification/ Agreement, a minimum penalty of Rs.5000 to Rs.30,000/- shall be levied for deficiencies as per each category as mentioned below.

Category I: Not using (i) prescribed wire brushes, scrapping tools, safety tools and equipments.

Category II: Non deployment of technical personnel for supervision of works by the contractor. Also not providing of Coating to the towers etc., as per specification.

Category III: Use of improper grade / quality of material other than specified in the tender.

For the above deficiencies in the quality of works noticed by the Engineer, penalties shall be levied as given below.

<table>
<thead>
<tr>
<th>Type of Category</th>
<th>First instance (Rs.)</th>
<th>Second instance (Rs.)</th>
<th>Third instance (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>5,000/-</td>
<td>10,000/-</td>
<td>15,000/-</td>
</tr>
<tr>
<td>Category II</td>
<td>7,500/-</td>
<td>15,000/-</td>
<td>22,500/-</td>
</tr>
<tr>
<td>Category III</td>
<td>10,000/-</td>
<td>20,000/-</td>
<td>30,000/-</td>
</tr>
</tbody>
</table>

In the event of fourth instance of noticing the deficiency of quality of works in any of the above categories, the bidder shall be debarred from participating in future tenders for a minimum period of one year.
2.1 Prices
2.2 Price Variation (PV) clause
2.3 Variation in taxes and duties
2.4 Statutory Variation
2.5 Prices And Other Variations
2.6 Terms Of Payment
2.7 Royalties For Patents Etc
2.8 Performance Security
2.9 Responsibility of the Contractor:
2.10 Penalty For Late Completion & Deficiencies in quality of works
2.11 Delays Beyond Contractor's Control
2.12 Progress of works
2.13 Recovery of many form contractor in certain cases
2.14 Signing of the contract.
2.15 Paying officer & consignee
2.16 Execution of works not covered by contractor
2.17 Extension of completion period

SECTION-II: FINANCIAL

2.1 Prices: The prices quoted shall be Firm except for Cement, Reinforcement steel and Earth Flat (GI &MS) in Schedule A and Transmission Line Tower Parts, Substation Structures, cables, Isolators and Conductors in schedule –A. The estimates / Schedules are prepared with prices FADS inclusive of packing and forwarding, Goods & Service Tax, seignorage charges, labour welfare cess and other legally permissible duties and levies wherever applicable, handling charges to cover the transport from destination to site / stores, unloading at destination and insurance (transit and storage at site including erection risks).

For Equipment & Materials and for works:

The Bidder has to quote in E-Procurement platform, the percentage (both in words and figures) Excess/ On Par/ Less over the total estimated contract value given in the Schedule-A. The detailed contract order will be released duly applying the quoted percentage on Schedule-A.

The quoted rates i.e. quoted percentage on Schedule-A shall remain same irrespective of (i) increase / decrease in quantity (ii) execution of contract beyond the scheduled completion period for whatever reasons (iii) increase in the rates of material or labour or both during execution with and beyond the completion period. However Price variation as per Clause 2.2, Statutory Variation as per Clause 2.4 and applicable rates for supplemental quantities beyond 25% excess over agreement quantities as per Clause 2.16, shall be applicable.

2.2 PRICE VARIATION (PV) Clause: The price variation is applicable for Cement and Reinforcement steel in works schedule and Transmission Line Tower Parts, Substation Structures, Earth Flat (GI &MS), and Conductors in materials schedule and the calculation of Price Variation is as below

The Price Variation is applicable in respect of the items Cement and Reinforcement steel as per G.O.Ms.No.94, Dt.16.04.2008 and T.O.O(CE-Civil) Ms.No.24, Dt.28.04.2008.

a) The price adjustment shall be applicable within original contract period or Period extended on grounds of the departmental delays and valid reasons and shall not be applicable to the extensions granted on account of the contractor’s fault as envisaged in G.O.Ms.No.94 of I&CAD.

b) The price adjustment shall be applicable for actual components of works actually carried out during the period of the bill. The price variation formula is PV = (Final Rate – Basic Rate) * Quantity.

c) The adjustment scheme will be applied where the variation (increase or decrease) is more than 5% i.e. actual variation will be considered if increase or decrease is more than 5%.

d) In case variation is positive, the department will operate variation in rates only to the extent where it is above 5% over the estimated rates. Thus if the price excess is 10%, payment will be made only to the extent of 5% (10% - 5%) since the contractor factors into his original bid his risk of absorbing the first 5% increase. The same shall be followed for – ve price variation.
e) For the time extension due to department fault, both +ve and –ve price variations are applicable.

f) For the time extension due to contractors fault, -ve price variation is applicable.

g) The Basic rate of reinforcement steel bars and cement as taken in the estimate are Rs. per MT and Rs. /- per MT of cement and Tower parts taken as from the circulated rates.

h) The final rate of reinforcement steel for the purpose of price variation shall be the rate informed by Govt. of Telangana as on one month prior to the date of check measurement of work.

i) The rate communicated by Government for reinforcement steel and cement is inclusive of all taxes and duties. Hence no additional taxes and duties will be given on price variation amount. **No ceiling on the Price Variation payment either for decrease or increase in prices in case of civil works.**

j) The Basic rate of Transmission Line Tower Parts, Substation Structures and Earth Flat as taken in the estimate were furnished in the Project Data Sheet.

k) The final rate of Transmission Line Tower Parts, Substation Structures for the purpose of price variation shall be the rate communicated by the Chief Engineer / Zone for every month as on 2 months prior to the date of Dispatch and for earth flat one month prior to the date of Dispatch.

l) The rate communicated by TSTRANSCO for Transmission Line Tower Parts, Substation Structures and Earth Flat is inclusive of all taxes and duties. Hence no additional taxes and duties will be given on price variation amount.

Price Variation is applicable in respect of Supply of Conductor and the price shall be based on and subject to adjustment due to variations in the following factors:

i. **E.C. Grade Aluminium:** The ex-works cost of indigenous E.C. grade aluminium wire rod based on average price of M/s. Nalco, Balco, Hindalco, and Malco as given in CACMAI circulars prevailing as on 30 days prior to the Bid submission closing date as per NIT.

ii. **HTGS wire:** The ex-works cost of per MT of HTGS wire exclusive of duties and taxes corresponding to 3.00 to 4.09mm designation as given in CACMAI circulars prevailing as on 30 days prior to the Bid submission closing date as per NIT.

iii. The above basic prices of raw materials will remain unaltered during the execution of contract.

iv. For any variation up or down in the prices of raw materials as defined above, for every one rupee change in the rate of one MT of EC grade aluminum wire rod and HTGS wire the corresponding increase or decrease in price per KM of finished conductor allowable shall be as given below:

<table>
<thead>
<tr>
<th>CONDUCTOR</th>
<th>Variation in Rs. Per KM of conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For Aluminium</td>
</tr>
<tr>
<td>Panther ACSR Conductor</td>
<td>0.588</td>
</tr>
<tr>
<td>Zebra ACSR Conductor</td>
<td>1.185</td>
</tr>
<tr>
<td>Moose ACSR Conductor</td>
<td>1.467</td>
</tr>
</tbody>
</table>

v) For the purpose of calculation of price variation the prices of HTGS wire and EC grade aluminum shall be taken as those prevailing on the first working day of the calendar month one month prior to the date of delivery.

vi) The Base and final prices / indices shall correspond to same manufacturers as given in the CACMAI. The price variation formula is \( PV = (\text{Final Rate} \ - \ \text{Basic Rate}) \times \text{Quantity} \).

vii) The date of delivery shall be the date of receipt of materials in good condition at destination stores (i.e. check measurement date as per Form-13) for the purpose of price variation calculations.
viii) If the delivery of the material is within the scheduled delivery period, the Price Variation applicable will be based on the actual delivery.

ix) In case the purchaser advances the delivery, the price variation applicable will be based on the actual delivery.

x) Irrespective of increase in the prices of raw materials, the total Price Increase per KM of the Conductor will be limited to a maximum of 50% over the Unit price mentioned in Purchase Order. However there is no ceiling for negative variation.

xi) The Price Variation amount can be claimed for each batch of supplies made from time to time (out of total quantity) and will be payable after due verification.

xii) In case of conductors, where the supplier makes his own arrangements to get the Rod made out of Aluminium Ingots, the prices of Aluminium Rod as per CACMAI mentioned above will only be taken into consideration for arriving at the price variation claims irrespective of whatever expenditure the supplier might have incurred in getting the ingot converted into Rod.

xiii) If the date of delivery as defined in the P.V. formula is beyond the contracted delivery date the contracted delivery date or the actual delivery date whichever is advantageous to the Purchaser will form the basis for calculation of price variation.

xiv) Notwithstanding the formula applicable for regulating the price variation, if at any time any documentary evidence proof or certificate in regard to the price variation bills is required by the Purchaser, the supplier will have to furnish the same to the Purchaser.

VARIATION IN TAXES & DUTIES AND STATUTORY VARIATIONS:

2.3 VARIATION IN TAXES AND DUTIES:

The bidder will be entirely responsible for quoting the correct taxes & duties, other local taxes or levies if any, license fee etc., he has to incur until completion of the contract.

If the rates of the statutory levies assumed by the bidder are less than the actual rates prevailing at the time of bidding, the TSTRANSCO will not be responsible for such errors. If the rates of the statutory levies assumed by the bidder are later proved to be higher than the actual rates prevailing at the time of bidding, the difference will be passed on to the credit of the TSTRANSCO.

2.4 STATUTORY VARIATIONS:

Any variation up or down in statutory levy or new levies introduced after signing of the contract under this specification will be to the account of TSTRANSCO provided that in cases where schedule of programme of works is not adhered to by the bidder and if there are upward variation/revision after the agreed schedule of programme of works, the bidder will bear such impact of levies and if there is downward variation/revision the TSTRANSCO will be given credit to that extent.

2.5 PRICES AND OTHER VARIATIONS:

The rate quoted by the bidder less by more than 10% of the TSTRANSCO’s total estimated cost will be considered as abnormally low rate. In the case of abnormally low quoted rates i.e. less than 10% additional security deposit (ASD) to be paid for the less percentage below 10% i.e., if the bidder quotes 20% below the total estimated cost then he has to pay ASD equivalent to 10% of the total estimated cost. This ASD amount will not be accepted by BG, Cheque, cash or money order. It shall be paid by way of crossed demand draft on any scheduled/nationalized bank drawn in favour of the Superintending Engineer/OMC/Metro-West/Hyderabad. The ASD amount will be released after completion of work in full shape in all aspects.

2.6 TERMS OF PAYMENT:

All the bidders who shall accept the following terms of payment are only acceptable. Bids received stipulating terms other than the following terms will be invalidated.
For Works:

i) Payments will be made up to 90% of the bills for the items of works completed during a month. For this purpose the contractor shall submit monthly bills to the Executive Engineer regularly to ensure payments in time. The contractor shall give full details of items of works done against each location in support of the bill. Bills submitted without supporting details will not be taken into cognizance.

ii) Out of balance 10% amount, the first 5% payment will be released after completion of all the works, provided the material account is settled. The final 5% payment will be released after completion of the Guarantee period or on submission of a Bank Guarantee for the equivalent amount, valid for the guarantee period plus two months claim period, subject to settlement of material account paying officer will be Superintendent Engineer/OMC/Metro-West/Hyderabad or Accounts Officer/OMC/Metro-West/Hyderabad.

b) For supply of Materials / Equipment (If applicable):

(i) (a) 80% payment will be made within 30 days for the material / equipment supplied in complete shape subject to their delivery as per the schedule of work contained in the bar chart and on its receipt at destination stores/site in good condition (i.e. from check measurement date in Form-13). The concerned AEE/stores will receive the equipment/material in full shape at site and the concerned EE/stores will do the check measurement and issue the Form-13. The check measurement shall be done within five days from the receipt of materials.

(b) 10% payment will be made after erection of equipment / material

(c) Balance 10% payment will be made after commissioning of equipment /material.

The Contractor shall furnish the following documents in quadruplicate for arranging payment for the equipment / material supplied.

a) Copies of the invoices showing Contract No., Goods description, quantity, unit price and total amount.

b) Acknowledgement of receipt of material from consignee i.e. Form-13

c) Proof of payment of Excise duty (Not applicable for bought out items)

d) Acknowledgment of Consignee on Delivery Challan in original.

e) Detailed packing list

f) Copy of lorry receipt.

g) Copies of Insurance Certificate / policies

h) Test certificates approval and Dispatch clearance. (Not applicable for furniture and general items)

i) Certificate certifying that the defects, if any, pointed out during inspection have been rectified.

ii) No payments will be made for the supplies made prior to scheduled delivery date or for materials which are not in full shape.

iii) The payments against Schedule are subject to Performance Security with a validity of 12 months as on the date of Check Measurement for proper fulfillment of performance obligations.

iv) Billing will be done as per actual work done in material portion as well as labour portion.

2.7 ROYALTIES FOR PATENTS ETC.: All royalties for patents or charges for the use of infringement thereof that may be involved in the construction or use of any equipment shall be included in the bid prices. The bidder shall protect the TSTRA/NSCO against any and all such claims arising out on account of the use thereof.

2.8 PERFORMANCE SECURITY: The successful bidder shall furnish within 15 days from the date of issue of preliminary acceptance letter or the Letter of Intent, performance security equal to FIVE PERCENT (5%) of the total accepted bid value for the proper execution and fulfillment of contract which will include the guarantee period of 12 months over and above the specified completion period with Six months claim period thereafter.
If the bidder fails to furnish the performance security as specified within 15 days from the date of issue of preliminary acceptance letter or the Letter of Intent, the contract is liable for cancellation and forfeiture of the bid security. The performance security shall also be forfeited if the successful tenderer fails to fulfill the terms of the contract.

Performance security should be made by Demand Draft from any Nationalized Bank/Scheduled Bank in the Headquarters in favour of the Superintending Engineer/OMC/Metro-West/ Hyderabad. Performance Guarantee period covers a period of 12 months guarantee for satisfactory performance of the galvanized structures and other materials supplied by the contractor and also for the workmanship against faulty erection/civil works for a period of 12 months from the date of commissioning of the line/substation/bay.

2.9 RESPONSIBILITY OF THE CONTRACTOR:
The successful bidder is responsible for the safe delivery of the goods in good condition at destination and execution of the works ensuring quality. He should acquaint himself of the conditions obtaining in regard to supply of the materials. Team of Quality Assurance from Head Quarters will visit time to time to verify the quality of works.

2.10 PENALTY FOR LATE COMPLETION:
The completion period of the works mentioned in Schedule (Programme of works of specification is the essence of contract).

In case of delay in erection of the scheduled works, whatever be the reasons, the TSTRANSCO can levy and collect the penalty @ 0.5% per week or part thereof for the portion of works not completed, subject to a maximum of 5% of the total value of works. Once the maximum is reached, TSTRANSCO may consider termination of the contract. The right of the TSTRANSCO to levy penalty shall be without prejudice to its rights under the law including the right to get the balance works executed by other agencies at the risk and cost of the successful bidder. This is in addition to the right of the TSTRANSCO to recover any damages from the contractor and also blacklisting.

SPECIFIC ACCEPTANCE OF THIS CLAUSE SHOULD BE IN BLACK & WHITE IN THE BID. IF SUCH ACCEPTANCE IS NOT INDICATED, THE BID IS LIABLE TO BE OVERLOOKED.

In case the successful bidder fails to execute the works as per the programme, TSTRANSCO reserves its right to get the balance works executed by other agencies at the risk and cost of the successful bidder, this is in addition to the right of the TSTRANSCO to recover any damage from the contractor and also blacklisting.

2.11 DELAYS BEYOND CONTRACTOR'S CONTROL:
The contractor shall not be entitled to claim compensation on account of delays or hindrances to the works for any cause whatsoever. Should the cause of delay or hindrance not be the responsibility of the contractor, the Chief Engineer will consider whether it is possible or not to grant extension of time to compensate for this delay or hindrance. The contractor will not, however, be eligible for any compensation by way of increase in the rates for the works executed beyond the contract period.

2.12 PROGRESS OF WORK:
If it is found that the progress of work is not commensurate with the programme of completion, TSTRANSCO will be entitled to terminate the contract in part or full giving 15 days notice and get the balance works completed through other agencies at the contractor's cost and risk. You shall also furnish the quantity of material consumed, the details of work and the balance materials held by you every month. Every report submitted by you shall be verified and countersigned by the concerned Divisional Engineer/O&M and by you or your authorized representative.

The contractor should complete all the works in all aspects as stipulated in the schedules and handover to DE/O&M concerned unless otherwise final bill will not be processed.

2.13 RECOVERY OF MONEY FROM CONTRACTOR IN CERTAIN CASES:
In every case in which provision is made for recovery of money from the contractor, the TSTRANSCO shall be entitled to retain or deduct the amount thereof from any moneys that may be due or may become due to the contractor under these presents and/or under any other contract or contracts or any other account whatsoever, Bid Security/ Performance Security etc., held up by the TSTRANSCO.
2.14 **SIGNING OF THE CONTRACT:**

Within 15 days of award of the contract the duplicate copy of the award letter shall be returned by the contractor duly signed and dated.

A formal agreement will be entered into with the contractor within 30 days of acceptance of the performance security. If the contractor does not sign the agreement within 30 days of acceptance, the contract awarded may be cancelled and the next lowest responsive bidder will be called for negotiations.

2.15 **PAYING OFFICER & CONSIGNEE:**

The Paying Officer is the Superintending Engineer/OMC/Metro-West/Hyderabad or Accounts Officer/Metro-West/Hyderabad.

The Agreement authority is the Superintending Engineer/OMC/Metro-West/Hyderabad.

2.16 **EXECUTION OF WORKS NOT COVERED BY THE CONTRACT:**

In the course of the execution of works against the contract, if it becomes necessary to execute items of work which are not covered either by the Tender Specification or your offer or this detailed acceptance letter, such works shall be carried out by you at the rates arrived as per clauses given below. All such items of works shall, however, be executed only on the written directions of the concerned Executive Engineer.

3.0 **SUPPLEMENTAL QUANTITIES / ITEMS:**

The quantities indicated in the Schedule-A (Materials / Equipment) and Schedule-B (Works) are only provisional and are likely to change during actual execution. When quantities of any item are likely to exceed beyond 25% over and above the scheduled quantity or any new items / supplemental items arises, the Contractor shall bring the fact to the notice of Chief Engineer/Construction well in advance and take prior orders for going ahead with the work. Without approval of this office, the Contractor shall not go ahead with the work wherever there is increase in quantities exceeds beyond 25% over and above the scheduled quantities or any new items / supplemental items arises.

The contractor is bound to execute all Increased / supplemental / new items that are found essential, incidental and inevitable during execution of the contract at the rates to be worked out as below:

3.1 **Increased Quantities:**

I) **For Material / Equipment covered in Schedule-A:** The rates accepted for individual items of material / equipment shall hold good even for the increased quantities up to and beyond 25% over and above the agreement quantities.

II) **For work items covered in Schedule-B:**

*For quantities increased over and above the Scheduled quantities: The rates awarded in the contract are applicable for any increase in quantities of works.*

3.2 **For Supplemental / New Items:**

i) For the items relating to the Schedule-B where the rate can be deduced from the estimate or TSTRANSCO / DISCOMS / common SSR, the rate applicable will be the estimated / SSR rate +/- tender percentage quoted/ accepted by the bidder for Schedule –B. The schedule of rates adopted for supplemental items / new items shall be from the current SSR applicable during the execution period.

ii) For the items relating to the Schedule-A or Schedule-B where the rates of new items cannot be deduced from the estimate / SSR, the rate payable will be arrived based on the prevailing market rates duly enquiring / collecting quotations and observing the reasonableness of the rates by the Purchaser.

3.3 The contractor shall plan and procure the materials indicated in the schedule ‘A’ duly verifying with the approved layout and profile, So that the procured quantities match with actual requirement to avoid excess supply of materials. The Executive Engineer shall give the details of the materials such as quantities of type wise towers and extensions and other line materials based on the line approved profile and the quantities of type wise structures and other materials based on the approved layout on the date of Kickoff meeting without fail.
3.4 The Schedule time required to complete the new / supplemental items including the balance work will be indicated in the approval letter issued for new / supplemental items.

2.17 EXTENSION OF THE COMPLETION DATE:

When a work cannot be completed within the completion period indicated for reasons beyond the control of the contractor i.e., due to Force Majeure conditions mentioned below or due to the reasons attributable to TSTRANSCO, the contractor shall represent for the same and extension of time without levying penalty shall be granted only on the issue of an undertaking by the contractor that they will not put forth at a later date, any claims for extra payments towards increased overheads, material/equipment/works cost etc., during the extended period. It is the sole discretion of the TSTRANSCO to grant extension of completion period.

6.1 FORCE MAJEURE:

i) The Contractor will not be liable for forfeiture of its performance security, penalty for late delivery, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contact is the result of an event of Force Majeure.

ii) For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

iii) If a Force Majeure situation arises, within 15 days from the date of eventuality the Contractor shall notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Contractor shall continue to perform their obligations under the Contact as far as it is reasonably practical, and will seek all reasonable alternative means for performance not prevented by the Force Majeure event.

6.2 DELAYS ORDERED BY THE PURCHASER

TSTRANSCO reserves the right to suspend and reinstate execution of whole or any part of the Works without invalidating the provisions of the contract. Orders for suspension or reinstatement of the Works will be issued by the Engineer to the Contractor in writing. The time for completion of the works will be extended suitably to account for duration of the suspension. Any costs incurred by the contractor due to increased overheads, idling of labour etc., as a result of such suspension will not be reimbursed to the contractor.

2.0 RESPONSIBILITY OF THE CONTRACTOR:

The successful bidder is responsible

a) For the safe delivery of the goods in good condition at destination and execution of the works ensuring quality. He should acquaint himself of the conditions obtaining in regard to supply of the materials.

b) To mobilize and plan for the labour and TSTRANSCO shall not be responsible for any mismatch of work on account of whatever so the reasons and the successful bidder has to bear the costs towards ideal labour on account of mismatch of work if any.

c) To submit the work/ material bills, (preferably monthly for work bills and for materials immediately after receipt of them at site) promptly and submit all the required enclosures with out fail. TSTRANSCO shall not be responsible for any delayed payments whatever so the reasons.

The bidders are requested to study all the existing conditions and all the above aspects of the project while quoting itself and no extra claim will be entertained on the above reasons.

3.0 CLAIMS DUE TO DELAYS BEYOND CONTRACTOR'S CONTROL:

The contractor shall not be entitled to claim compensation on account of delays or hindrances to the works for any cause whatsoever. Should the cause of delay or hindrance not be the responsibility of the contractor, the Chief Engineer will consider whether it is possible or not to grant extension of time to compensate for this delay or hindrance. The contractor will not, however, be eligible for any compensation by way of increase in the rates for the works executed beyond the contract period.

4.0 RECOVERY OF MONEY FROM CONTRACTOR IN CERTAIN CASES:

In every case in which provision is made for recovery of money from the contractor, the TSTRANSCO shall be entitled to retain or deduct the amount thereof from any moneys that may be due or may become due to the contractor under these present and/or under any other contract or contracts or any other account whatsoever, including Bank Guarantees, Bid Security/ Performance Security etc., held up by the TSTRANSCO.
5.0 WAY LEAVES & TREE CUTTING IN TRANSMISSION LINE CORRIDOR:

Payment of compensation for damaged crops or fruit bearing trees shall be initially made by the contractor, which will be reimbursed by TSTRANSCO later on. The compensation so payable in respect of damaged crops shall be based on the assessment of MRO. In respect of the trees, compensation shall be payable as per the guidelines issued in T.O.O. Dir (Transmission) Ms.no.238, Dt.10.11.2006. The contractor shall take up the payment of compensation amount only after written approval by the Executive Engineer. The contractor shall pay 75% of the compensation in pursuance with the early completion of work. The payment through Account payee cheques shall be done in the presence of Assistant Engineer.

However after finalization of compensation of amounts by the department, the balance amount shall also be paid by the contractor and can claim for the reimbursement of the actuals based on the estimates sanctioned by the department and on production of the copies of the cheques given to the land owners/farmers and on production of the receipts/ acknowledgments taken from the land owners. The Superintending Engineer/OMC shall finalize the compensation claims.

6.0 TERMINATION OF CONTRACT:

If it is found that Progress of works are not commensurate with the program of completion or if the contractor does not fulfill his obligations as per the terms of the specification TSTRANSCO will be entitled to terminate the contract in part or full by giving 15 days notice and get the balance works completed through other agencies at the contractor’s cost and risk. Warning letters will be issued by Superintending Engineer/ OMC or/and Chief Engineer / Zone or/and Chief Engineer / Construction if the progress is not satisfactory. If the progress continues to be poor even after the second warning letter, show cause notice / final notice will be issued by the Superintending Engineer/ OMC. If no satisfactory reply is received or the progress of the works are not improved within 15 days of issue of the final notice / show cause notice, the Superintending Engineer / OMC shall terminate the agreement, which will be followed by stoppage of all payments to the contractor, encashment of the BGs, and after termination of contract the balance works / supplies shall be completed through alternate agencies at contractor’s risk and cost. The contractor so penalized shall be blacklisted for 3 years from the date of termination of contract.

In the event of termination of contract due to delay attributable to the contractor, TSTRANSCO is entitled to get back equipment/ material from the contractor for the payment already made but the material is not put to use, and then get the works done by other agency/agencies for completion of contract by using the said recovered material. The contractor shall have no objection in this regard.

Sd/-

CHIEF ENGINEER,
METRO ZONE/HYDERABAD
SECTION – III (TECHNICAL)
PART - A
GENERAL:

3.1 TYPE OF WORK:
Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA

3.2 COMPLIANCE WITH REGULATIONS:
Unless otherwise specified, works shall be carried out in accordance with the Indian Electricity Act, 1910, Indian Electricity Rules, 1955 or any revisions thereof, which may be issued during the currency of the contract and the requirements of any other Regulations and Acts in India to which the TSTRANSCO may be subjected to.

All railway track, communication line or other important track crossings and routing of the line through air field region shall conform to the relevant rules and procedure as may be laid down by Railway, Communications, Aviation or other concerned Authorities from time to time.

Aviation signals will have to be provided at the top of the towers in the vicinity of Civil and Military aerodromes or airfield regions, if any. Similar provisions will have to be made on the special river crossing towers. The rates for tower erection shall include such works also.

3.3 SAFETY OF STAFF AND LABOURERS:
The contractor shall provide and make all necessary arrangements and insurance for the safety of his staff and laborers at site of works. The TSTRANSCO will not, in any way, be responsible for any accident, minor or fatal, to any person at the site of works or for any damages arising there from during erection and this shall be contractor's responsibility. The staff insurance charges or litigation occurring out of the contract if any shall be borne by the contractor only.

3.4 PROGRESS REPORTS:
Weekly reports showing the actual progress made in the receipt of materials by the contractor and in completion of various works shall be regularly submitted in duplicate by the contractor to the concerned field Divisional Engineer/O&M & Superintending Engineers and Chief Engineer/Metro Zone.

3.5 PERFORMANCE GUARANTEE:
The contractor shall guarantee the satisfactory performance of the erected line for a period of 12 months from the date of handing over and the formal acceptance of the completed work by the TSTRANSCO. If any defects are found within this period due to fault in work the contractor shall rectify such defects forthwith at site without any extra cost to the TSTRANSCO.

List of Approved Brands / makes for procurement of materials:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Material</th>
<th>Approved brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reinforcement and structural steel</td>
<td>(1) VSP (2) SAIL and (3) TISCO (4) ISCO</td>
</tr>
<tr>
<td>2</td>
<td>Earth flats-- MS &amp;GI</td>
<td>TSTRANSCO approved re-rollers.</td>
</tr>
</tbody>
</table>

The contractor shall invariably use the steel angles manufactured by SAIL, VSP, TISCO and ISCO only for the fabrication of Line and Substation structures. The earth flats which are not manufactured by the above primary producers can be procured from any other TSTRANSCO approved re-rollers.

3.6 DEVIATIONS FROM SPECIFICATION:
Should a bidder desire to depart in any respect from the provisions of this specification, he must specifically mention such departures in his bid under the heading "BIDDER'S COMMENTS ON DEPARTURES FROM THE SPECIFICATION AND CONDITIONS OF CONTRACT". The bidder must explain in detail each and every departure he proposes to make. All departures shall be subject to the approval of the Engineer; otherwise the provisions of this specification shall prevail.
3.7 **RESPONSIBILITY OF THE CONTRACTOR:**
The contractor shall guarantee and be entirely responsible for the execution of the contract in accordance with the general conditions of contract, specification, schedules and as per drawing as handed over by site engineer appendices. He shall further guarantee and be responsible for proper erection within the guaranteed completion and maintenance periods.

The contractor shall be responsible for collection of materials at TSTRANSCO's stores, transport to site, erecting and setting to work of the said EHT transmission line.

3.8 **PENALTIES IMPOSED FOR LATE COMPLETION OF WORKS:**
The completion period committed shall be deemed to be the essence of the contract. In case of delay in completion of work, whatever be the reasons, the TSTRANSCO may at its option demand and recover from the Tenderer an amount equivalent to ½% of the value of the works not completed within the prescribed time limit for every week of delay or part thereof, subject to a maximum of 5% of the total value of the contract. This right of TSTRANSCO shall be without prejudice to the rights under the law, including the right to cancel the contract, forfeit the deposit and recover damages for breach of contract.

4 **STANDARD SPECIFICATIONS:**
Unless otherwise specified, works shall be carried out in accordance with relevant Indian standards and T.S.D.S.S. or any revision thereof which may be issued during the currency of the contract, and all the clauses relating to materials and workmanship, responsibilities, liabilities, commencement of works, completion delays and extensions, suspension works, and forfeitures etc., as provided in the T.S.D.S.S. shall be binding.
1.1 Scope
This part of the specification provides for check survey, distribution of all the material to work locations, setting to work, erection, testing, commissioning and for performance guarantee of EHV Transmission line as mentioned in the summary sheet.

2.0 Route
The actual route of the transmission line shall depend on the results of the survey being carried out by the TSTRANSCO and is also subject to the approval of the Power Telecommunication Coordination Committee. For any deviation in the alignment for any reason whatsoever the bidders are not eligible for any extra rate over the bided / accepted rates.

3.0 Topography:
Along the route of the transmission line the altitude of the country varies from sea level to about 1000 meters above mean sea level. The topography of the terrain is fairly plain having hilly terrain, cultivated fields, gardens, and small thick jungles.
4.0 TYPE OF CONSTRUCTION:
The line shall be constructed on self-supporting galvanised lattice steel towers suitable for assembly at site by bolt connections. The conductors shall be in vertical formation. Continuous earth wire shall be provided above the conductors for effective shielding etc. The construction details shall comply in all respects with the specification given herein. The line shall initially terminate on terminal towers situated at a distance of not more than 75 meters from the out-door substations at either end. From the terminal towers, the line shall be connected to the terminal structures in the substations.

5.0 PERMITS AND PRIORITIES:
The contractor shall make his own arrangements in using private roads, pathways, etc., in connection with the construction work. The contractor shall himself arrange for permits required for the operation of the vehicles used in construction works. The TSTRANSCO may, however assist the contractor in obtaining controlled commodities necessary for the execution of the works if it considers the demand justified. No extension shall however, be admissible to the contractor in the completion schedule for the erection of the transmission line, if such permits or priorities are not granted.

6.0 CEMENT AND STEEL REINFORCEMENT RODS:
The cement and steel reinforcement rods required for the work have to be supplied by the contractor as per latest ISS. Ordinary Portland cement of Grade-43 manufactured as per IS-8112 of 1989 shall only be used. Storage, certification, delivery and testing of the cement shall confirm to IS-8112 with latest amendments. IS Certification mark is obligatory. Cement procured from major cement manufacturing plant such as M/s.Raasi, M/s.Vishnu, M/s.Andhra Cement Company, M/s.ACC, M/s.CCI, M/s.L&T, M/s.Corporal, M/s.Priyadarshini, M/s.Madras Cements etc will only be accepted for which prior approval shall be obtained from the TSTRANSCO. Reinforcement Steel shall conform to IS 1786 and shall be procured from standard manufacturers i.e. TISCO, SAIL & VSP for use in tower foundations. Copies of invoices and test certificates from the cement and steel manufacturers shall be submitted by the contractor to the Engineer and obtain clearance before actual use. Such clearance will be given within a maximum period of one week.

7.0 REPLACEMENT:
In the event of the materials lying with the contractor for the execution of this contract being lost, damaged or destroyed while being in the custody of the contractor before being taken over by the APTRANSCO, the contractor shall be liable to make good the loss without any extra charges to the APTRANSCO.

8.0 COMPLETENESS OF BID:
The bidder should submit the bid complete in all respects. No handling, idle, or storage charges shall be paid by the TSTRANSCO to the contractor. The bidders should include these in their quoted rates for individual items and / or the works.

9.0 SCHEDULES AND APPENDICES:
The details of the approximate quantities of material supplies and erection works involved are given in the Schedules A & B respectively. The bidders are required to quote for the quantities mentioned in the Schedules. However, the extent of material supplies as well as the erection works shall be decided based on the actual field conditions and therefore, for unit rates for each item shall form the basis of contract for payment purpose.

10.0 SUPPLEMENTAL ITEMS AND PROCEDURE FOR WORKING OUT RATES FOR SUPPLEMENTAL ITEMS.
Refer Clause for supplemental items

11.0 SPECIALWORK:
The rates for works not included in the schedule will be decided upon, when any such necessity arises during the execution of the works, by negotiations between the Engineer and the contractor and the contractor shall perform the work on the terms and conditions contained in this specification. The bidder must inform himself of the conditions of the terrain / area and quote the rates.

12.0 DATE OF COMPLETION:
It is of utmost importance that the line shall be completed as per the provisions in Schedule – D of this specification. If the line is not completed by the contractor within the time stipulated in the specification duly adhering to the programme as given by him, damages / penalty for the delay in completion will be recovered as provided in the specification.
13.0 MATERIALS REQUIRED FOR THE WORK:
   This is a total turnkey contract and the Successful bidder shall supply all the material required for erection of the line. The material is to be delivered by the contractor at the site stores. The contractor will be responsible for the proper handling and maintenance of the materials up to the time of handing over of the completed works to the TSTRANSCO and return of surplus materials if any, at the TSTRANSCO's stores. The cost of such handling and storage shall be covered in the quoted prices detailed in Schedule-A.

After completion of the Check Survey, the contractor has to furnish the actual quantity of material required for each item covered in Schedule-A and proceed to procure the requisite quantity of material only. Should however, on completion of all the works, any surplus materials for which payments have been made by the TSTRANSCO are lying with the contractor, all such material shall be handed over to the Engineer at the TSTRANSCO's stores. This shall be done within one to two months after completion and handing over of the line. If the materials are not returned within this period and/or in the opinion of the Executive Engineer in charge of the work, are not in a fit condition for use, such surplus materials will be treated as sold to the contractor at the rate equal to the stores issue rate plus 10% centage charge or at the prevailing market rates plus incidental charges, whichever is higher, and recoveries made accordingly. The 10% retention amount against the contract will be released only after all the balance materials are handed over at TSTRANSCO's stores in proper shape and material accounts are rendered.

14.0 INSURANCE FOR THEFT AT CONTRACTOR'S STORES /TRANSIT LOSSES ETC.
   It is the entire responsibility of the contractor to ensure safety for the materials lying with him for erection purpose. The contractor has to insure the materials during erection at his cost and the contractor will be responsible for the safety of the materials till the line is handed over for operation.

15.0 ERECTION TOOLS:
   The erection tools required for the construction of the line shall be arranged by the contractor at his own cost. The bidder shall furnish full details of the tools & plant available with him for carrying out the foundation works (details of form boxes available for concreting), tower erection works and stringing works in the form 'schedule-VII' enclosed to this specification.

16.0 ERECTION LOSSES:
   The following maximum additional quantities of materials are permissible, to cover damages and losses during erection.
   i) Disc insulators required: Up to 1% of the quantity.
   ii) Conductor and earthwire: Up to 1% of the route length of the line. (The 1% wastage includes the additional lengths required to account for sag and jumpers).
   iii) Bolts and Nuts, washers and Hardware & accessories: Up to 2% of the quantity required for conductor & earthwire.

17.0 SURPLUS MATERIALS:
   On completion of the works all materials left surplus from those supplied shall be handed over to TSTRANSCO at the TSTRANSCO’s stores. If any surplus towers are to be devoluted, they must be in full shape or else cost of full tower will be recovered from the contractor. The contractor shall furnish a statement giving full details of all materials utilized on works (based on tower schedule which should give location wise details with types of towers, spans, foundations etc.) and the balance to be returned to the TSTRANSCO and obtain a clearance certificate from the Executive Engineer, within one or two months depending upon the volume of work involved. It may be noted that returning of all materials and rendering of accounts for the materials received is a pre-condition for release of payment against final bill and also the 10% retention amount at a later date.

18.0 DEVIATIONS FROM SPECIFICATION:
   Should a bidder desire to depart in any respect from the provisions of this specification, he must specifically mention such departures in his bid under the heading "BIDDER'S COMMENTS ON AND DEPARTURES FROM THE SPECIFICATION AND CONDITIONS OF CONTRACT". The bidder must explain in detail each and every departure he proposes to make. All departures shall be subject to the approval of the Engineer, otherwise the provisions of this specification shall prevail.

19.0 RESPONSIBILITY OF THE CONTRACTOR:
   The contractor shall guarantee and be entirely responsible for the execution of the contract in accordance with the general conditions of contract, specification, schedules and appendices. He shall further guarantee and be responsible for proper erection within the guaranteed completion and maintenance periods.
20.0 PERFORMANCE GUARANTEE:
The contractor shall guarantee the satisfactory performance of the erected line for a period of 12 months from the date of handing over and the formal acceptance of the completed line by the TSTRANSCO. If any defects are found within this period due to fault in erection, the contractor shall rectify such defects forthwith at site without any extra cost to the TSTRANSCO. The performance of the jumpers on the angle towers will be watched during the period of performance guarantee and in case it is found during the stage of operation of line that there is a fall of a suspension insulator string along with the hanger during the performance guarantee period an amount of Rs.2,000/- for such failure will be recovered from the contractor from any of his bills.

21.0 STANDARD SPECIFICATIONS:

Unless otherwise specified, works shall be carried out in accordance with relevant Indian standards and A.P.S.S. or any revision thereof which may be issued during the currency of the contract, and all the clauses relating to materials and workmanship, responsibilities, liabilities, commencement of works, completion delays and extensions, suspension works, and forfeitures etc., as provided in the A.P.S.S. shall be binding.

22.0 STANDARDS OF MATERIALS TO BE SUPPLIED BY THE BIDDER

The following shall be the standards of materials to be supplied by the bidder, which are covered under Schedule – B for erection of the lines.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Indian standard</th>
<th>Specification Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IS-8112 of 1989 of Latest issue</td>
<td>Ordinary port land cement of grade 43</td>
<td></td>
</tr>
<tr>
<td>2. IS-1786</td>
<td>Tor steel for reinforcement</td>
<td></td>
</tr>
<tr>
<td>3. IS-456</td>
<td>For concrete aggregates.</td>
<td></td>
</tr>
<tr>
<td>4. IS-383</td>
<td>For sand for use in rendering, plastering and mortar</td>
<td></td>
</tr>
<tr>
<td>5. IS-1239 (part-I)</td>
<td>Hot dip galvanized M.S.Pipe and galvanizing conforming to ISS-2633/1986</td>
<td></td>
</tr>
<tr>
<td>6. IS-5613 (Part-II)</td>
<td>Danger Boards, Phase plates, Bird Guards and Number plates</td>
<td></td>
</tr>
<tr>
<td>7. IS-3043</td>
<td>Pipe earthing</td>
<td></td>
</tr>
<tr>
<td>8. IS-2062-1992</td>
<td>Steel for General structural purpose – For M.S.Flat 50 x 6mm for earthing of tower lines.</td>
<td></td>
</tr>
</tbody>
</table>

a) The material shall be procured from the regular suppliers of TSTRANSCO
b) The material shall be procured after taking approval of SE/TLC/TSTRANSCO
c) In respect of tower accessories, the contractor has to use the material on the line only after approval by SE/TLC.

**PART –II ERECTION**

1. Check Survey
2. Site Stores
3. Way Leaves and Tree Cutting
4. Stub Setting and Foundations
5. Grounding
6. Erection of Towers
7. Insulator Hoisting:
8. Stringing of Conductor and Earthwire

**PART-I: ERECTION**

1. **CHECK SURVEY:**

The detailed surveys are carried out by the TSTRANSCO. The successful bidder is required to carry out only check survey. After the approved profiles are received, the contractor must fix up locations based on the approved spans indicated in the profile / tower schedule and only conspicuous variations in the chain age and physical features as indicated in the profile and as actually noticed during check-survey must be brought to the notice of the TSTRANSCO's Engineer for taking remedial action. The position of locations stacked on the ground should be got approved by the Executive Engineer concerned. If the site of a tower location is not suitable for locating a tower the location will have to be shifted suitably keeping in view the limitation of span and this will be decided by the Executive Engineer. All the tools and instruments required for carrying out the check-survey should be arranged by the Contractor himself.
2 **SITE STORES:**

The successful bidder shall establish temporary stores at his cost at a suitable location for storing the line material within 15 days of award of contract. This store should be dismantled and site cleared after the work is completed by him.

3 **WAY LEAVES AND TREE CUTTING:**

Payment of compensation for damaged crops or fruit bearing trees shall be initially made by the contractor, which will be reimbursed by TSTRANSCO later on. The compensation so payable in respect of damaged crops shall be based on the assessment of MRO. In respect of the trees, compensation so payable is the lowest of the rates fixed by the Horticulture/ NABARD/ MRO. The contractor shall take up the payment of compensation amount only after written approval by the Executive Engineer. The payment shall be made in the presence of representatives of TLC, Accounts and Vigilance wings of TSTRANSCO. The Superintending Engineer/TLC shall finalize the compensation claims.

The contractor shall take all possible steps to see that standing crops etc. are not damaged during execution of works. When such damage is inevitable the compensation will be borne by the TSTRANSCO to the extent of land required for laying of foundation, provided the damage is with prior concurrence of the Executive Engineer. The contractor shall bear the compensation for damages caused without prior concurrence of the Executive Engineer concerned. Any extra land required by the contractor temporarily for dumping of the construction material and consequent damage to the crops etc. shall be the responsibility of the contractor.

In the event of any obstruction being encountered from the local villagers or authorities, the contractor shall immediately notify the Executive Engineer who shall take such steps as may be necessary to clear the obstruction. The contractor or his representative or gangs shall not adopt antagonistic attitude towards the village authorities with whom they may come into contact, but shall immediately report to the Executive Engineer any case of obstruction which cannot be settled amicably. No trees shall be cut until the TSTRANSCO has made necessary arrangement with the authorities concerned and permission is given to the contractor to fell such trees. The TSTRANSCO shall arrange to remove the obstacles as soon as possible. At times however, it may not be possible for the TSTRANSCO to arrange right-of-way for laying foundations or erecting the towers or stringing the line. At all such times, the contractor shall shift his gangs to other locations. The rates quoted shall cover all such contingencies and no extra payments shall be claimed for such contingencies.

4. **STUB SETTING AND FOUNDATIONS:**

4.4 **Setting of stubs**

The contractor shall undertake full responsibility for the correct setting of stubs in accordance with the approved methods of the exact locations and alignment and in precisely correct level. Stub setting templates shall be used for proper setting of stubs.

Cement concrete foundations shall be constructed complying with the foundation drawings to be furnished to the successful bidder. The type of foundation to be laid at each location will be decided by the Executive Engineer after inspection of site and for this purpose the locations must be excavated for dry type foundations initially and offered for inspection. Foundation at a location shall be laid only on receipt of written communication from the Executive Engineer indicating the type of foundation to be laid.

In case foundations of types other than those mentioned in Appendix-I are found necessary in the course of execution of contract, such foundations shall have to be laid only on communication of drawings for such foundations by the Engineer.

4.2 **The rate for laying the foundations with 1:2:4 mix concrete is inclusive of the cost of dewatering of pits during concreting but shall be exclusive of the excavation cost and inclusive of cement cost**

The TSTRANSCO reserves the right to uncover and examine any foundation if it is found to be not according to specification. The contractor shall be required to open up and rectify all defective foundations thereby discovered at his sole expense and cost.

4.3 **Excavation for foundations:**

Earth Work Excavation rates for foundation pits shall be quoted by the bidders for the following soils, including dewatering of pits. However rates for shoring and shuttering shall be quoted by the bidder separately against respective item of Schedule.
a) Dry soils.
b) Wet soils.
c) Partially Submerged soils.
d) Fully Submerged soils.

**Hard Rock**: Hard rock will be that which requires drilling and blasting by any method. The cost of drilling and blasting shall be included in the quoted rates. In certain cases, when the area around the location happens to be an inhabited area consequent to which blasting cannot be resorted to, the excavation may have to be done either by the process of drilling, wedging, hammering and splitting or by the process of heating and splitting by sudden cooling. The rate quoted shall take into consideration such contingencies also.

**NOTE**:  
i) For soils other than hard-rock, excavation rate is inclusive of backfilling the pits with excavated soils after laying foundations and levelling of site.

ii) For soils covered by hard-rock variety, the excavation rate is inclusive of backfilling with excavated rock bits and borrowed earth duly rammed after laying the designed rock foundation.

iii) No extra charges shall be admissible for the removal of the fallen earth in the pit, when once excavated.

The estimated rates loaded with tender percentage should cover all contingencies during the process of excavation. For any reasons whatsoever, no extra claim will be accepted.

### 4.4 Type of Foundations:
Cement concrete footing shall be used for all types of towers in conformity with the present day practices followed in the country. There will be mostly pyramid, stepped and chimney type. In very loose soils and wet locations R.C.C type of foundations may have to be provided to suit actual conditions. All the four footings of towers will be similar. No separate rate is admissible for dewatering of pits for laying concrete. Bidders shall quote for concreting including cost of dewatering. In case of river crossings it may be necessary to use well foundations or other special type of foundations based on actual conditions.

### 4.5 Classification of Foundations:
Classification of soil shall be made according to IS : 200 (Part I) 1974 for footing cast in open pits. The foundation designs for various types of Foundations as given below shall be adopted in the construction of all 132 kV & 220 kV Transmission Lines and shall be based on the following instruction. The Foundation Drawings as finalized by the Civil Engineering Wing for various soil conditions suitable for different Types of Towers being deployed in the construction shall be followed by all field officers strictly.

<table>
<thead>
<tr>
<th>SLN No.</th>
<th>Soil at the Location of Tower</th>
<th>Classification of Foundation to be adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Where normal dry cohesive or non-cohesive soils are met.</td>
<td>Dry</td>
</tr>
<tr>
<td>2(a).</td>
<td>Where sub-soil water is met at 1.50 meters or more below the ground level in normal soil</td>
<td>Wet</td>
</tr>
<tr>
<td>(b)</td>
<td>Where surface water could stand for long period with water penetration not exceeding 1.0 m below ground level (e.g. Paddy fields, Sugarcane fields)</td>
<td>Partially Submerged / Partially Black Cotton</td>
</tr>
<tr>
<td>3(a).</td>
<td>Where sub-soil water is encountered between 0.75 meter and 1.50 meters depth below ground level.</td>
<td>Fully Submerged Black Cotton</td>
</tr>
<tr>
<td>(b)</td>
<td>Where top layer of Black Cotton soil extends up to 50% of the depth with normal soil thereafter</td>
<td></td>
</tr>
<tr>
<td>Note</td>
<td>Where soil is clayey type, not necessarily black in colour, which shrinks when dry, swells when wet.</td>
<td></td>
</tr>
<tr>
<td>4(a).</td>
<td>Where sub-soil water Table is within 0.75 m depth from ground level.</td>
<td>Fully Submerged – Black Cotton</td>
</tr>
<tr>
<td>(b)</td>
<td>Where top layer of Black Cotton soil exceeds 50% and extends up to full depth or is followed by normal soil.</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>Where top layer is normal soil up to 50% of the depth but the lower layer is a Black Cotton soil</td>
<td></td>
</tr>
</tbody>
</table>

Note - In case of items 4(a), (b) & (c) above, the concerned Superintending Engineer (Civil) shall personally inspect and certify on soil classification and shall not delegate this responsibility to any sub-ordinate officers.
5(a) Where decomposed or fissured rock, hard gravel, kanker, limestone, laterite or any other soil of similar nature is met. Fissured / soft rock

(b) Where top layer of normal dry soil extends up to 85% of the depth followed by fissured rock without presence of water.

6(a) Where Hard rock is encountered at 1.5 m or less below ground level. Hard Rock

(b) Where Hard rock is encountered form 1.5 m to 2.5 m below Ground Level though Top layer is of normal soil

(c) Where chiseling, drilling and blasting is required for excavation.

Note – 3 While classifying foundation of Wet, Partially Submerged / Partially Black Cotton, Fully Submerged / Black Cotton foundations mentioned above, the worst conditions may be considered and not necessarily the conditions prevailing at the time of inspection. For instance, there are areas where sub-soil water rises when canal water is let-out in the field raising sub-soil water to a considerable degree. Similarly the effect of monsoon or when the nearby reservoirs are full should be considered and not the conditions prevailing in open season or summer when work is carried out normally. In all such cases, the Chief Engineer (Civil) shall personally inspect and certify the requirement of higher classification on case to case basis.

Note – 4 For critical locations of cut-point / Angle Towers, the classification of Tower Foundations may be at next higher type for ensuring safety of the transmission line as likely to be subjected to variable forces from time to time on account of change in season and climatic conditions. This shall be decided by the concerned Superintending Engineer (Civil) on case to case basis on personal inspection.

Note – 5 In case of highly collapsible & loose soils and river crossings, special design for foundations are to be made by Civil Engineering Wing for adoption on case to case basis.

Note – 6 At locations subjected to water logging, particularly in paddy fields, ponds, marshy areas, etc., the chimney of all stubs to be raised to 600 mm over the normal chimney being adopted in other cases. This shall be done after complete erection of towers as a separate item for identified locations.

In addition to the above, depending on the site conditions more varieties of foundations may be introduced suitable for intermediate conditions under the above classifications to effect more economy.

4.6 FOUNDATION CONCRETE:

(a) **Pad Concrete:** The cement concrete used for the base/pad of foundations shall be of 1:4:8 mix with 40mm well graded hard broken granite metal.

(b) **Foundation Concrete:** The cement concrete used for the foundations (frustrum/stepped and chimney) shall be of 1:2:4 mix ratio with 20 mm (3/4") hard broken granite metal.

The cement required for the work shall be supplied by the Contractor. The cement to be used for this line shall confirm the specification as per clause (20.1) of Section-5.

The sand used for the concrete shall be composed of hard silicon materials. It shall be clear and of a sharp angular grit type and free from earthy or organic matter and deleterious salts. The aggregate shall be of clean broken hard granite or other stone specified or approved by the Engineer. It shall be of hard, close grained quality. It shall also be as far as possible cube like, preferably angular, but not flaky, perfectly clean and free from earth organics or other deleterious matter. 20 mm aggregate shall be of size as will pass through 20 mm square mesh measured in clear.

The water used for mixing concrete shall be fresh, clean and free from oil, acids and alkali. Saltish or blackish water should not be used.

The concrete should be mixed as stiff as the requirements of placing the concrete in the forms or moulds with ease warrant and the degree to which the concrete resists segregation will permit. The quantity of water used should be the minimum.

In the interest of speedy execution of works and to obtain homogeneous mix of concrete, mechanical mixers and vibrators shall be used for mixing & consolidation of concrete, except in case of emergency (such as failure of mixer or where it is not practicable to have mixer up to the location) or for each concrete sub-base where hand mixing can be resorted.
Proper forms of moulds adequately braced to retain proper shape while concreting should be used for chimney or steps and slab portions. The mould should be made watertight so that cement cream will not come out leaving only sand and jelly consequently forming honeycombing in the concrete. The rate for concrete is inclusive of form box. Sufficient number of form boxes for each type of foundation should be made so that the works are not held up on this account.

The stub angle shall be free from rust and cleaned thoroughly and coated with cement paste made of one part of cement and 3/4 part of water (cement slurry) to a thickness of 1.6 mm (1/16”) before the cement concrete is laid against the stub angles. The coating with cement slurry shall be done each time to such a height so that concrete will be laid to that height before the cement wash becomes dry. The form boxes shall be cleaned and oiled before these are used for concreting.

The concrete shall be laid in 150 mm layers and consolidated well so that the cement cream works up to the top and no honey-combing is left in the concrete. After concreting the chimney portion to the required height, the top surface should be finished smooth, with slight slope towards the outer edge to drain off the rainwater falling on the copings. These copings and muffings should be done after the stringing is completed in respect of tension locations and such other locations as may be decided by the Engineer at site. For such locations an adhoc reduction of Rs.100/- per location will be made while billing for concrete and this will be released after the coping and muffings are completed.

In special cases, the TSTransco Engineer at site may authorise use of quick setting or rapid hardening compound in certain foundations. The cost of such quick setting compound will be paid extra as per actuals (on production of valid vouchers) if the contractor procures and uses it on the works, subject to the certificate of the Executive Engineer at site regarding its actual consumption for the works. In case the TSTransco supplies the quick setting compound required, no extra cost will be paid to the contractor.

Concreting is to be done continuously and monolithically, so that the subsequent layers are laid before the initial setting of the bottom layer begins. If, on rare occasions, fresh concrete is to be laid on old concrete in less than a week, the surface of the old set concrete should be chipped and cleaned thoroughly with wire brush and washed with a layer of thick cement slurry before the new concrete is laid. If, however the concrete is more than 10 days old, the top layer of the set concrete should be chipped and cleaned thoroughly with wire brush and fresh water, and layers of cement mortar 12 mm thick shall be laid only after giving a coat of cement slurry, as specified above to ensure proper bonding between old and new concrete.

In wet locations, the site must be kept completely dewatered both during the placing of the concrete and for 24 hours after completion. There should be no disturbance of concrete by water during this period. No extra rate will be paid for the dewatering and the rate for concrete is inclusive of dewatering charges. The forms of moulds shall not be removed before a lapse of about 24 hours after the completion of concreting. After removal of the forms, the concreted surface, where required, shall be repaired with a rich cement and sand mortar in the shortest possible time.

4.7 CURING AND BACKFILLING:

The concrete after it is 24 hours old shall be cured by keeping the concrete wet continuously for a period of 14 days after laying it. No separate rate shall be payable for curing and it is to be included in the rate for concreting.

The pits may be backfilled with selected and excavated earth sprinkled with necessary amount of water and well consolidated in layers not exceeding 150 mm thickness after a minimum period of 24 hours on completion of concreting. As the uplift strength of the foundation depends upon proper consolidation of backfilled earth extreme care shall be taken in this regard with special emphasis. Thereafter both the backfilled earth and exposed chimney top shall be kept wet for the remainder of the prescribed time of 14 days. The backfilling of foundations shall be so carried out that after one monsoon the level of the backfilled earth does not go below the surrounding ground level. However if any foundation settles below ground level after one monsoon it would be filled up by the contractor to be in level with the surrounding ground without any extra charges to the TSTransco. The Stub setting templates shall be opened only after the completion of backfilling. No separate rate shall be payable for backfilling and it is to be included in the excavation rate.
After backfilling, about 150 mm high earthen embankment along the sides of excavation pits will be made and sufficient water will be poured in the backfilled pits so that standing water remains above the backfilled earth for at least 24 hours. The uncovered concrete chimney above the backfilled earth shall be kept wet continuously for 14 days after concreting by providing wet empty gunny bags fully wrapped around the concrete chimney for curing and ensuring that the bags are kept wet by frequent pouring of water on them. The excavated earth left over should be spread within the four legs of the tower location.

4.8 GROUNDING:
Pipe earthing or counterpoise earthing has to be done at such tower locations where it is found necessary depending upon the type of soil met with at the location and the earth resistance at that location.

4.9 PIPE EARTHING:
At locations where pits can be excavated the towers shall be earthed by pipe earthing as per the drawing enclosed to this specification. The grounding shall be effected by making about 325 mm dia and 3850 mm deep pit at a distance of not less than 3650 mm diagonally away from the stubs and filling in the pits with finely broken coke having granule sizes not more than 25 mm thick. The coke shall be maintained up to a distance of 150 mm from the pipe on all sides. The top edge of the pipe shall be at least 600 mm below the ground level. The steel strip shall be buried not less than 600 mm deep from the ground level. The earth flat shall be of G.I. as specified in the drawing enclosed.

The rate for earthing is inclusive of cost of GI earthing set, coke, salt, excavation, back filling and measuring tower footing resistance.

5.0 COUNTERPOISE EARTHING:
In places of high resistivity soils especially in rocky locations special earthing arrangement shall be employed in the form of counterpoise earth to bring down the tower footing resistance to 10 ohms. The counterpoise earth shall consist of 4 Nos. 7/8 SWG galvanized steel wires running radially from all the four tower legs for a distance of about 15 to 30 meters. The galvanized steel wire shall be connected to the tower legs by galvanized steel lugs forged or compressed at its one end, complete, with 16 mm (5/8”) dia bolts and nuts, required for connecting the earthing to the tower and the counterpoise shall be buried radially from the tower base at 600 mm below/ground level. The lugs should be preferably buried in chimney portion of the foundation to avoid pilferage. The rate for counterpoise earthing is inclusive of excavation, back filling, measuring tower footing resistance and materials such as lugs and exclusive of 120 mtr of steel wire.

5.1 MEASURING TOWER FOOTING RESISTANCE:
The tower footing resistance of all towers shall be measured by the contractor using his own instruments in dry weather after the erection in the presence of the Engineer before stringing of earth wire and furnish the same to this office.

6.0 ERECTION OF TOWERS:
Towers shall be erected by piecemeal method on the foundations, not less than 14 days after concreting and after such time that the concrete has acquired its full strength. The towers shall be erected in workmanship like manner and its members shall not be strained or bent during the course of erection. Care shall be taken to see that the jointing surfaces are clean and free from dirt or grit. The tower erection shall be done in strict accordance with the approved drawings.

After initial erection, all tower bolts shall be checked to ascertain that all nuts are fully tight. Suitable means shall be adopted by the contractor to ensure that none of the bolts have been left out. The bolt threads shall be punched immediately after completion of the erection of each tower to avoid the nuts becoming loose. Punching of bolts shall be made by chamfering the threads with center punch in at-least three places equally placed on the contact surface of bolts and nuts. All the bolts & nuts in the towers upto the height below the bottom cross arm level including the bolt connecting the cross bracings at the bottom cross arm level, shall be seam welded in the upper half round portion (25mm length) of the bolt & nut circumferentialy by using 10 guage welding rods. This shall be done immediately after the tower is erected and its verticality is checked and found to be within the limits. After seam welding, one coat of zinc rich paint shall be applied on the seam-welded surface matching the galvanised portion of the tower.
The contractor shall entirely be responsible for the correct erection of all towers as per the approved drawings, and their correct setting on an alignment approved by the Engineer. If the stubs or superstructures after erection are found to differ from approved drawings or to be out of alignment, the contractor shall dismantle and re-erect them correctly at his own cost without extension of time. The towers must be truly vertical after erection and no straining will be permitted to bring them to verticality. Tolerance allowed for verticality is 25 mm in a height of 9.15 meters i.e., 1 in 360 of tower height. Verticality of each tower shall be measured by the contractor and furnished to the Executive Engineer.

Each tower shall be fitted with number plate, danger plate and phase plate. Anticlimbing devices shall be provided on towers erected at all railway crossings, important road crossings etc. Bird guards shall be provided on suspension towers. These accessories shall conform to the relevant standards.

7.0 **INSULATOR HOISTING:**

Suspension insulators shall be used upto deviations of 2 degrees on all tangent type towers in the line and tension insulators on all angle type towers.

For ensuring insulation co-ordination the suspension or tension strings on approach and terminal towers near the substation ends up to a length of 1.5 kilometers shall be provided with adjustable arcing horns on tower side and fixed arcing horns on line side, keeping the arcing gap as may be stipulated by the Engineer at site.

Insulator strings shall be assembled on the ground. These shall be cleaned and examined before hoisting. They shall be kept on tarpaulins at the tower site so that, once they are cleaned there is no scope for the insulator to get contaminated. All accessories shall be properly fitted. It shall be ensured that all current carrying parts are smooth, and without dirt, cracks, or chips. Those having glazing defects exceeding half-centimeter square shall not be used and such insulators shall be accounted for under 1% wastage allowed.

8.0 **STRINGING OF CONDUCTOR AND EARTHWIRE:**

The stringing of the conductors and earth wire shall be done by a standard method used for such lines, which shall be indicated in the bid. The bidders shall give details of the stringing method they propose to follow and indicate its adaptability and advantages. They shall also indicate the tools and equipment required for stringing by the method proposed by them. The contractor shall use his own stringing and erection tools and other equipments. Before the commencement of the stringing, the contractor shall submit the stringing charts for the conductor and earth wire showing the initial and final sags and tension for various temperatures and spans along with equivalent spans in the line, for approval by the Engineer.

The contractor shall be entirely responsible for any damage to the towers or the conductor during stringing. He shall also be responsible for proper distribution of the conductor drums to keep the numbers and lengths of cut pieces of the conductor to the minimum. Pieces leftover shall be accounted for under 1% wastage allowed.

8.1 **HANDLING OF CONDUCTOR:**

The contractor shall be entirely responsible for the proper handling of the conductor and earthwire drums in the field. Handling and transporting of the conductor drums shall be carried out in such a manner as to minimise the possibility of damage from abrasion through rough handling, or dirt and grit getting into reel and on the conductor, injury to conductor etc; particular care shall be taken at all times to ensure that the conductors do not get kinked, twisted or abrased in any manner. Drum lifting jacks shall be used for paving out conductor.

Trestles shall be provided in the spans in which the conductor is proposed for paving out and it shall be ensured that at no time the conductor touches the ground (whether hard or soft). If the conductor is damaged, the section affected shall be replaced or repaired by putting joint or using repair sleeve or polishing with emery cloth, so as to give satisfactory corona performance. At all stages of construction proper care shall be taken so that the conductor surface is smooth enough to give satisfactory corona and radio-interference performance.

All equipment used in handling and/or transporting the conductor, such as grips, pulleys, slings, cable car etc; shall be so designed and maintained that the surfaces which come into contact with the conductor, are kept free of foreign matters or defects which may lower the corona inception voltage of the conductor to an unacceptable level.
8.2 PULLING IN OPERATION:

The earthwire shall be strung and securely clamped to the towers before the conductors are drawn up, in the order of the top conductor first, then the middle and the bottom conductor at the end. It shall be ensured that all the conductors of one section should be identically tensioned. The pulling of the conductor into the travelers comprising aerial and ground rollers shall be carried out in such a manner that the conductor is not damaged or contaminated with any foreign substance and that it may not be rubbed with the rough ground surface. The travelers shall have a size and shape most suitable for the type of stringing and size of conductor involved and as recommended by the conductor manufacturer. These shall be approved by the Engineer before use. The travelers surface in contact with aluminum surface of conductor shall be of such a material that conductor is not damaged, like neoprene rubber, aluminum, or stainless steel. These shall be equipped with high quality ball or roller bearings for minimum friction. They should be inspected daily for free and easy movement in blocks during stringing and sagging.

During pulling out operation the tension in each conductor and earthwire shall not exceed the designed working tension of the conductor and the actual prevailing temperature. After being pulled, the conductor and earthwire shall not be allowed to hang in the stringing blocks for more than 96 hours before being pulled to the specified sag. During the time the conductors and earthwire are on the stringing blocks, before sagging in, it shall be ensured that the conductors and earthwire are not damaged due to wind, vibration or other causes.

8.3 SAGGING IN OPERATION:

The conductors and earthwire shall be sagged in accordance with approved stringing charts before they are finally attached to the towers through the earthwire clamps for the earthwire and insulator strings for the conductor.

The conductor shall be pulled up to desired sag and left in travelers for at least one hour after which the sag shall be rechecked and adjusted, if necessary, before transferring the conductors from the travelers to the suspension clamps. The conductors shall be clamped within 36 hours of sagging in. Prestressing of conductor is not required. Instead, the conductors should be strung to a sag of one inch to a foot less than the sag shown on the final sag charts provided by the erection contractor.

In respect of twin Moose conductors the adjustment of the sub-conductor sag by means of sag adjustment devices provided in the insulator string shall invariably be not permitted at the time of stringing of conductors. The sag adjustment plates shall be kept in fully open position at the time of stringing of conductor.

The sag will be checked in the first and last spans of the section in case of sections up to eight spans and in one intermediate span also for sections with more than eight spans. The contractor shall be responsible for any damage caused to the towers or to the conductors through overstressing during stringing. Dynamometers shall be used in checking the tension in the conductors and earthwire and these instruments shall be periodically checked with a standard dynamometer. The sag shall also be checked when the conductors have been drawn up and transferred from aerial rollers to the insulator clamps.

The stringing block, when suspended on the transmission structure for sagging, shall be so adjusted that the conductor on the traveler will be at the same height as the suspension clamp to which it is secured.

At sharp vertical angles, the sag and tension shall be checked on both sides of the angle. The conductor and earth wire shall be checked on the travelers for equality of tension on both sides. The suspension insulator assemblies shall normally assume vertical position when the conductor is clamped. Sagging operation shall not be carried out under wind, extremely low temperature, or other adverse weather conditions, which prevent satisfactory sagging.

The erection contractor should ensure that

i) Any departure from the correct sag in any span does not exceed 4 per cent.

ii) The sag of any conductor does not depart by more than 3 percent from the mean sag of all the conductors in the same span.
8.4 CONDUCTOR DAMAGE AND REPAIR:

If the conductor is damaged for whatever reason and the damage is not repaired by repair sleeves or by rubbing with emery cloth, it shall be brought to the notice of the Engineer and shall not be used without his approval. Even repairing of conductor surface shall be done only in case of minor damages, scuff marks etc., which are safe from both electrical and mechanical points of view. The final conductor surface shall be clean, and smooth, without any projections, sharp points, cuts or abrasions etc., for giving satisfactory corona and R.I performance.

All the joints on the conductor or the earth wire shall be of compression type, in accordance with the recommendations of the manufacturers for which the necessary tool and equipments like compressors and dies, grease guns, presses etc., shall have to be arranged by the contractor. These shall be made in the best workmanship like manner and shall be perfectly straight and having maximum strength. Each part of the joints shall be cleaned by wire brush to make it free of rust or dirt etc., and properly greased before the final compression is done with the compressors.

All joints or splices shall be made at least 30 meters away from the structures. No joint or splice shall be made in spans crossing over main roads, railways, small rivers or in tension span. Not more than one joint per conductor shall be allowed in one span. The compression type fittings used shall be of self-setting type or care shall be taken to make the cable to indicate when the fitting is centered properly. During compression or splicing operation the conductor shall be handled in such a manner as to prevent lateral or vertical bearing against the dies. Care shall be taken to protect the conductor from scratches, abrasions or other damages. After pressing, the aluminum sleeve shall have all corners rounded, burrs and sharp edges removed and smoothened.

8.5 STRINGING RATE:

The stringing rate for stringing of the conductors per route length of line shall include paving, stringing, tensioning, clamping and jointing of conductors as per schedules and fitting of all necessary accessories, specified above or otherwise, which are normally required or are usual with such lines.

Similarly the rate for stringing of the earth wire shall also include the stringing and fixing of the necessary accessories like suspension and tension clamps, earth bonds, compression joints etc, as required. Wherever necessary ground clearance has to be measured to ensure obtaining adequate ground clearance and the rate should include this also. The performance of the jumpers on the angle towers will be watched during the period of performance guarantee and for the failure of a jumper during this period resulting in the breakdown of the line an amount of Rs.5,000/per jumper will be recovered from the bills of the contractor due for payment by the TSTRANSCO against any of the works executed by him for the TSTRANSCO.

8.6 ACCESSORIES:

Accessories like vibration dampers, armour rods etc., for the conductors shall also be fitted on the line as desired by the Engineer according to the recommendations of the manufacturers. Armour rods shall be provided at all suspension supports of the conductors and vibration dampers shall be provided on both sides of the suspension and tension supports at suitable distances from the supporting points for each phase conductor. While fixing these on the line care must be taken that conductor is not damaged in any way and no sharp edges are left at any point. All accessories shall be clean, smooth and in perfect condition before fitting.

8.7 FINAL CHECKING, TESTING AND COMMISSIONING:

After completion of the works final checking of the line shall be done by the contractor to ensure that all the foundation works, tower erection and stringing have been done as approved by the Engineer, and also that they are complete in all respects. All the works shall be thoroughly inspected, keeping in view the following main points.

I. Sufficient backfilled earth is lying over each foundation pit and it is adequately compacted.

II. Concrete chimneys and their coping are in good and finely shaped conditions.

III. All the tower members are correctly used strictly as per the drawings and are free from any defect or damage, whatsoever.
IV. All the bolts are fully tightened and they are properly punched and half-round welded as per contractual provisions.

V. The stringing of the conductors and earth wire has been done as per the approved sag and tension charts and desired clearances are available.

VI. No damage, minor or major to the conductor, earth wire, accessories and insulator strings still unattended are noticed.

VII. The jumpers provided at the cut points are connected rigidly to the tension hardware utilizing all the jointing bolts provided for the purpose.

After final checking, the line shall be tested for insulation in accordance with tests prescribed by the Engineer. All arrangements for such testing or any other test desired by the Executive Engineer shall be done by the contractor and necessary labour, transport and equipment shall be provided by him. Any defects found out as a result of such test, shall be rectified by the contractor forthwith without extra charges to the TSTRANSCO.

The contractor shall submit a report to the above effect to the Executive Engineer. In case it is noticed later that some or any of the above are not fulfilled, the TSTRANSCO’s Engineers will get such items rectified through other agencies and recover the cost of such works from the bills payable to the contractor against the contract or from retention amounts. Recoveries will be affected in respect of the following also in addition to the above.

   i) For each bolt hole in a tower member which is not as per design : Rs.10/-
   ii) For each jumper failure at a cut point during the performance guarantee period. : Rs.5000/-

After satisfactory tests on the line and on approval by the Engineer the line shall be energized at full operating voltage before handing over.

8.8 **RECTIFICATION OF DEFECTS DURING THE DEFECTS LIABILITY PERIOD:**

After commissioning and handing over of the line to the TSTRANSCO, the contractor shall arrange for thorough patrolling of the line during the first six months of the defects liability period so that the defects if any noticed during that period may be rectified by the contractor free of cost to the TSTRANSCO without having to wait for the TSTRANSCO to suggest such rectifications. During the balance period however, the contractor shall arrange for rectification of the defects free of cost to TSTRANSCO as and when pointed out by the TSTRANSCO.

8.9 **EXECUTION OF WORKS RELATING TO POWER LINE CROSSINGS AND RAILWAY CROSSINGS:**

Works such as erection of towers underneath an existing power line and paving out of conductors and earthwire and stringing the power line crossing span or a railway crossing span, will have to be done only after receipt of approval from the concerned officer, which, sometimes, may not match with the programme of the contractor.

In such cases, the contractor shall execute such works as and when approvals are received. His rates for tower erection and stringing shall take into consideration, such contingencies also.

* * *

**GENERAL TERMS AND CONDITIONS**

1.0 **General:**

The work to be performed under this contract consists of providing labour, materials, plant, equipment supplies including POL transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work (except items specified to be furnished by the Engineer-in-charge) all in strict accordance with the drawings, schedules and specifications, including revisions and amendments there to and such detailed drawings as may be provided by the Engineer-in-charge during the execution of contract.

2.0 **Scope:**

*The scope of work covered for the work of* : Shifting of 220KV Gachibowli-Erragadda-Shapurnagar-DC line at Sy. No. 5 Part, Block-2 of Izzathnagar Village, Serilingam Pally Mandal, Ranga Reddy District for HMDA
3.0 **Working conditions:**

The contractor shall take special note of the following aspects of restricted working conditions while executing the work and should quote his rates accordingly. The contractor shall ensure the following strictly at no extra cost under all conditions.

a) The work shall be carried out with least disturbance and inconvenience to the office staff and visitors.

b) Necessary precautions and safety arrangements shall be taken for carrying out the work safely and effectively without causing damage to the existing structure and to prevent accidents as directed by Engineer-in-charge.

c) Minimum area to the extent possible shall be used for stacking of construction materials and machinery, duly leaving parking space for TSTRANSCO vehicles and employees vehicles, as per the approval of Engineer-in-charge.

d) It will be the tenderer responsibility to satisfy himself that sufficient quantities of construction materials required for the works shall exist in the borrow areas or quarry sites. The department does not accept any responsibility either in handing over the quarries or procuring the materials of any other facilities. The tenderer will not be entitled for any extra rate or claim for the misjudgment on his part for quantity and quality of materials available in the quarries.

e) The contractor shall make his own arrangements for erection of barricades around the area earmarked for stacking the construction materials, construction Tools & tackles and equipment as directed by Engineer-in-charge.

f) The working hours for certain works may have to be adjusted in such a way that cause least disturbance to the working of the office in strict compliance to the instructions of the Executive Engineer-in-charge, whose decision shall be final.

g) The contractor shall make good all losses/damages suffered by structures or persons connected or not connected with work or TSTRANSCO as a result of the activity of the contractor. The contractor shall take necessary insurance covering the same.

4.0 **Substandard work/material:**

The contractor shall promptly remove from the premises all materials/work condemned by the Executive Engineer/Civil or his authorized representative, as failing to conform to the contract, whether incorporated in the work or not, and the contractor shall promptly replace and re-execute such work in accordance with the contract and without expense to the TSTRANSCO. If the contractor does not remove such condemned work and materials within three days of written notice to him the owner may remove and the expenses of such removal within ten days time thereafter will be debited to contractors account. The owner may upon ten days written notice sell such materials at auction or private sale and shall account for the net proceeds thereof after deducting all the costs and expenses that should have been borne by the contractor.

5.0 **List of Approved Brands / makes for procurement of materials:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Material</th>
<th>Approved brands</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Reinforcement and structural steel</td>
<td>(1) VSP (2) SAIL and (3) TISCO (4) ISCO</td>
</tr>
<tr>
<td>3</td>
<td>Earth Flats- MS &amp;GI</td>
<td>TSTRANSCO approved re-rollers.</td>
</tr>
</tbody>
</table>

The contractor shall invariably use the steel angles manufactured by SAIL, VSP, TISCO and ISCO only for the fabrication of Line and Substation structures. The earth flats which are not procured by the above primary producers can be procured from any other TSTRANSCO re-rollers.
1.0 Technical Specification for Common Building Materials:

The aggregates such as sand, metal shall be obtained from the source as indicated in lead statements.

1.1 Indian Standards:

The aggregates both fine and coarse shall comply with the requirements of IS: 456 for concrete and IS: 383 for sand for use in rendering, plastering and mortar except as hereinafter stated and shall be delivered to and maintained at the site, clean, washed and free from dirt.

1.2 Samples:

Samples shall be submitted to the Engineer and all aggregates used in the work shall be at least equal to the approved sample.

1.3 Fine Aggregate:

The fine aggregate for concrete, shall consist of naturally occurring and graded in accordance with the requirements of IS.383 for grading Zone-2 or grading Zone-3 except that no particle shall exceed 3/16 inch. It shall be free from excessive sharpness. Fine aggregate for cement mortar and rendering plastering shall comply with IS: 383.

1.4 Course Aggregate:

Coarse aggregate shall be graded to produce sound concrete and for reinforced concrete shall be such that at least 5% by weight will pass a mesh of a size 1/4 per inch less than the minimum lateral distance between the reinforcing bars or 1/4 inch less than the minimum cover, whichever is smaller.

1.5 Water for Concrete:

Clean fresh water shall be used for mixing concrete grout and mortar and curing. The water used for mixing and curing shall be free from deleterious matter and acids and alkaline substances in a solution or suspension. Potable water shall generally be used for mixing and curing concrete.

1.6 Water for Drinking:

All potable water shall be free from deleterious matter and shall be equal to or better than the minimum standard acceptable to the local and state authorities. Filtration and chlorination by approved means shall be installed as necessary to obtain the required standard. Storage and distribution of potable water shall be such as to prevent contamination.

1.7 Cement:

Ordinary Portland cement of Grade 43 manufactured as per IS 8112 of 1989 shall only be used.

Storage, certification, delivery and testing of the cement shall conform to IS: 269, IS: 8112 or the latest issue.

IS certification mark is obligatory.

Cement procured from major cement manufacturing plants such as M/s Raasi, M/s Vishnu, M/s Andhra cement co., ACC, CCI, M/s L&T and Coramandel, Priyadarshini, Madras Cements etc will only be accepted for which prior approval shall be obtained from the employer. Copies of invoices and test certificates from the cement manufacturers shall be submitted by the contractor to the Engineer and his clearance obtained before actual use. Such clearance will be provided within a maximum period of one week.

1.8 Reinforcement:

Steel required for reinforcement will be procured by the contractor. The contractor shall workout the requirement immediately after taking over the site and receipt of working drawings and take the approval of the site Engineer and arrange for procurement.
2.0 Technical Specification for Excavation:

This clause covers excavation to be done for all the civil works. Excavation rates for all soils for foundations of (i) structures (ii) walls for control room shall be quoted. This rate should be inclusive of dewatering, shoring & shuttering required if any. Sides and bottoms of excavation shall be vertically true. Blasting material for excavation in Hard rock required if any has to be procured by bidder himself. Necessary assistance in the form of approval for procurement of the material will be given by the Board to the extent possible. All rules under explosive act shall be followed by the successful Bidder. Blasting work shall be done only after approval by the site engineer during specified hours. The person in charge of blasting shall satisfy himself that all blasts have exploded before working people are permitted to re-approach work site. Withdrawal of unexploded charge will not be permitted under any circumstances. Unexploded charge shall be flooded with water and the hole marked in a distinguished manner. Another hole shall be drilled at a distance of about 450 mm of old whole in the direction of unexploded charge and fired in usual way. This process shall be continued till the original blast is exploded. Excavation in decomposed or soft rock shall be carried out by crow bars or pic-axes or pneumatic drills etc. If he desires to do blasting, he shall obtain permission of site Engineer and do accordingly.

The rock obtained during excavation is the Board’s property and it shall not be used under any circumstances by the contractor. Rock excavated shall be stacked by the successful tenderer at a convenient place within the Substation switchyard as directed by the Engineer-in-charge at no extra cost.

3.0 Technical Specification for Back Filling:

After completion of foundation, footings and walls and other construction below the elevation of the final grades and prior to back filling, all forms of temporary shoring, timber, etc., shall be removed and the excavation cleaned of all trash, debris and perishable materials. Back filling shall begin only with the approval of the Engineer-in-charge. Back fill shall not be dropped directly upon or against any structure or facility where there is danger of displacement or damage. Backfill shall be placed in horizontal layers not to exceed 15 cm in thickness. Each layer shall be compacted with proper moisture content and with such equipment as may be required to obtain a density equal to or greater than 95% of maximum as determined by the relevant Indian Standards. Trucks or heavy equipment for depositing or compacting back-fill shall not be used within 1.5m of the foundation/structures, or other facilities which may damage by their weight or operation. The methods of compaction shall be subject to approval of the Engineer-in-charge. Backfill adjacent to pipes shall be hand placed free of stones, concrete, etc., compacted uniformly on both sides of the pipe and where practicable, to a depth of 300 mm over the top of pipes, when tampering around piping care should be taken to avoid unequal pressures.

4.0 Technical Specification for Cement Concrete:

4.1 Code of Practice:

Except where otherwise specified, described or directed all concrete and reinforced concrete work shall be carried out in accordance with Indian Standard 456 Code of practice for plain and reinforced concrete.

4.2 Gauging Concrete:

Aggregate shall be measured in proper gauge boxes. When measuring the fine aggregate due allowance shall be made for the moisture content and the bulk adjusted to suit the mix. The methods adopted for gauging the concrete materials shall have the approval of the Engineer-in-charge.

4.3 Concrete Proportions:

The concrete shall be of nominal mix as specified in the drawings or in the bill of quantities.

4.4 Consistency:

The quantity of water used shall be sufficient to produce a dense concrete of adequate workability for its purpose, which will surround and properly grip all the reinforcement.
4.5 **Crushing Strength:**

The crushing strength of the concrete should be as specified in IS 456 for the proposed mixes.

4.6 **Gauging Water:**

The General arrangements for the supply of water for mixing concrete shall be to the satisfaction of the Engineer who will determine the quantity of water to be employed in the mix according to the degree of moisture in the aggregate. The quantity of water thus determined shall be accurately measured for each separate mixing in a suitable container.

4.7 **Mixing Concrete:**

Concrete shall be thoroughly mixed to a uniform consistency in the mixing machines of approved types. Mixing shall continue until the cement is thoroughly distributed throughout the mass, and shall last at least two minutes or for 80 turns of the mixer after the whole of the water has been added.

Any concrete showing signs of initial setting before being deposited shall not be used in the works and shall be removed from the site. The concrete shall be discharged from the mixer on to a level watertight platform or floor or into a water tight receptacle. Normally hand mixing of concrete will not be allowed but where the total quantity of concrete is considerably small, the mixing may be done by hand subject to the approval and entirely at the discretion and satisfaction of the Engineer-in-charge.

4.8 **Qualified Engineer:**

The contractor shall employ qualified Engineer with a qualification of not less than a degree in Engineering who shall be responsible for all concreting carried out for the works. He shall be available at site at all times when concreting is being carried out.

4.9 **Concrete in Unsuitable Weather:**

In the event of rain, storms or other severe weather conditions arising, concreting shall be stopped and appropriate temporary stop ends vee grooves etc., placed as may be necessary. To meet such circumstances, the contractor shall always have in readiness on the site approved framed sheeting tarpaulins etc., for the protection of newly placed concrete. Should any concrete be damaged due to rain, streams or other weather conditions, the Engineer may order the cutting out /replacement of the damaged concrete at the expenses of the contractor.

4.10 **Form Work:**

This clause is applicable for form work/ centering etc for all the civil works under the specification.

a) The form work shall conform to clause 10 of IS: 456 latest. The contractor entirely responsible for the sufficiency and efficiency of the form work, which term includes moulds, and also for the safe removal of the same. Before commencing the work he shall submit for the approval of the Engineer, details of the form work he proposes to use but such approval shall in no way relieve him of any of his responsibilities for the sufficiency and efficiency of the work and that it will be resistant to the strains imposed on it in vibrating the concrete and will retain all the fines in the concrete as may be necessary to provide the desired concrete surface.

b) The form work shall be designed and arranged so that it will not settle under the load and can be stripped and removed without causing any blemish or jar to the concrete.

c) For beam soffits the contractor shall provide cambers or such other form which will ensure that undersides of beams are truly horizontal or cambered to the extent shown in the drawings.

d) All forms shall be securely braced and supported to prevent any sagging or bulging during construction. In no circumstances shall wire ties be used. All chamber and radius strips. Liners and cores shall be provided where necessary and shall be due to space and securely fixed. All forms shall be fixed to the proper line and trued up immediately before depositing the concrete. All joints shall be close enough to prevent leakage liquid from the concrete.
e) Form work for all exposed faces of mass concrete and for all faces of reinforced concrete shall consist of approved material so finished as to produce the concrete surface, finish specified without any loss of fines and without honey-combing or bulges etc., strutting shall be of such design to allow accurate adjustment and easy removal.

f) Strutting of formwork against the sides of the structures that is subject to movement or vibration will not be permitted.

g) The inside faces of the forms shall be treated with mould oil or other approved preparation in either case, that will not have deteriorating effect either the strength or prevent the oil or other approved preparation coming into contact with the reinforcement.

4.11 **Removal of Form Work:**

The length of time between concreting and the removal of the formwork is the sole responsibility of the contractor. It shall, however, be competent, to the Engineer to require a minimum length of time. For structure foundation minimum time limit specified is 24 hours for removing formwork from date of placing concrete.

4.12 **Stop Ends:**

The position of temporary stop ends for vertical joints shall be as approved by the Engineer. Shuttering to form the stops shall be firmly fixed and secured round the reinforcing bars. Such concrete, as passes through the stops shall be hacked off and removed as soon as the concrete has set.

4.13 **Construction Joints:**

Recesses of approved size and type shall be formed in construction joints where required by the Engineer in order to form a key with the following concrete. The cost of all shuttering to construction joints shall be deemed to be included in the rates named in the priced bill of quantities. Before Depositing any concrete resting or abutting on work previously carried out the surfaces and ends of the existing work shall be thoroughly racked to such an extent that no portion of the previous surface remains. Thus roughened surfaces shall be thoroughly cleaned off, brushed and watered immediately before the succeeding operations are commenced. The roughened surfaces shall be coated with cement/sand mortar 1/2 inch thick immediately before the concrete of the next layer is placed (special care shall be taken to put the mortar and fresh concrete thoroughly up against the hardened concrete).

4.14 **Cleanliness of Form Work:**

Before concreting is commenced all formwork shall be scrupulously cleaned and wetted, and the contractor shall adopt all necessary measures to ensure that all debris, dirt, wash water and other refuse is removed. The reinforcement and form work will then be inspected by the Engineer and concreting shall not be commenced until the Engineer gives permission. Such inspection shall not however relieve the contractor any of his responsibility for the correctness of the work in every respect.

4.15 **Execution of Concrete Work:**

Section limits: Concreting shall be carried out in Sections, not exceeding the limits specified for particular work.

4.16 **Casting Programme:**

The contractor's casting programme shall be such that such section of work can be satisfactorily completed in one operation after permission has been given to proceed. No claim for overtime working to complete a casting programme will be entertained.

4.17 **Conveyance of Concrete:**

The concrete shall be conveyed from the mixer to its place in the works as rapidly as possible and in such a manner that there shall be no separation or loss of the ingredients. In no circumstances shall more than half an hour lapse between the time when water is added to the mix and the time when the concrete is finally consolidated in position. The use of concrete distributing chutes at an angle of more than 45 degrees from the horizontal will not be permitted without the prior written sanction of the Engineer. In no case shall concrete be dropped from barrows or otherwise from a height of more than one and half meters. The arrangements to be adopted by the contractor for conveying and depositing concrete shall be subject to the approval of the Engineer.
4.18 **Depositing Concrete:**
Before any concrete is put in, the contractor shall carryout any filling of pockets or trimming the sides where found necessary to suit the level and line of the concrete to be laid as directed by the Engineer at site. Unless otherwise approved, concrete shall be placed in one operation to the full thickness of members.

4.19 **Consolidating Concrete:**
Concrete normally shall be consolidated by means of sufficient number of mechanical vibrators. Hand ramming and tamping will only be allowed where specified or by the prior permission of the Executive Engineer. Hand ramming and tamping where permitted shall be sufficient and efficient such as to produce uniform consolidation.

4.20 The concrete shall be thoroughly worked around reinforcement and against shutters so that all entrained air is duly expelled and the concrete surface when stripped be found to be good and free of the formation of air pockets, honey combing or other defects.

4.21 The concrete shall be worked into position where placed and not allowed to flow, for sloping beams the work of depositing concrete shall start from the lower end and work upwards.

4.22 Except where arrangements, approved by the Engineer are made for placing concrete under water, the areas on which concrete is to be deposited shall be made and kept free from standing water during concreting operations and running water crossing or entering such areas shall be brought under control before concreting is commenced.

4.23 **Finish of Concrete Surfaces:**
Immediately any wrought or metal faced for work is struck the surface of the concrete will be inspected by the Engineer and after any remedial work directed or permitted by the Engineer has been completed to his satisfaction, the contractor shall remove all form marks and other imperfections in order to give uniform appearance. The cost of this work shall be included in the rates for concrete.

4.24 Floor surfaces shall be worked to a smooth even finish to correct levels of falls as indicated in the drawings or as directed.

4.25 Where so directed, concrete floor surfaces shall be treated with silicate of soda grade P.84 diluted with four times its volume of water applied to the work with a watering can or spray and afterwards spread evenly with a mop or brush. Twenty-four hours later a second application shall be made and, if any surface still appears porous, further applications of the solution shall be given until the work will absorb no more. Any excess of liquid on the surface after the last coat has been absorbed shall be removed and the surface allowed drying. When dry it shall be washed with the plain water.

4.26 **Curing:**
The curing period shall commence immediately after the concrete is finally trowelled or secreted and continue for a period of 21 days. The top and side surfaces of concrete shall be kept moist and be protected from the direct rays of the sun during the period. The contractor shall submit to the Engineer, his proposals for ensuring continuous protection of the concrete during the curing period.

4.27 **Defective Work:**
Concrete which is defective from any cause whatsoever shall, if so directed by the engineer, be cut out and the work reconstructed at the successful bidder's cost. No concrete thus cut out shall be reused.

4.28 The faces of the concrete work shall be sound and solid, free from honey combing. No 'Patching' of any concrete facing will be allowed without the express written permission of the Engineer.

5 **Technical Specification for Reinforced Concrete:**
The preceding clauses relating to concrete generally shall be read in conjunction with these following:

5.1 **Mixes:**
The mixes of concrete shall be as specified in the bill of quantities or shown in the drawings.
5.2 **Cover to Reinforcement:**

The reinforcement shall in all cases be covered with no greater and no less than the minimum thickness of concrete specified shown in the drawings. Where two bars cross, the outer should have the minimum cover and no more.

5.3 **Form Bolts:**

Any form bolts that are in the concrete shall be withdrawn when the forms are stripped. They shall not be placed within 2 inches of any steel reinforcement, so that the holes they leave do not reduce the effective cover on the steel.

5.4 **Bending Reinforcement:**

Bends, cranks or other on reinforcing bars shall be carefully formed exact in accordance with the drawings, otherwise, all bars shall be truly straight. Bends shall be made cold round a former having a diameter of at least four times, the diameter of the bars. Heating of bars for any purpose what so ever will not be allowed.

5.5 **Splicing Reinforcement:**

Where splices or overlapping in reinforcement are required the bars shall be provided with such splices or overlaps shown in the drawings. No bars may be jointed by welding unless special permission in writing has previously been given by the Engineer, in applying for such permission the contractor shall supply full details of the method he proposes to use.

5.6 **Fixing Reinforcement:**

The number, size, form and position of all steel reinforcing bars, ties, links, stirrups and other parts of the reinforcement shall be exact in accordance with the drawings, and such parts shall be kept in the correct positions in the forms without displacement during the process of working the concrete into place. Space bars, supporting stools and distance pieces to maintain the reinforcement in the correct position shall be provided by the contractors as directed by the Engineer, without any extra cost to the Board.

5.7 The use of timber blocks for welding the steel of the forms will not be permitted.

5.8 All straight bars shall be fixed parallel to each other and to the sides of the forms. Any ties, links or stirrups connecting the bars shall be tied so that the bars are properly braced, the inside of their curved parts shall be in actual contact with the bars round which they are intended to fit.

5.9 **Binding Wire:**

Bars shall be bound together with black annealed steel wire No.16 S.W.G thick and the binding shall be done tight with proper pliers or automatic binders. The free ends of the binding wire shall be sent in walls. The rate of reinforcement should be inclusive of cost of binding wire.

5.10 **Steel To Be Clean:**

All steel reinforcement before the concrete is deposited shall be clean and free from all loose mill scale, dust and loose rust, and coatings such as paints, cement, grout etc.

5.11 **Depositing:**

No concrete shall be deposited until form work and reinforcement has been inspected and approved by the Engineer. Care shall be taken that the steel reinforcement is thoroughly surrounded by the concrete and that no voids or cavities are left. Consolidation of the concrete, either by hand or mechanical vibration, shall be to the satisfaction of the Engineer, and under no circumstance shall consolidation obtained by heavy impact on the form work.

5.12 The top of each layer of concrete shall be laid parallel to the longitudinal axis of the work and shall not be at a slope to it.

5.13 **Defective Work:**

If, on the removal of the shuttering any honey combing or other defective workmanship shall be found in the face of the concrete, the Engineer will decide whether, in his opinion, the strength of the member is affected, and whether 'Patching' will be permitted in which case the defective concrete shall be cut out to the extent ordered by the Engineer, and the remaining concrete thoroughly cleaned and made good. If before or during this operation, any reinforcing bar is exposed, the cutting out shall continue right round the bar, to form a key. Where reinforcing bars are so exposed, care shall be taken to ensure that they are not damaged by the tools used for cutting out the concrete.
5.14 If, in the opinion of the Engineer, the strength of the member is affected by the defective materials or workmanship, he may direct that the whole members shall be removed and a new member constructed by the contractor without charge. The contractor may, however, elect to carry out load test at his own cost, and if the load test shows results sufficiently satisfactory to the Engineer, the member may be left in place, provided all surface defects are made good by the contractor without charge. The weight of the test load will be determined by the Engineer.

5.15 If 'Patching' is discovered which has been carried out without the permission of the Engineer, the whole member affected will be liable for rejection, in which case the member shall be removed and a new member constructed by the contractor, all without charge.

5.16 **Scaffolding:**

The rates quoted by the tenderers for all civil works shall be inclusive of scaffolding charges required if any. Materials and labour required for scaffolding shall be arranged by the contractor himself.

6.0 **SAFETY PLANS:**

The following safety plan shall be observed and followed by the contractor for execution of the work safely.

6.1 **GENERAL SAFETY RULES FOR FOUNDATIONS, TOWER ERECTION & STRINGING, EARTHING:**

1. Steel/Aluminum/Wooden ladders of 3.5 length shall be used for movement of labour in excavation, stub setting and concreting works. Keep cement out of the eyes.

2. All polypropylene ropes and slings, shackles proposed to be used shall be tested and inspected thoroughly before use.

3. Walkie talkie sets shall be used for effective communication.

4. Binoculars shall be used for closer view.

5. Red and Green flags shall be used for illiterate communication.

6. Pilot wires and joints shall be tested and thoroughly inspected before use.

7. Ropes and guy wires shall be tested and thoroughly inspected before use.

8. Ensure travellers in frictionless and good condition.

9. Load rating of stringing, pulling lines, conductor grips, load bearing hardware and accessories, rigging and hoists shall not be exceeded.

10. Traveller grounds should be installed at the first and last tower between tensioner and puller, when stringing in proximity to energized lines. Traveller ground at a maximum distance not exceeding 3 KM. Personnel shall never be in series with a ground lead. Traveller grounds shall have a suitable grounding stub located in an accessible position to enable placing and removing the ground clamps with hot sticks when necessary.

11. The conductor reel stands shall have breaking device to prevent over running and backlash as the conductor is pulled out.

12. The location of the puller, tensioner and intermediate anchor sites shall be selected such that the structures are not over loaded.

13. Slack shall be removed from all anchor lines prior to loading to minimize the possibility of equipment movement or impact loads to the anchors.

14. All equipment, conductors, anchors and structures within the work area shall be bonded together and connected to the ground source.

15. A running ground shall be installed between the reel stand and tensioner for conductor, or puller for pulling line, and the first tower.
16. When clipping is being done, care must be exercised to ascertain that the conductor are grounded prior to clipping, placing a local ground upon the conductor at the location of work.

17. Care must be exercised to ensure that concentrated load of the men, car and equipment dose not increase the sag appreciably to cause a hazard from obstructions over which the car will pass while installing spacers in bundle conductors.

18. If two conductors are to be spliced, the conductors shall be bonded and grounded before being spliced.

19. To cross over of energized lines, the line clear permit system shall be followed without any ambiguity to de-energize the lines. The de-energized lines shall be earthed effectively. Men and material clearance on line shall be ensured before returning permit.

6.2 GENERAL SITE SAFETY RULES & REGULATIONS

1. All personal engaged for this job shall wear Safety Helmet & safety shoes & insured.

2. Appropriate Hand Gloves shall be used for Materials handling, Welding, Grinding, Gas cutting, Chemical Handling & Electrical work.

3. Suitable goggles must be ensured for the personnel deployed for Welding, Gas Cutting Chipping etc Grinders shall use face shield.

4. The personnel engaged in the noise zone such as Compressor Operator, Pneumatic Vibrators & Breakers, DG Operator etc. will be equipped with suitable ear protection are ensured.

5. All personal working over 2.0-meter height shall wear full body safety harness with double lanyard and scaffold hook, before climbing. Further he will have to anchor the safety harness to a fixed structure before starting the work at a height, Fall Arrest Devices will be used in conjunction with safety harness, wherever the requirement arises.

6. Smoking is prohibited in all restricted area except in authorized smoking areas/shelters.

7. Horseplay is prohibited at workplace. Running at the site is prohibited, except in case of emergency.

8. Material shall not be thrown from the height. It should be lowered from height.

9. Other than the electricians, no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.

10. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

11. Electrical supply to portable equipments should be through Earth leakage circuit breaker (ELCB) of 30 milliamps sensitivity.

12. All major /minor accidents and near misses to be reported to Site in charge / Site Safety Engineer to enable the management to take necessary steps to avoid the recurrence.

13. All tools and tackles shall be inspected before use. Defects to be reported immediately. No lifting tackle to be used unless it is certified by a competent person/ Safety Engineer.

14. Workers should possess induction tester. Whenever a shut down is taken this device should be used to ensure no current is on the conductor.

15. Move carefully when walking or climbing.

16. Keep the working area as neat as possible.
17. Remove hazards as soon as they are noticed.

**ENERGIZED ELECTRICAL WORKS, BASIS REQUIREMENTS ARE:**

18. Face shields/ Voltage rated gloves/ Voltage rated rubber floor matting Shepherd’s Hook/ Warning/ Safety signs/ barricades.

19. Pay close attention to what is being done.

20. Disconnect power tools before adjusting them.


22. Avoid interrupting another person who is using a power tool.

**6.3 SAFETY SIGNS**

1. Safety warning signs shall be placed to provide adequate warning of hazards. Sign shall be removed or covered when the hazards no longer exist.

2. Warning signs shall indicate the cautions to be observed regarding the hazards concerned and the necessary information and, also, actions of employees required to initiate.

3. It is recommended that safety signs on the Project conform with the current national colour codes.

4. Signs shall be in English & Local language where located near public highways and facilities.

5. Sign required to be seen at night shall be illuminated. Kerosene and open flame pots shall not be used for illumination.

**6.3 STORES**

1. A layout demarcating areas for stacking, storing and disposing the materials is made.

2. The materials are stacked with passage to reach them. The aisle is marked. Materials should not protrude beyond the marked area posing tripping hazard.

4. Name boards shall be displayed to mention the place for every item.

4. The racks installed must be supported well to prevent from falling.

5. To reach the rack top, person should not climb on the rack shelf, ladder should be used.

6. Vertical stacking of materials should not exceed the prescribed norms, posing falling hazard because of imbalance.

7. Adequate lighting is provided.

8. Flammable, materials like Dissolved acetylene, paints etc. are stored under well-ventilated shed. Electrical connection in these locations should be proper and maintained well such that they do not cause short circuit. Smoking, carrying matchbox or any other fire causing materials is prohibited in these areas.

9. Sufficient fire extinguishers are kept at conspicuous places and the path to reach them shall not be blocked anytime.

10. Toxic materials are labeled and kept at secured place where only authorized persons shall handle.

11. Nail pullers shall be used whenever possible to remove nails from boxes and crates. Metal strapping should be cut with proper safety tool.

12. Barrels and drums shall preferably be placed on one end. If placed on their side, these shall be provided with racks or blocked so these cannot roll.

13. Oils, greases and paints shall not be openly stored at any time.

14. The scrap pile and junk materials shall be kept as orderly as conditions will permit. Extreme care shall be used in handling scrap material to prevent personal injury.

15. All T&P issued to the site to be ensured in safe working conditions by a competent person and damaged T&P to be identified and place at a marked place.

16. First aid box shall be available at work site.

**6.4 TRANSPORTATION OF MATERIALS**

1. Only identified crew does the loading and unloading of the materials.

2. The gang leader and the crew should be aware of the weight of the materials they are to be handled.

3. Proper and reliable tackles like slings, D-shackles etc. shall be used for material handling.
4. Lashing to be done after the materials loaded on the trailer.
5. Red flag is tide on structures extending beyond the trailer body. At night, reflectors to be fixed.
6. Structures extending beyond the cabin height are prohibited from transporting.
7. The driver should be aware of the path to the terminal he is to transport the material and ensure any blockaded are there.
8. The gang leader should know the specific spot for unloading the materials.
9. Two tag lines shall be tide to the end of the structures while handling by crane.
10. All structural steel shall be placed on wooden sleepers.
11. Stable and sufficient wooden sleepers to be ensured by the Foreman /gang leader.
12. Workmen should not travel along with the loaded material.
13. It is better to plan material shifting in sequence in such a manner that one gang is engaged for loading and another gang should be made available for unloading. This will reduce the traveling of workmen on transport vehicles.
14. The supplier/Manufacturer shall provide such packing for the material/equipment as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Technical specification for material/equipment. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, humidity etc. during transit and open storage.

6.5 PHOTOS AND PROGRESS REPORT

Contractor shall furnish three (3) prints to the PURCHASER/ENGINEER of progress photographs of the work done at 'Site'. Photographs shall be taken when and where indicated by the PURCHASER/ENGINEER or his representative. Photographs shall be adequate in size and number to indicate various stages of erection. Each photograph shall contain the date, the name of the CONTRACTOR and the title of the photograph. Normally photographs may be taken once every 15 days and for all special events.

The above photographs shall accompany the fortnight/ monthly progress report detailing out the progress achieved on all erection activities as compared to the Schedules. The report shall also indicate the reasons for the variance between the scheduled and actual progress and the action proposed for corrective measures wherever necessary. The contractor shall furnish progress reports as and when requested by the PURCHASER/ENGINEER.

Photographs shall be taken by the contractor for each tower location of EHT lines in the following stages of
1. After excavation is over in normal soils.
2. Before and after blasting in Hard rock soils.
3. During dewatering.
4. During concreting.
5. Shoring & strutting.
SECTION IV: SPECIAL CONDITIONS OF CONTRACT

1 ENGAGEMENT OF LABOUR:
The contractor shall make his own arrangements for engagement of all labour, local or otherwise, their transportation, housing, feeding and payment thereof, in accordance with labour law, unless the contract otherwise provides. No idle labour payment will be made to the contractor.

2 LIABILITY FOR ACCIDENTS TO PERSONS:

2.1 The contractor shall indemnify the purchaser against all actions, suits, claims, demands, cost or expenses arising in connection with injuries suffered by persons employed by him, on the works whether under the General Law or under the Workers Compensation Act, 1923 or any other statute in force at the date of the contract dealing with question of liability of employer for injuries suffered by employees and have taken steps properly to insure against any claims thereunder. Contractor should take insurance cover to all his workmen for injuries, disablement and death. All compensation against workmen’s compensation act should be settled by the Contractor.

2.2 On the occurrence of an accident which results in the death of workmen employed by the contractor which is due to the contract work and of so serious as to be likely to result in the death of any such workman, the contractor shall within 24 hours of happening of such accident intimate in writing to the Engineer and such other officers required by the provision of the workmen’s compensation act, the fact of such accident. The contractor shall indemnify the TSTRANSCO against all loss or damage sustained by the TSTRANSCO resulting directly or indirectly from his failure to give information in the manner aforesaid including the penalties or fines if any payable by the TSTRANSCO as a consequence of the TSTRANSCO’s failure to give notice under the workmen’s compensation act or otherwise conform to the provisions of the said act in regard to such accident.

2.3 In the event of any claim being made, or action brought against the purchaser involving the contractor and arising out of the matters referred to and in respect of which the contractor is liable under the clause of the contract shall be immediately notified thereof, and he shall conduct all negotiations for the settlement of the same or any litigation that may arise there from.

2.3.1 In the event of an accident in respect of which compensation may become payable under workmen’s compensation act VIII of 1923 and any subsequent amendment thereof, whether by the contractor or by the TSTRANSCO, as principle it shall be lawful for the Engineer to retain out of monies due and payable to the contractor such sum or such sums of money as may be in the opinion of the said Engineer be sufficient to meet such liability. The opinion of the Engineer shall be final in regard to all matters arising under this clause and will not be subject to any claim.

2.3.2 Liability for damage or loss to third party including inspection officers due to act of the contractor or by his representatives connected with the execution of this contract shall be fully borne by the contractor. The contractor shall maintain such detailed records to furnish information regarding engagement and discharge of all workmen employed under this contract as to be adequate for the timely and full settlement of claims under the workmen’s compensation act. All cases of accidents or injuries shall be reported to the Engineer with full details required for the settlement under the workmen’s compensation act.

2.4 The contractor should report about all accidents within 24 hours to the Engineer of the TSTRANSCO in the preliminary accident form. He should furnish other particulars such as medical certificates, wage particulars, fitness certificates, and proof of having paid the compensation as per the rules in vogue in the due course without delay.

3.0 LIABILITY FOR DAMAGE TO WORKS AND PLANTS:

3.1 The contractor during the progress of the work shall take every reasonable, proper, timely and useful precaution against accident or injury to the workmen from any cause and shall remain answerable and liable for all the accidents or injuries thereto which until the same, or be occasioned by the acts of omissions of the contractor or his workmen or his representatives and all losses and damages to the works as aforesaid, shall be made in the most complete and substantial manner by and at the sole cost of the contractor and to the reasonable satisfaction of the Engineer. Should such loss or damage happen to units of works or plant or materials falling outside the scope of this contract and due to the lapses of the contractor, these shall be replaced or compensated for by the contractor to the satisfaction of the Engineer.
3.2 In the case of loss or damage to any portion of the work occasioned by the causes, the same shall if required by the purchaser, be made good by the contractor in like manner but at the cost of the purchaser at a price to be agreed between the contractor and the purchaser and the purchaser shall pay to the contractor the contract value of the portion of the work so lost or damaged or any balance of such contract value remaining unpaid as the case may be.

3.3 Until the work shall be or deemed to be taken over as aforesaid, the contractor shall also be liable for and shall indemnify the purchaser in respect of all damage or injury to any person or to any property of the purchaser or other occasioned by the act of the contractor or his workmen or his representatives or by defective design, work or materials but not due to cause beyond his reasonable control.

3.4 Provided that the contractor shall not be eligible under the contract for any loss of profit or loss of contracts or any claims made against the purchaser not already provided for in the contract, not for any damage or injury caused by or arising from the acts of the purchaser or of others (save as to damage by fire, as hereinafter provided) due to the circumstances over which the contractor has not control nor shall his total liability for loss, damage or injury exceed the total value of the contract.

4 INCOME TAX RECOVERY
As per the standing instructions of Government of India on the deduction of Income Tax at source, recovery of Income Tax of the values of the work done will be made from relevant bills.

5 TAXES, LEVIES, DUTIES AND STATUTES:
5.1 Contractor shall be entirely responsible for payment of all taxes, levies, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.

5.2 In respect of supply portion, the contractor shall pay all types of fees, levies, taxes, duties etc. required to be paid by any National or State statute, ordinance or other law or any regulation or bye-law of any local or other duly constituted authority in relation to the execution of works and by the rules and regulations of all Public bodies and companies whose property or rights are affected or may be affected in any way of the works. The contractor shall in compliance with the above keep the Purchaser indemnified against all such penalties and liability of every kind for breach of any statute, ordinance or law, regulation or bye-law.

5.3 Nothing in the contract shall relieve the contractor from his responsibility to pay any tax that may be levied by the Government on the turnover / profits made by him in respect of the contract.

5.4 i. As per provision of taxation act, necessary applicable taxes will be deducted at source at all stages of payment on the bills and same will be remitted to the concerned department in respect of erection portion.

ii. Any increase in prices, in respect of supply portion, as per the clause (2.1) of Section-II, ‘Financial’, will not be considered for payment since this is a total turnkey contract on firm price basis. Claims in respect of variation in taxes and duties shall be made as per clause (2.2.1) of Section-II, ‘Financial’.

2.2 SEIGNORAGE CHARGES:
Seignorage charges have to be paid by the bidder to the Assistant Director Mines & Geology Department otherwise it will be deducted from the bills as per rules in vogue.

2.2.1 GOODS AND SERVICE TAX (GST):
The Ministry of Finance, Department of Revenue, Central Board of Excise and Customs vide Notification No.15/2017, Dt: 01.07.2017 has notified that the Central Goods and Services Tax (Third Amendment) Rules, 2017 shall come into force with effect from the 1st day of July, 2017. GST @ 18 % is applicable on Schedule under work contracts.

2.2.2 CORPUS FUND:
Corpus fund @ 0.1% on value of civil works (without taxes) is applicable and shown as LS provision in the estimate. The contribution to the corpus fund of N.A.C, Hyderabad, component loaded in the estimate shall be added in each bill of contractors and recovered from the contractors bills.

CHIEF ENGINEER,
METRO ZONE/HYDERABAD
PARTICULARS OF REGISTRATION

1. Name and address of Company:

2. Please state whether:
   a) Individual
   b) Registered Partnership firm
   c) Unregistered Partnership firm
   d) Pvt. Ltd., Co.
   e) Public Ltd., Co.
   f) Others (please specify)

3. Type:  
   a) Class A, B etc.,
   b) Large/Medium or Small scale Industry

4. Names and full address of partners (in case of partnership firm) or Directors (in case of Ltd., Co.)

5. Whether registered under
   a) GST
   b) Any other state sales tax law (please specify)

6. Authority of the person signing the contract to represent the company.

7. Furnish a photocopy duly attested of each of the following documents:
   a) Certificate of Registration from the Registrar of firms.
   b) Copy of Partnership deed.
   c) Copy of Memorandum of Articles.
   d) Copy of registration certificates as per item 5 above.

   Date :                     Signature :

   Place :                   Name & Designation :

   Seal :
# Schedule II

## Details of the Technical Personnel in the Organization of the Bidder

Name of the Bidder:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name &amp; Qualification</th>
<th>Professional experience and details of works carried out</th>
<th>Field in which now engaged</th>
<th>Remarks</th>
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Bidder's Signature with seal
(A) DETAILS REGARDING FINANCIAL STANDING OF THE BIDDER

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Bank</th>
<th>Actual balance at the credit of the Contractor</th>
<th>Permissible over-draft</th>
<th>Total Credit</th>
<th>Remarks</th>
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Note: - Latest Certificates from the Bankers in proof of cash balance and other credit facilities shall be furnished.

Bidder's Signature with seal

(B) DETAILS REGARDING FINANCIAL TURNOVER OF THE BIDDER

(Here the balance sheet for the last financial year, annual turnover, debt equity ratio and other relevant financial parameters and the proof for credit standing may be furnished). The following particulars may be filled in.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Financial year</th>
<th>Turnover in Rs. lakhs</th>
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Bidder's Signature with seal
SCHEDULE - IV

DETAILS OF WORKS OF SIMILAR TYPE AND MAGNITUDE CARRIED OUT BY THE BIDDER.

NAME OF THE BIDDER:

<table>
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<tr>
<th>Sl. No.</th>
<th>Name of the work with full description</th>
<th>Place &amp; State</th>
<th>Bid cost</th>
<th>Period of Completio n as per agreement</th>
<th>Period in which actually complete d work</th>
<th>Reasons for delay &amp; actual cost of works executed</th>
<th>Date of Complet i on</th>
<th>Principal features like major items of work, major difficult situations if any</th>
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Note: Certificate issued by the Engineer-in-charge of the Department / Undertaking not below the rank of Executive Engineer or equivalent countersigned by the rank of Superintending Engineer or equivalent shall be furnished by the bidder without fail in support of the above information.

Bidder's Signature
with seal
**SCHEDULE - V**

**DETAILS OF ONGOING WORKS UNDER EXECUTION IN TSTRANSCO / DISCOMS.**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the work/ Description</th>
<th>Place &amp; State</th>
<th>Work on hand</th>
<th>Work bided for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tendered cost in Rs.</td>
<td>Stipulated period of completion</td>
</tr>
<tr>
<td>1</td>
<td>132 kV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>220 kV</td>
<td></td>
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<tr>
<td>3</td>
<td>400 kV</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>DISCOMS</td>
<td></td>
<td></td>
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</tbody>
</table>

I / We M/s…………………………………. here by declared that the information furnished in respect of works under execution in the above said schedule is true to the best of my / we knowledge and belief. I / We hereby undertake that in the event of any of the above information found to be false or incorrect at a later date the TSTRANSCO is entitled to reject the bid or terminate the contract agreement entered into besides black listing the bidder.

**Note:** Certificate issued by the Engineer-in-charge of the Department / Undertaking not below the rank of Executive Engineer or equivalent countersigned by the rank of Superintending Engineer or equivalent shall be furnished by the bidder without fail in support of the above information.

Bidder's Signature with seal
SCHEDULE - VI

UNDERTAKING TO BE GIVEN BY THE COMPANY/PARTNERSHIP FIRM/CONTRACTOR ALONG WITH THE BID.

I./We ____________________________________________________ representing the Company/Partnership Firm/Contractor responding to the bid invitation by the TSTRANSCO vide Specification No._________________ hereby sincerely and solemnly affirm and state as follows:

(Strike out which is not applicable)

(a) that myself or any of the representative of my Company/Firm do not have any relatives as deferred in appended Annexure in the TSTRANSCO/APTRANSCO/DISCOM.  

OR

(b) That the following officers/employees of the TSTRANSCO/APTRANSCO/DISCOM are related to me and to my representative of my Company/Firm and their status in the TSTRANSCO/APTRANSCO/DISCOMS is as under:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Officer/Employee</th>
<th>Designation and Place of working</th>
<th>TSTRANSCO/DISCOM</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>4.</td>
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<td>5.</td>
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<td>6.</td>
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</tr>
</tbody>
</table>

It is certified that the information furnished above is true to the best of my knowledge and belief. It is hereby undertaken that in the event of any of the above information found to be false or incorrect at a later date, the TSTRANSCO/DISCOM is entitled to terminate the contract agreement entered into besides recovering damages as may be found necessary with due notice.

Signature of the authorised representative/Tenderer

Name:  
( in block letters)

Seal:

Date:
ANNEXURE (TO SCHEDULE-VI)

LIST OF RELATIVES:

1. Father
2. Mother (including step mother)
3. Son (including Step Son)
4. Son’s Wife
5. Daughter (including Step Daughter)
6. Father’s Father
7. Father’s Mother
8. Mother’s Mother
9. Mother’s Father
10. Son’s Son
11. Son’s Son’s Wife
12. Son’s Daughter
13. Son’s Daughter’s Husband
14. Daughter’s Husband
15. Daughter’s Son
16. Daughter’s Son’s Wife.
17. Daughter’s Daughter
18. Daughter’s Daughter’s Husband
19. Brother (including Step Brother)
20. Brother’s Wife
21. Sister (including Step Sister)
22. Sister’s Husband.
23. Son’s Wife’s Father (and their siblings)
24. Son’s Wife’s Mother (and their siblings)
25. Daughter’s Husband’s Father (and their siblings)
26. Daughter’s Husband’s Mother (and their siblings)
SCHEDULE - VII

DECLARATION FOR TAKING UP THE AWARDED WORKS

On award of work, I/We_____________________________ will take up the works promptly and achieve progress as per the programme communicated for each of the work. If I/We_____________________do not show the progress as per Schedule communicated for each work and the progress is (are) proved to be very slow which may result in delay in completion, the TSTRANSCO can cancel all such works and may got be executed through alternate agencies at our cost and risk and without prejudice to the right of TSTRANSCO to levy any penalties as per the terms of agreement.

Signature of the authorised representative/Tenderer

Name: (in block letters)

Seal:

Date:
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Name of the Bank :</td>
</tr>
<tr>
<td>2.</td>
<td>Name of the Branch :</td>
</tr>
<tr>
<td>3.</td>
<td>Branch code :</td>
</tr>
<tr>
<td>4.</td>
<td>City :</td>
</tr>
<tr>
<td>5.</td>
<td>Account No.</td>
</tr>
<tr>
<td>6.</td>
<td>MICR No.</td>
</tr>
<tr>
<td>7.</td>
<td>IFSC No.</td>
</tr>
<tr>
<td>8.</td>
<td>Income Tax PAN Number :</td>
</tr>
<tr>
<td>9.</td>
<td>GST Registration Number :</td>
</tr>
<tr>
<td>10.</td>
<td>Date of GST Registration :</td>
</tr>
<tr>
<td>11.</td>
<td>Place of GST Registration :</td>
</tr>
</tbody>
</table>

Signature of the Bidder
SCHEDULE IX

EXPERIENCE CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s. ------------------------------- has carried out the following works in the jurisdiction of the -------------------------------, during the financial year --------- and the execution of these works is found to be satisfactory.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Work</th>
<th>L.S.Agt.No.</th>
<th>Date of Commencement of work and Date of Completion of work</th>
<th>Value of Agreement Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
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</tbody>
</table>

Date: _____________________________  
Signature of the Superintending Engineer/ Divisional Engineer
# CHECK LIST

## COMMERCIAL CONFIRMATIONS

State ‘Yes’ or ‘No’ to each of the following items:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Whether the work offered conforms to the relevant TSTRANSCO's / ISS Specifications and drawings.</td>
</tr>
<tr>
<td>2.</td>
<td>Whether Qualification and Performance particulars are furnished.</td>
</tr>
<tr>
<td>3.</td>
<td>State whether complete Quantity for full lot is quoted. (Bidder must quote for 100% of quantities of all items against each lot)</td>
</tr>
</tbody>
</table>
| 4. | a) State whether Bid Security is enclosed.  
   b) State whether Bid Form is enclosed. |
| 5. | State whether 90 days Validity is offered for the bid |
| 6. | State whether TSTRANSCO’s Payment Terms are accepted. |
| 7. | State whether TSTRANSCO’s penalty Clause is accepted. |
| 8. | State whether TSTRANSCO’s Completion period is accepted. |
| 9. | Are you prepared to furnish Performance Security @ 5% of the Contract value within 15 days from the date of issue of preliminary acceptance letter or Letter of Acceptance. |
| 10 | State whether TSTRANSCO’s Guarantee Clause is accepted. |
| 11 | State whether Prices are inclusive of all taxes & duties. |
| 12 | All Schedules are furnished as per summary sheet for bid |

Signature of Bidder  
With Seal and Date
PROFORMA - I

BID FORM

Date: .......

TO: (Name and Address of Purchaser)

Gentlemen and/or Ladies:

Having examined the Bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver. ..................... (Description of Work / Materials / equipment) in conformity with the said bidding documents for the sum of. ............. (total bid amount in words and in figures) or such other sums as may be ascertained in accordance with the schedule of prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the Materials / equipment in accordance with the delivery schedule specified in the Schedule of Requirements.

We agree to abide by this Bid upto ................ (for the Bid Validity Period) specified in Clause and it will remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, will constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

We certify / confirm that we comply with the eligibility requirements as per clause of the bidding documents.

Dated this. ........day of. ........2020.

____________________________
[Signature] [in the capacity of]

Duly authorized to sign Bid for and on behalf of ............
PROFORMA –II

BID SECURITY FORM

Whereas. .............. (hereinafter called "the Bidder") has submitted its Bid dated (date of submission of bid) for the supply/erection of.  .................... (Name and /or description of the Materials / equipment/work) (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE. ............. (Name of bank) having our registered office at. ........... (Address of bank) (hereinafter called "the Bank"), are bound unto. .............. (Name of Purchaser) (hereinafter called "the Purchaser") in the sum of ________, for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ___day of 2020.

THE CONDITIONS of this obligation are:

1. If the Bidder
   a) Withdrawing its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
   b) Does not accept the correction of errors in accordance with the Bid Specification, or

2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity;
   (a) Fails or refuses to furnish the performance security, in accordance with the Bid Specification.
   (b) Fails or refuses to execute the Contract Form if required; or
   We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including Thirty (30) days after .................(Specification Date) the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

. .................
(Signature of the Bank)

NOTE:  This will be executed on a Rs.100/- non-judicial stamp paper issued by a scheduled Bank.
To: ___________(Name of Purchaser)

WHEREAS………………………………………….. (Name of Supplier/contractor)
(hereinafter called "the Supplier/contractor") has undertaken, in pursuance of Contract
No...........dated...........2020 to supply/erection ............ (Description of Materials / equipment
and Services) (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier/contractor
will furnish you with a Bank Guarantee by a recognized Bank for the sum specified therein
as security for compliance with the Supplier's/contractor’s performance obligations in accordance
with the Contract.

AND WHEREAS we have agreed to give the Supplier/contractor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of
the Supplier/contractor, up to a total of. .......................... (Amount of the Guarantee in Words and
Figures) and we undertake to pay you, upon your first written demand declaring the
Supplier/contractor to be in default under the Contract and without cavil or argument, any sum or
sums within the limit of............. (Amount of Guarantee) as aforesaid, without your needing to prove
or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the.  ... day of.  ..... 2020

Signature and Seal of Guarantors

..........................................
Date. ..........................2020.
..........................................
..........................................
Address:..........................
..........................................
..........................................

NOTE: This will be executed on a Rs.100/- non-judicial stamp paper by a scheduled Bank.
<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Material / Equipment</th>
<th>Name of the Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Conductor</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>M/s Anam Electrical Manufacturing Co., Kadiyam</td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td>M/s Arrow Cables Ltd, Hyderabad</td>
<td></td>
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<tr>
<td>iii)</td>
<td>M/s Sterlite Industries India Ltd, Pune</td>
<td></td>
</tr>
<tr>
<td>iv)</td>
<td>M/s Oswal Cables Pvt. Ltd, Hyderabad</td>
<td></td>
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<tr>
<td>v)</td>
<td>M/s J.S.K.Industries Ltd, Mumbai</td>
<td></td>
</tr>
<tr>
<td>vi)</td>
<td>M/s Deepak Cables (I) Ltd, Bangalore</td>
<td></td>
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<tr>
<td>vii)</td>
<td>M/s Smitha Conductors Ltd, Mumbai</td>
<td></td>
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<tr>
<td>viii)</td>
<td>M/s Hindustan Vidyut Products Ltd., Faridabad</td>
<td></td>
</tr>
<tr>
<td>ix)</td>
<td>M/s APAR Industries Ltd., Vadodara</td>
<td></td>
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<tr>
<td>x)</td>
<td>M/s KJV Alloy Conductors Pvt. Ltd, Hyderabad</td>
<td></td>
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<tr>
<td>xi)</td>
<td>M/s Hind Aluminium Industries Ltd., Silvasa</td>
<td></td>
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<tr>
<td>xii)</td>
<td>M/s Achuyuta Electricals Pvt. Ltd., Hyderabad</td>
<td></td>
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<tr>
<td>xiii)</td>
<td>M/s Hindustan Vidyut Products, Faridabad.</td>
<td></td>
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<tr>
<td>xiv)</td>
<td>M/s APAR Conductors, Vadodara</td>
<td></td>
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<tr>
<td>xv)</td>
<td>M/s Cabcon India Pvt Ltd. Kolkata</td>
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<tr>
<td>xvi)</td>
<td>M/s R.E. Cables and Conductors Pvt Ltd.</td>
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<tr>
<td>xvii)</td>
<td>M/s Lumino Industries Ltd, Kolkata</td>
<td></td>
</tr>
<tr>
<td>xviii)</td>
<td>M/s. Diamond Power Infrastructure Ltd, Vadodara</td>
<td></td>
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<tr>
<td>2)</td>
<td>Transmission Line Towers and Sub Station Structures fabricators</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>M/s. Bajaj Electricals Ltd., Mumbai</td>
<td></td>
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<tr>
<td>ii)</td>
<td>M/s RPG Transmission Ltd., New Delhi</td>
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<tr>
<td>iii)</td>
<td>M/s. Jyothi Structures Ltd., Mumbai</td>
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<td>iv)</td>
<td>M/s. BS Transcom, Hyderabad.</td>
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<td>v)</td>
<td>M/s. KEC International Ltd., Mumbai</td>
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<td>vi)</td>
<td>M/s. Kalpataru Power Transmission Ltd., Gandhinagar</td>
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<tr>
<td>vii)</td>
<td>M/s. Hyundai Electrical Transmission Ltd., Gurgaon</td>
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<tr>
<td>viii)</td>
<td>M/s. Sujana Towers Ltd., Hyderabad</td>
<td></td>
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<td>x)</td>
<td>M/s. Sangam Structures Ltd., Allahabad</td>
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<td>xi)</td>
<td>M/s. ICOMM Tele Ltd., Hyderabad</td>
<td></td>
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<tr>
<td>xii)</td>
<td>M/s. Aster Teleservices Pvt. Ltd., Hyderabad</td>
<td></td>
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<td>xiii)</td>
<td>M/s. Hyderabad Steels Ltd., Hyderabad</td>
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<td>xiv)</td>
<td>M/s. R.S Engineering Co., Hyderabad</td>
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<td>xv)</td>
<td>M/s. Venkateswara Electrical Industries, Hyderabad</td>
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<td>xvi)</td>
<td>M/s. Vertex Engineers., Hyderabad</td>
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<td>xvii)</td>
<td>M/s. Kusuma Enterprises, Hyderabad</td>
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<td>xix)</td>
<td>M/s Annapurna Constructions and Transmissions Hyderabad</td>
<td></td>
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<td>xx)</td>
<td>M/s Iris Infra Services Pvt Ltd Hyderabad</td>
<td></td>
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<tr>
<td>xxi)</td>
<td>M/s Sai Tirimula Fabricators</td>
<td></td>
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<tr>
<td>xxii)</td>
<td>M/s ECI Infra</td>
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<tr>
<td>xxiii</td>
<td>M/s MPower Infratech. Ltd.Hyd.</td>
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<tr>
<td>xxiv</td>
<td>M/s AK Power Industries ;Kolkata</td>
<td></td>
</tr>
<tr>
<td>3) a</td>
<td>Porcelain Disc Insulators</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>M/s. Birla NGK Industries Private Limited, Kolkata</td>
<td></td>
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<tr>
<td>ii)</td>
<td>M/s Insulators &amp; Electricals Company, Bhopal</td>
<td></td>
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<tr>
<td>iii)</td>
<td>M/s W.S. Industries (I) Ltd., Chennai</td>
<td></td>
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<tr>
<td>iv)</td>
<td>M/s BHEL, Secunderabad</td>
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<tr>
<td>v)</td>
<td>M/s. Saravana Insulators, Chennai</td>
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<tr>
<td>3)b</td>
<td>Long Rod Porcelain Insulators</td>
<td></td>
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<tr>
<td>i)</td>
<td>M/s Modern Insulators Ltd. Rajasthan</td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>7/3.15mm HTGS wire</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>M/s UIC Wires Limited, Kolkata</td>
<td></td>
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<tr>
<td>ii)</td>
<td>M/s Geekay Wires Private Ltd., Hyderabad</td>
<td></td>
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<tr>
<td>iii)</td>
<td>M/s. Ramsarup Industries, Kolkata</td>
<td></td>
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<tr>
<td>5)</td>
<td>Galvanised Bolts and Nuts and Washers</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>M/s Nexo Industries, Ludhiana</td>
<td></td>
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<tr>
<td>ii)</td>
<td>M/s HR Steel Industries, Howrah</td>
<td></td>
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<tr>
<td>iii)</td>
<td>M/s NL Engineers Pvt. Ltd., Mohali</td>
<td></td>
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<td>iv)</td>
<td>M/s Himalaya Engg, Works Pvt. Ltd., Hyderabad</td>
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<td>v)</td>
<td>M/s Naveen Metal Industries, Kolkata (Washers)</td>
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<td>vi)</td>
<td>M/s Spring Lock Industries, Vadodara (Washers)</td>
<td></td>
</tr>
<tr>
<td>vii)</td>
<td>M/s. Remax (India), Ludhiana</td>
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<tr>
<td>viii)</td>
<td>M/s. BRK Industries, Ludhiana</td>
<td></td>
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<tr>
<td>ix)</td>
<td>M/s. Maheshwari Bright and Fasteners Pvt Ltd. Hyderabad</td>
<td></td>
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<tr>
<td>x)</td>
<td>M/s KRSNA Transmission Hardware Mfg.Pvt Ltd. Gujrat</td>
<td></td>
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<tr>
<td></td>
<td>Hardware &amp; Accessories and Clamps and Connectors</td>
<td>Solid Core Insulators</td>
</tr>
<tr>
<td>----</td>
<td>-------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td>iii) M/s. Godavari Mechanical Industries, Hyderabad</td>
<td>iii) M/s W.S. Industries (I) Ltd., Chennai</td>
</tr>
<tr>
<td></td>
<td>iv) M/s. Durga Line Materials, Hyderabad</td>
<td>iv) M/s BHEL, Secunderabad</td>
</tr>
<tr>
<td></td>
<td>vii) M/s. Modern Malleable Ltd., Kolkata</td>
<td></td>
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<tr>
<td></td>
<td>viii) M/s. Star Iron Works Ltd., Kolkata</td>
<td></td>
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<td></td>
<td>ix) M/s. Asbesco (I) Pvt. Ltd., Kolkata</td>
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<tr>
<td></td>
<td>iii) M/s. Godavari Mechanical Industries, Hyderabad</td>
<td>iii) M/s W.S. Industries (I) Ltd., Chennai</td>
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<tr>
<td></td>
<td>iv) M/s. Durga Line Materials, Hyderabad</td>
<td>iv) M/s BHEL, Secunderabad</td>
</tr>
<tr>
<td></td>
<td>x) M/s. Godavari Mechanical Industries, Hyderabad</td>
<td>x) M/s. Star Iron Works Ltd., Kolkata</td>
</tr>
<tr>
<td></td>
<td>xii) M/s. Kailash Enterprises, Hyderabad</td>
<td>xii) M/s. Modern Malleable Ltd., Kolkata</td>
</tr>
</tbody>
</table>

The following Power Grid approved steel manufacturers are also approved by TSTRANSCO for procuring steel and angles which are not manufactured/rerolled by SAIL, VSP. TISCO & ISCO subject to stage inspection as per clause 24.1 section- I General.

a. M/s Southern iron & steel company Ltd, Pattaneri, Salem (Tamil Nadu)
b. M/s Lloyds Steel (only for steel plates)
c. M/s Jindal Steel & Power Ltd, Raigarh (only slabs, booms & billets).
d. M/s Jindal Vijaya Nagar Steel Limited, Bellary, Karnataka, (only for plates 3mm to 10mm thick)
e. M/s Jindal Iron & Steel Company Ltd, Thane.
f. M/s. Hazira works (for MS & HT plates upto 20mm thick)

The following re-rollers are approved by TSTRANSCO subject to procurement of the input ingots from SAIL, VSP. TISCO & ISCO

b. M/s Shri Bhajarang Alloys Ltd, Nagpur.
c. M/s Vandana Ispat Ltd, Raipur.
d. M/s Shilpa Re-Rollers Ltd, Butibori, Nagpur.
e. M/s Bhuwalka Steel Industries Limited, Thane.
f. M/s P.R. Rolling Pvt Ltd, Jaipur.
g. M/s Vinar Ispat Ltd, Chandrapur.
h. M/s. Eagle Steels, Taloja.
i. M/s Shilpa Re-Rollers Ltd, Kamptee Road, Nagpur.
j. M/s Mahavir Steel Industries Ltd, Pune.
k. M/s Unique Structures & Tower Ltd, Raipur.
l. M/s Rite Steel Industries, Nagpur.
m. M/s United Metal Industries, Chennai.
n. M/s Hamma Steel Industries, Chennai.
o. M/s Sharda Ispat, Nagpur.
p. M/s Maharashatra Steel Rolling & Engineering works, Mumbai.
q. M/s SRMB Udyog Limited Paharpur, Kolkata.
r. M/s Shyam Steel Industries Limited, Kolkata.
s. M/s Prakash Ispat Udyog, Nagpur.
t. M/s Swastika Steel & Allied products, Kolkata.
u. M/s Sujana Metal products, Hyderabad.
w. M/s Sawaria Pipes Pvt Ltd, Hyderabad.
x. M/s Abhishek Steels Pvt. Ltd, Hyderabad.

The above re-rollers are approved with the following guide lines into consideration.

i) The steel angles re-rolled shall be as per the approved manufacturing quality assurance plan.
ii) The steel supplied to TSTRANSCO shall be embossed with company name ending with APT.
<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Material / Equipment</th>
<th>Name of the Manufacturer</th>
</tr>
</thead>
</table>
| 1)    | Conductor            | xix) M/s Anam Electrical Manufacturing Co., Kadiyam  
xx) M/s Arrow Cables Ltd, Hyderabad  
xxi) M/s Sterlite Industries India Ltd, Pune  
xxii) M/s Oswal Cables Pvt. Ltd, Hyderabad  
xxiii) M/s J.S.K Industries Ltd, Mumbai  
xxiv) M/s Deepak Cables (I) Ltd, Bangalore  
xxv) M/s Smîtha Conductors Ltd, Mumbai  
xxvi) M/s Hindustan Viduyt Products Ltd., Faridabad  
xxvii) M/s APAR Industries Ltd., Vadodara  
xxviii) M/s KJV Alloy Conductors Pvt. Ltd, Hyderabad  
xxix) M/s Hind Aluminium Industries Ltd., Silvassa  
xxx) M/s. Achuyuta Electricals Pvt. Ltd., Hyderabad  
xxxi) M/s. Hindustan Viduyt Products, Faridabad  
xxxii) M/s. APAR Conductors, Vadodara  
xxxiii) M/s. Cabcon India Pvt Ltd. Kolkata  
xxxiv) M/s R.E. Cables and Conductors Pvt Ltd. |
| 2)    | Transmission Line Towers and Sub Station Structures fabricators | i) M/s. Bajaj Electricals Ltd., Mumbai  
ii) M/s. RPG Transmission Ltd., New Delhi  
iii) M/s. Jyothi Structures Ltd., Mumbai  
iv) M/s. BS Transcom, Hyderabad  
v) M/s. KEC International Ltd., Mumbai  
vi) M/s. Kalpataru Power Transmission Ltd., Gandhinagar  
vii) M/s. Hyundai Electrical Transmission Ltd., Gurgaon  
viii) M/s. Sujana Towers Ltd., Hyderabad  
x) M/s. Sangam Structures Ltd., Allahabad  
xi) M/s. ICOMM Tel Ltd., Hyderabad  
 xii) M/s. Aster Teleservices Pvt. Ltd., Hyderabad  
xiii) M/s. Hyderabad Metals Ltd., Hyderabad  
xiv) M/s. R.S Engineering Co., Hyderabad  
xv) M/s. Venkateswara Electrical Industries., Hyderabad  
xvi) M/s. Vertex Engineers., Hyderabad  
xvii) M/s. Kusuma EntSAPrises, Hyderabad  
xx) M/s Annapurna Constructions and Transmissions Hyderabad  
xxi) M/s. Sai Tirumala Fabricators  
xxii) M/s ECi Infra  
xxiv) M/s AK Power Industries ;Kolkata  
xxv) M/s. Laxmi Powertel Pvt. Ltd, Hyderabad  |
| 3) a  | Porcelain Disc Insulators | vi) M/s. Birla NGK Industries Private Limited, Kolkata  
vii) M/s Insulators & Electricals Company, Bhopal  
viii) M/s W.S. Industries (I) Ltd., Chennai  
ix) M/s BHEL, Secunderabad  
x) M/s. Saravana Insulators, Chennai  
| 3) b  | Long Rod PorcelainInsulators | i) M/s Modern Insulators Ltd. Rajasthan  |
| 4)    | 7/3.15mm HTGS wire     | iv) M/s UIC Wires Limited, Kolkata  
v) M/s Geekay Wires Private Ltd., Hyderabad  
vi) M/s. Ramsarup Industries, Kolkata  |
| 5)    | Galvanised Bolts and Nuts and Washers | ix) M/s Nexo Industries, Ludhiana  
x) M/s HR Steel Industries, Howrah  
xi) M/s NL Engineers Pvt. Ltd., Mohali  
xii) M/s Himalaya Engg. Works Pvt. Ltd., Hyderabad  
xiii) M/s Naveen Metal Industries, Kolkata (Washers)  
xiv) M/s Spring Lock Industries, Vadodara (Washers)  
v) M/s. Remax (India), Ludhiana  
vi) M/s. BRK Industries, Ludhiana  
x) M/s. Maheshwari Bright and Fasteners Pvt Ltd. Hyderabad  
x) M/s KRSNA Transmission Hardware Mfg.Pvt Ltd. Gujarat  |
<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Material / Equipment</th>
<th>Name of the Manufacturer</th>
</tr>
</thead>
</table>
| 6)    | Hardware & Accessories and Clamps and Connectors | i) M/s. IAC Electricals Pvt. Ltd., Kolkata  
        xi) M/s. Tyco Electronics Systems India Pvt. Ltd., Bangalore  
        xii) M/s. Godavari Mechanical Industries, Hyderabad  
        xiii) M/s. Durga Line Materials, Hyderabad  
        xiv) M/s. Kailash EntSAPrises, Hyderabad  
        xv) M/s. Uday Clamps Mfg. Co., Hyderabad  
        xvi) M/s. Modern Malleable Ltd., Kolkata  
        xvii) M/s. Star Iron Works Ltd., Kolkata  
        xviii) M/s. Asbesco (I) Pvt. Ltd., Kolkata |
| 7)    | Solid Core Insulators | vii) M/s. Birla NGK Industries Private Limited, Kolkata  
        viii) M/s Insulators & Electicals Company, Bhopal  
        ix) M/s W.S. Industries (I) Ltd., Chennai  
        x) M/s BHEL, Secunderabad  
        xi) M/s. Modern Insulators Ltd., Rajastan  
        xii) M/s. Saravana Insulators, Chennai. |
| 8)    | Circuit Breakers | i) M/s ABB Ltd, Baroda  
        ii) M/s Siemens Ltd., Aurangabad  
        iii) M/s Crompton Greaves Ltd., Nasik  
        iv) M/s. Areva T & D India Ltd., Chennai  
        v) M/s. Megawin Switchgear P Ltd, Secunderabad (up to 33 kV only) |
| 9)    | Current Transformers & Potential Transformers | i) M/s ABB Ltd., Baroda  
        ii) M/s. Areva T & D India Ltd, Bangalore  
        iii) M/s BHEL, Secunderabad  
        iv) M/s Crompton Greaves Ltd., Nasik  
        v) M/s. Vidyut Controls Systems (P)Ltd, Hyderabad (up to 132kV)  
        vi) M/s. Vijai Electricals Ltd, Hyderabad(PTs up to 132 kV only)  
        vii) M/s. LAMCO, Hyderabad (up to 132 kV only) |
| 10)   | Capacitor Voltage Transformers | i) M/s ABB Ltd, Baroda  
        ii) M/s. Areva T & D India Ltd, Bangalore  
        iii) M/s BHEL, Secunderabad  
        iv) M/s Crompton Greaves Ltd., Nasik  
        v) M/s. LAMCO, Hyderabad (up to 132 kV only) |
| 11)   | Lightning Arrestors | i) M/s. Areva T & D India Ltd, Bangalore  
        ii) M/s Crompton Greaves Ltd., Nasik  
        iii) M/s. Lamco Lightning Arrestors Pvt., Ltd., Hyderabad  
        iv) M/s. Oblum Electricals Industries P Ltd., Hyderabad  
        v) M/s Elektrolites power ltd;Jaipur |
| 9)    | Current Transformers & Potential Transformers | i) M/s ABB Ltd., Baroda  
        ii) M/s. Areva T & D India Ltd, Bangalore  
        iii) M/s BHEL, Secunderabad  
        iv) M/s Crompton Greaves Ltd., Nasik  
        v) M/s. Vidyut Controls Systems (P)Ltd, Hyderabad (up to 132kV)  
        vi) M/s. Vijai Electricals Ltd, Hyderabad(PTs up to 132 kV only)  
        vii) M/s. LAMCO, Hyderabad (up to 132 kV only) |
| 10)   | Capacitor Voltage Transformers | v) M/s ABB Ltd., Baroda  
        vi) M/s. Areva T & D India Ltd, Bangalore  
        vii) M/s BHEL, Secunderabad  
        viii) M/s Crompton Greaves Ltd., Nasik  
        ix) M/s G.R.Power Switchgear Ltd., Hyderabad  
        x) M/s Versatek Switchgears Pvt. Ltd., Secunderabad  
        xi) M/s Southern Switchgear Industries, 145/B, Hyderabad  
        xii) M/s Switchgears & Structural(I) Private Ltd, Hyderabad  
        xiii) M/s Universal Isolators, Indore, MP  
        xiv) M/s Siemens Ltd., Hyderabad  
        xv) M/s Crompton Greaves Ltd., Nasik  
        xvi) M/s Switches and Switchgears Hyderabad |
| 12)   | Isolators | i) M/s G.R.Power Switchgear Ltd., Hyderabad  
        ii) M/s Versatek Switchgears Pvt. Ltd., Secunderabad  
        iii) M/s Southern Switchgear Industries, 145/B, Hyderabad  
        iv) M/s Switchgears & Structural(I) Private Ltd, Hyderabad  
        v) M/s Universal Isolators, Indore, MP  
        vi) M/s Siemens Ltd., Hyderabad  
        vii) M/s Crompton Greaves Ltd., Nasik  
        viii) M/s Switches and Switchgears Hyderabad |
| 13)   | Control and Relay panels | i) M/s G.E. Power Controls, Bangalore  
        ii) M/s. Areva T & D India Ltd, Chennai  
        iii) M/s ABB Ltd., Baroda  
        iv) M/s. Siemens Ltd.  
        v) M/s. Schneider electric Infrastructure Ltd. |
| 14 | LTAC Panels & Marshalling Kiosks | i) M/s G.E.Power Controls, Bangalore  
ii) M/s. Areva T & D India Ltd, Chennai  
iii) M/s ABB Ltd., Baroda  
iv) M/s Popular Switchgears Pvt Ltd., Nasik  
v) M/s. Jain Enterprises, Rajahmundry  
vi) M/s Bose Corporation, Kolkata |
|--|---------------------------------|---|
| 15 | Chargers & DCDB | i) M/s Dubas Engineering Pvt. Ltd., Bangalore  
ii) M/s Amara Raja Batteries Ltd., Renigunta  
iii) M/s Kejriwal Auto Electric & Engineering Works, Kolkata  
v) M/s. Automatic Pvt., Ltd., Kolkata  
vi) M/s Sabinfe, Hyderabad  
vii) M/s. Statcon Power Controls, Noida  
viii) M/s Agarwal Salt Co., Bikaner  
i) M/s Servilink Engineers Pvt Ltd. Vadodara  
x) M/s Caldyne Automatics Ltd., Kolkata  
xii) M/s Swati Electronics Pvt Ltd. |
| 16 | Batteries (Sealed Maintenance free Batteries) | i) M/s Amara Raja Batteries Ltd., Renigunta  
ii) M/s. HBL Nife, Hyderabad  
iii) M/s. Exide, Hyderabad  
v) M/s AAJ Accumulators Pvt Ltd., Kolhapur |
| 17 | Control Cables & LT power Cables | i) M/s. Arrow Cables Ltd, Hyderabad  
ii) M/s. Arun manufacturing Company, Delhi  
iii) M/s. Vikas Cable Company, New Delhi  
v) M/s. Finecab Ltd., Hyderabad  
vii) M/s. Goyolene Fibres ( India) Private Limited, Mumbai  
viii) M/s. Grid India Power Cables Pvt., Ltd Gurgao  
in) M/s. Pavan Power Cables, Hyderabad  
x) M/s. SPM Power and Telecom Pvt Ltd Hyderabad  
xii) M/s. KEI Industries Limited, Hyderabad |
| 18 | XLPE U/G Power Cables | i) M/s. Universal Cables Ltd., Satna  
ii) M/s. RPG Cables Ltd, Hyderabad  
iii) M/s. Hindustan Vidyut Products Ltd., New Delhi-110001  
v) M/s. Cable Corporation of India Ltd, Mumbai  
| 19 | Sub-Station Lighting | i) M/s. Bajaj Electricals  
ii) M/s. Philips  
iii) M/s. Crompton Greaves Ltd |
| 20 | Wave Traps | i) M/s. Areva T & D India Ltd, Bangalore  
ii) M/s. BPL, Palakkad, Kerala |
| 21 | PLCC and Telecom Equipment | i) M/s. ABB, Mumbai  
ii) M/s. BPL, Palakkad, Kerala  
iii) M/s. Puncom, Mohali |
| 22 | Energy Meters | i) M/s. Secure meters Ltd., Udaipur  
ii) M/s. L &G,  
iii) M/s. L&T, Mysore |
| 23 | a) 33kV Station Transformers | i) M/s. Vijay Elec. Ltd, Hyderabad  
ii) M/s. Crompton Greaves Ltd, Nasik  
iii) M/s. Esennar Trasformers (P) Ltd., Hyderabad  
v) M/s. EMCO Ltd., Jalgoan  
vii) M/s. Inra Vidyut Ltd., Bangalore  
vii) M/s. ECE, Hyderabad  
viii) M/s. HIT, Hyderabad  
ix) M/s. PETE, Hyderabad. |
| 24 | Diesel Generator Set | As per DISCOMs approved list of Companies.  
i) M/s. Powerica  
ii) M/s. Jakson Ltd., Noida  
iii) M/s. Escorts Ltd.  
v) M/s. Genset India (P) Ltd., Kolkata  
v) M/s. Greaves Cotton Ltd. |
<table>
<thead>
<tr>
<th>25(a)</th>
<th>Steel Brands for use in Reinforcement</th>
<th>1) VSP 2) SAIL 3) TISCO</th>
</tr>
</thead>
<tbody>
<tr>
<td>25(b)</td>
<td>Steel Brands for use for Structures &amp; Towers</td>
<td>1) VSP 2) SAIL 3) TISCO and 4) ISCO</td>
</tr>
<tr>
<td>27</td>
<td>Furniture</td>
<td>Godrej</td>
</tr>
<tr>
<td>28</td>
<td>T &amp; P</td>
<td>Taparia, Indore.</td>
</tr>
<tr>
<td>29</td>
<td>EOT Crane</td>
<td>RANK, ACCES, TRANS RAIL, SIVPRA, ATLAS CRANES</td>
</tr>
<tr>
<td>30</td>
<td>AIR CONDITIONING SYSTEM</td>
<td>Voltas, Bluestar, Carrier</td>
</tr>
<tr>
<td>31</td>
<td>PLCC Terminal &amp; Coupling units</td>
<td>M/s. ABB Limited., Andheri (west) Mumbai</td>
</tr>
<tr>
<td>32</td>
<td>PLCC Terminals, wave traps &amp; Exchanges</td>
<td>M/s. BPL Telecom Pvt.Ltd., Kasturba Road, Bangalore</td>
</tr>
<tr>
<td>33</td>
<td>Exchanges</td>
<td>1 M/s. Intellicon Pvt.Ltd., Karkhana, Secunderabad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 M/s. Intellicon Pvt.Ltd., Gandhinagar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 M/s. Siemens Ltd., Bangalore</td>
</tr>
<tr>
<td>34</td>
<td>Wave Traps</td>
<td>1 M/s. Areva T&amp;D Pvt Ltd., Hosur, Tamlanadu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 M/s. Techno Labs, Hyderabad</td>
</tr>
<tr>
<td>35</td>
<td>Telephone Cables</td>
<td>M/s. Maharaja Cables, New Delhi</td>
</tr>
<tr>
<td>37</td>
<td>Chargers</td>
<td>1 M/s. Swati Electronics &amp; Automation, Balanagar, Hyderabad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 M/s. Exide Batteries Ltd., Hosur, Bangalore.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 M/s. SPM Cables, Secunderabad</td>
</tr>
<tr>
<td>38</td>
<td>OLT equipment</td>
<td>M/s. Comtel Networks Pvt Ltd., Trombay Road, Chamber, Mumbai.</td>
</tr>
<tr>
<td>39</td>
<td>Chargers</td>
<td>M/s. S. Creative Electronics, Gurgaon, Haryana</td>
</tr>
<tr>
<td>40</td>
<td>A/C units</td>
<td>M/s. Varun Techno Services, AmeSAPet, Hyderabad</td>
</tr>
<tr>
<td>41</td>
<td>Cables</td>
<td>M/s. Kothari Brothers, Hyderabad, Secunderabad</td>
</tr>
<tr>
<td>42</td>
<td>A/C Units</td>
<td>M/s. Globo Tech Services, Vijayanagar Colony, Hyderabad</td>
</tr>
<tr>
<td>43</td>
<td>Electric Testing Instrument</td>
<td>M/s. World Traders &amp; Company, Veer nariman road, Mumbai</td>
</tr>
<tr>
<td>44</td>
<td>PLCC terminals</td>
<td>M/s. Punjab communications Ltd., S.A.S.Nagar, Chandigarh.</td>
</tr>
<tr>
<td>45</td>
<td>Batteries</td>
<td>M/s. Exide Industries Ltd., Chowranghee road, Kolkata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 M/s. SM Creative Electronics Ltd., Gurgaon, Haryana</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 M/s. Exide Industries Ltd., Krishnagiri Dist, Tamlanadu</td>
</tr>
</tbody>
</table>

The following Power Grid approved steel manufacturers are also approved by TSTRANSCO for procuring steel and angles which are not manufactured/rerolled by SAIL, VSP, TISCO & ISCO subject to stage inspection as per clause 24.1 section- I General.

a. M/s Southern iron & steel company Ltd, Pattaneri, Salem (Tamil Nadu)
b. M/s Lloyds Steel (only for steel plates)
c. M/s Jindal Steel & Power Ltd, Raigarh (only slabs, booms & billets).
d. M/s Jindal Vijaya Nagar Steel Limited, Bellary, Karnataka, (only for plates 3mm to 10mm thick)
e. M/s Jindal Iron & Steel Company Ltd, Thane.
f. M/s. Hazira works (for MS & HT plates upto 20mm thick)
The following re-rollers are approved by TSTRANSCO subject to procurement of the input Ingots from SAIL, VSP, TISCO & ISCO.

z. M/s Sanvijay Rolling & Engineering Limited, Nagpur.
aa. M/s Shri Bhajarang Alloys Ltd, Nagpur.
bb. M/s Vandana Ispat Ltd, Raipur.
c. M/s Shilpa Re-Rollers Ltd, Butibori, Nagpur.
ds. M/s Bhuwalka Steel Industries Limited, Thane.
e. M/s P.R. Rolling Pvt Ltd, Jaipur.
f. M/s Vinar Ispat Ltd, Chandrapur.
g. M/s Eagle Steels, Taloja.
h. M/s Shilpa Re-Rollers Ltd, Kamptee Road, Nagpur.
i. M/s Mahavir Steel Industries Ltd, Pune.
j. M/s Unique Structures & Tower Ltd, Raipur.
k. M/s Rita Steel Industries, Nagpur.
l. M/s United Metal Industries, Chennai.
m. M/s Hamma Steel Industries, Chennai.
n. M/s Sharda Ispat, Nagpur.
o. M/s Maharashtra Steel Rolling & Engineering works, Mumbai.
q. M/s Shyam Steel Industries Limited, Kolkata.
r. M/s Prakash Ispat Udyog, Nagpur.
s. M/s Swastika Steel & Allied products, Kolkata.
t. M/s Sujana Metal products, Hyderabad.
v. M/s Sawaria Pipes Pvt Ltd, Hyderabad.
w. M/s Abhishek Steels Pvt. Ltd, Hyderabad.

The above re-rollers are approved with the following guide lines into consideration:

a) The steel angles re-rolled shall be as per the approved manufacturing quality assurance plan.
<table>
<thead>
<tr>
<th>S.No.</th>
<th>NAME OF THE BANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Nationalized Banks</td>
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<tr>
<td>1</td>
<td>Allahabad Bank</td>
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<tr>
<td>2</td>
<td>Andhra Bank</td>
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<td>3</td>
<td>Bank of Baroda</td>
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<td>4</td>
<td>Bank of India</td>
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<td>5</td>
<td>Bank of Maharashtra</td>
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<td>6</td>
<td>Canara Bank</td>
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<tr>
<td>7</td>
<td>Central Bank of India</td>
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<tr>
<td>8</td>
<td>Corporation Bank</td>
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<tr>
<td>9</td>
<td>Dena Bank</td>
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<tr>
<td>10</td>
<td>Indian Bank</td>
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<tr>
<td>11</td>
<td>Indian Overseas Bank</td>
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<tr>
<td>12</td>
<td>Oriental Bank of Commerce</td>
</tr>
<tr>
<td>13</td>
<td>Punjab &amp; Sind Bank</td>
</tr>
<tr>
<td>14</td>
<td>Punjab National Bank</td>
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<td>15</td>
<td>Syndicate Bank</td>
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<td>16</td>
<td>UCO Bank</td>
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<td>18</td>
<td>United Bank of India</td>
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<tr>
<td>19</td>
<td>Vijaya Bank</td>
</tr>
<tr>
<td>20</td>
<td>State Bank of India and other State Bank Group Banks / Associated Banks</td>
</tr>
<tr>
<td>B</td>
<td>Major Scheduled Banks</td>
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<tr>
<td>1</td>
<td>Kotak Mahindra Bank Ltd</td>
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<td>2</td>
<td>Indusind Bank Ltd</td>
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<td>ICICI Bank Ltd</td>
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<td>HDFC Bank Ltd</td>
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<td>Centurion Bank Ltd</td>
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<td>6</td>
<td>IDBI Bank Ltd</td>
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<tr>
<td>7</td>
<td>Axis Bank Ltd</td>
</tr>
<tr>
<td>8</td>
<td>Yes Bank Ltd</td>
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</table>
The work shall be completed within Six (3) months from the date of handing over of site. The work shall be taken up subject to availability of line clearances on the feeder/equipment.

I / We agree to the above mentioned completion period and execution programme.

SIGNATURE OF THE BIDDER
WITH SEAL