

**E-TENDERING DOCUMENT
FOR**

**Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV
AC OHE system for Providing Rail Connectivity to upcoming CHP &
SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P**

E-TENDER NO.: RITES/PULKO/NCLNIGAHIOHE/23/R

**SECTION-1- NOTICE INVITING TENDER AND INSTRUCTIONS TO
TENDERERS**

SECTION- 2 – ADDITIONAL CONDITIONS OF CONTRACT

SECTION- 3 – SPECIAL CONDITIONS

SECTION- 4 – SCHEDULE A TO F

SECTION- 5 – TECHNICAL SPECIFICATIONS

SECTION- 6 – DRAWINGS



rites
THE INFRASTRUCTURE PEOPLE

MITES LIMITED
(A Govt. Of India Enterprise)
Project Unit, 13 Km. Milestone,
NH-24Lucknow – Sitapur Road
Lucknow – 226201

E-TENDER NO.: RITES/PULKO/NCLNIGAHI-OHE/23/R

TENDER AND CONTRACT DOCUMENT

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RITES LIMITED

E-TENDERING DOCUMENT FOR WORKS

SECTION 1

NOTICE INVITING TENDER AND INSTRUCTIONS TO TENDERERS

SECTION 1

NOTICE INVITING TENDER AND INSTRUCTIONS TO TENDERERS

1.0 GENERAL

1.1 Tender Notice

Tenders are invited through E-Tendering system by RITES Ltd., a Public Sector Enterprise under the Ministry of Railways, acting for and on behalf of Northern Coalfields Limited (Employer) as an Agent/Power of Attorney Holder, from eligible firms / agencies, satisfying the set eligibility and qualifying criteria, for the work of “**Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV AC OHE system for Providing Rail Connectivity to upcoming CHP & SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P**”

(Note: Throughout these bidding documents, the terms ‘bid’ and ‘tender’ and their derivatives are synonymous)

1.2 Estimated Cost of Work

The work is estimated to cost **Rs. 4,85,03,014.00** (Rupees Four Crore Eighty Five Lakh Three Thousand and Fourteen Only) excluding GST. The estimate is generally based on ~~CPWD Delhi Schedule of Rates 2018*/ MES* / Railways*/PWD Schedule of Rates 2018~~ **RVNL SOR-2021(excluding the element of GST on Works Contract Service)** ~~enhanced by % and market rates and latest LAR of RITES in different ongoing Projects for OHE works and partially on Latest DSR Rate (DSR E&M and Civil of 2018).~~ This Estimate, however, is given merely as a rough guide.

1.3 Time for Completion

The time allowed for completion will be **06 (Six)** months from the date of start which is defined in Schedule F under Clause 5.1(a) of Clauses of Contract.

1.4 Brief Scope of Work

- 1) Provision of OHE mast foundation, mast erection, stringing of OHE (approx. 2.50 TKM) and other allied works for successful execution of OHE works under power block and non-power block.
- 2) Co-ordination with East Central Railway both at the Divisional and Headquarters level
- 3) Sectioning Diagram, LOP, CSD, SED, Profile Drawing and other working drawings and get it approved from East Central Railway.
- 4) Preparation of “As Erected Drawings” furnishing 6 copies and 2 nos. of RTF for each drawing after approval and 2 nos. of editable Soft copies.

1.6 Availability of Site

The site for the work is largely available ~~*/shall be made available in parts, as specified below*:~~

1.7 Deadline for submission of bids is 11.:30 Hrs. on date 24.08.2023

The Employer may extend the deadline for submission of Tenders by issuing an amendment in writing in accordance with Clause 6.3. The Employer may extend the deadline for submission of bids and/or the bid opening date and time, even otherwise, if it considers the same to be desirable / expedient. In case of such extension, all rights and obligations of the Employer and the Tenderer previously subject to the original deadline will be subject to new deadline. All Bidders are advised to see the website <https://etenders.gov.in/eprocure/app> for extension of deadline for submission of tenders and / or the bid opening date.

1.8 Eligibility Criteria for Participation in this Tender

Subject to provisions in the Tender Document, participation in this Tender Process is open to all domestic bidders who fulfill the 'Eligibility' and 'Qualification criteria as prescribed in this tender document. Bidder should meet the following eligibility criteria as of the date of his bid submission and should continue to meet these till the award of the contract. Bidder shall be required to declare fulfillment of Eligibility Criteria in proforma-1. The Bidder, unless otherwise stipulated in the tender documents should meet following Eligibility Criteria:

- 1) The Bidder should be Private or Government Owned legal entity (individual, proprietary firm, firm in partnership, limited company (Private or Public Sector) or corporation).
- 2) The Bidder should not be (or proposes to be), a Joint Venture, **unless permitted explicitly as per clause 2.4 hereinafter and Critical Data Sheet**
- 3) Bidder should have valid registration with Employees Provident Fund organization under 'EPF and Miscellaneous Provisions Act, 1952'.
- 4) Only Class -I Local Suppliers, as defined in Make-in-India policy, unless otherwise mentioned in these documents.
- 5) ~~Only those contractors/ bidders, who commit themselves to Integrity Pact as per details in Clause 11.2 herein under, would be considered competent to participate in the bidding process. In other words, entering into this Pact would be a preliminary qualification. Any bid not accompanied by Integrity Pact duly signed by the bidder shall be considered to be a non-responsive bid and shall be rejected straight away.~~
- 6) The Bidder should not have a conflict of interest, which substantially affects fair competition. The Bidder and any of its affiliates (associates, subsidiary, JV partner), should not have been engaged by Ministry/ Department/RITES/Employer to provide consultancy services for the preparation or implementation of this project. The prices quoted should be competitive and without adopting any unfair/ unethical/ anti-competitive means. No attempt should be made to induce any other bidder to submit or not to submit an offer for restricting competition.
- 7) The Bidder should not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of these reasons.
- 8) The Bidder should not have been declared as Poor Performer by RITES and their name should not currently be in the 'Negative List' of RITES.
- 9) The Bidder (including their affiliates or subsidiaries or Contractors/ subcontractors for any part of the contract) should not be currently declared ineligible/suspended/ blacklisted/ banned/ debarred by RITES or by any Central/State Government Department/ Public

Undertaking or Enterprise of Central/State Government and such ban should not be in force at the time of submission of the Bid or extended deadline for submission of bid.

- 10) The Bidder should not have an association (as a bidder/ partner/ director/ employee in any capacity) with
 - a. The near relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons involved in decision making in the procurement as mentioned in Clause 17.1 hereinafter.
 - b. Of retired Gazetted or equivalent rank Officers of the Central or State Government or its Public Sector Undertakings as defined in clause 17.1 hereinafter
- 11) The Bidder must fulfill any other additional eligibility condition, if so prescribed, elsewhere in the Tender Document.
- 12) The Bidder should provide such evidence of their continued eligibility to the Employer/ RITES Ltd if so requested.

1.9 Purchase Preference Policies of the Government

As detailed in the Tender Document, RITES reserves its right to grant preferences to eligible Bidders under various Government Policies/ directives (policies relating to Make in India; MSEs; Start-ups etc.).

1.10 CRITICAL DATA SHEET

S. No	Description	Details
1.	Published Date	10.08.2023 & 18: 00 Hrs
	Bid Document Download / Sale Start Date	11.08.2023 & 15: 30 Hrs
2.	Pre-bid Query Receipt Start Time & Date	NA
3.	Pre-bid Query Receipt End Time & Date	NA
4.	Bid submission Start Date & Time	14.08.2023 & 11: 30 Hrs.
5.	Bid submission End Date & Time	24.08.2023 & 11: 30 Hrs.
6.	Bid Opening Date & Time	25.08.2023 & 11: 30 Hrs.
7.	Bid Validity (Refer Clause 8 below)	<i>75 Days from Date of submission</i>
8.	Tentative date of Opening of Financial Bid	20.09.2023 & 11: 30 Hrs.
9.	Tentative date of issue of Letter of Acceptance	30.09.2023

S. No	Description	Details
10	The work for which the Tender is being invited falls under the category of (Refer Clause 2.2 below)	Small */Normal*/ Large *
11	The work for which this Tender has been invited falls under (Refer Clause 2.3 below)	*Normal/* Difficult area .
12	In this tender Joint Venture is (Refer Clause 2.4 below)	*allowed /*not allowed.
13	Correction slips to GCC as applicable (Refer Clause 4.1 below)	Correction Slip/s upto date of opening of bid
14	Correction slips to SECTION-1 (Refer Clause 4.1 below)	Correction Slip/s upto date of opening of bid
15	Whether Clause 11.2 (Integrity Pact) shall be applicable	*YES / *NO
16	Cost of Tender Document: (Refer Clause 7 below)	Rs. 8,000.00 +18% GST i.e. Rs. 9,440.00
17	Earnest Money Deposit (EMD) – (Refer Clause 7 and 9 below)	Rs 9.70 Lakh (Rupees Nine Lakh Seventy Thousand only)
18	Name, Address and email ID of IEM 1 (Refer Clause 11.2A below)	Not Applicable
19	Name Address and email ID of IEM 2 (Refer Clause 11.2A below)	Not Applicable
20	Eligibility of Local Suppliers and Non-local Suppliers as per Make in India Policy (Refer Clause- 12.15 below)	Class -I Local Suppliers
21	Officer to be contacted regarding inspection of site. (Refer Clause-13 below)	Mr. Ashish Saxena (Sr.DGM/C) , RITES Limited, House No. 252/C, Road No. 1C, Ashok Nagar, Ranchi Jharkhand-834002 (E-mail id- ashish.1965@rites.com and Mob. No - 93899 91477 and Mr. Sandeep Kumar, Asstt. Mgr (Electrical) , RITES Ltd., Project Unit- Lucknow, 13 Km. Milestone, NH-24, Lucknow-Sitapur Road, Lucknow-226201, Uttar Pradesh (E-mail id- srm.sandeep@gmail.com and Mob. No - 8303672015

2.0 QUALIFICATION CRITERIA TO BE SATISFIED

- 2.1 The Qualification Criteria to be satisfied are given at Annexure I enclosed.
- 2.2 The Qualification Criteria to be satisfied will depend on the category of works, whether Small, Normal or Large. The work for which the Tender is being invited falls under the category of ~~Small*/Normal*/Large*~~.
- 2.3 The Qualification Criteria to be satisfied will also depend on whether the Work falls in Normal area or difficult area. Difficult area includes North East States, Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands and the 60 districts requiring Integrated Action Plan of Government of India (List available at Annexure IX). Normal area covers all areas other than difficult area.
The work for which this Tender has been invited falls under ~~*Normal/*Difficult area~~.
- 2.4 In this tender Joint Venture is ~~*allowed/*not allowed~~.
- 2.5 The documents to be furnished by the Bidder to prove that he is satisfying the qualification Criteria laid down, should all be in the Bidder's name, except in cases where through the name has changed, the owners continued to remain the same and in cases of amalgamation of entities.

3.0 FORMAT AND CHECK LIST FOR SUBMISSION OF INFORMATION ON QUALIFICATION CRITERIA

The information to be furnished and the documents to be enclosed shall be as per Clause 28.0 hereinafter. Documents/information complete in all respects, in support of meeting the Qualification Criteria should be submitted in one go. Submission of additional documents shall not be permitted. Only clarifications and filling of gaps/missing information in the submitted documents, may be permitted.

4.0 CONTENTS OF TENDER DOCUMENT

- 4.1 Each set of Tender or Bidding Document will comprise the documents listed below and addenda issued in accordance with Clause 6 herein below:

PART-1: - Technical Bid Packet

(Read with Correction Slip Nos. 1 to upto date the opening of bid)

- | | |
|-----------|--|
| Section 1 | Notice Inviting Tender and Instructions to Tenderers including Annexures |
| Section 2 | Additional Conditions of contract |
| Section 3 | Special Conditions of contract |
| Section 4 | Schedules A to F |
| Section 5 | Technical Specifications |
| Section 6 | Drawings |

PART-2: - FINANCIAL BID PACKET

Schedule of Quantities (Bill of Quantities)

PART-3: - General Conditions of Contract for Works

(Read with Correction Slip Nos. 1 to upto dated the opening of bid)

- | | |
|-----------|----------------------------------|
| Section 7 | Conditions of Contract for Works |
|-----------|----------------------------------|

Section 8	Clauses of Contract
Section 9	RITES Safety Code
Section 10	RITES Model Rules for Protection of Health and Sanitary Arrangements for Workers
Section 11	RITES Contractor's Labour Regulations

4.2 Part-3: General Conditions of Contract for Works (Compilation of section 7 to 11) as also Correction Slips to GCC are available on RITES website www.rites.com under the link 'Tenders'.

4.3 Part-3 of the tender, i.e., General Conditions of Contract for Works (Compilation of Section 7 to 11) is not uploaded as a part of this tender document because as stated in sub-clause 4.2 above, the same is available separately on RITES' website and can be seen/downloaded from there. **The bidder need not submit/upload Part 3 of the tender as a part of his offer. So far as Part-1 is concerned, the bidder is required to submit/upload only the documents mentioned in Clause 28.0 of Section 1 thereof. Rest of the Part-1 need not be uploaded. The bidder must, nevertheless, read the same. It shall be presumed that the bidder has read the contents of Part 1: Technical Bid Packet and Part 3: General Conditions of Contract and upto date Correction Slips there to and the same will be binding upon him.** The successful bidder will be required to sign the complete tender document i.e., Part 1, Part 2, Part 3 and Correction Slips, if any, thereto.

5.0 INSTRUCTIONS ON ACCESSING/PURCHASING OF BID DOCUMENTS AND SUBMISSION THEREOF

5.1 To participate in the E-Bid submission for RITES, it is mandatory for the bidders to get their firms registered with E-Procurement Portal <https://etenders.gov.in/e procure/app>

5.2 The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

5.3 REGISTRATION

- a) Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal ([URL:https://etenders.gov.in/e procure/app](https://etenders.gov.in/e procure/app)) by clicking on the link "Online Bidder Enrolment" on the CPP Portal which is free of charge.
- b) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- c) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- d) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- e) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- f) Bidder can log in to the site through the secured log-in by entering their user ID/Password and the password of the DSC/e-Token.

5.4 SEARCHING FOR TENDER DOCUMENTS

- a) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- b) Once the bidders have selected the tenders they are interested in, they may download the required documents/tenders schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS/E-mail in case there is any corrigendum issued to the tender document.
- c) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Helpdesk.

5.5 PREPARATION OF BIDS

- a) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- b) Bidder is advised to go through the tender advertisement/NIT and the tender document carefully to understand the documents required to be submitted as part of the bid. Bidder may please note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- c) Bidder, in advance, should get ready the bid document to be submitted as indicated in the tender document/schedule and generally, they can be in PDF/XLS/RAR/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- d) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN Card copy, Annual Reports, Auditor Certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

5.6 SUBMISSION OF BIDS

- a) Bid can be submitted only during validity of registration of bidder with CPPP E-Procurement Portal.
- b) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- c) The Bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- d) Bidder has to select the payment option as "offline" to pay the cost of tender document and EMD as applicable and enter details of the instruments.

- e) Bidder should prepare the financial instruments of the Cost of Tender Documents and EMD as per the instructions specified in Clause 7.0 (f) hereinafter. The originals should be posted/couriered/given in person to the concerned official, so as to reach him within a week from the date of opening. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. If the date of issue of DD/any other accepted instrument, physically sent, is on or before the bid submission end date, the same shall also be accepted even if the details are different from the scanned copy uploaded along with the bid. Otherwise the uploaded bid will be rejected.
- f) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender documents, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the Sky Blue coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
- g) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- h) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 Bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys.
- i) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- j) Upon the successful and timely submission of bids (i.e. after clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid ID to the bid. A bid summary will be displayed with the bid ID and the date & time of submission of the bid with all other relevant details.
- k) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. The acknowledgement may be used as an entry pass for any bid opening meetings.

5.7 ASSISTANCE TO BIDDERS

- a) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Help Desk Number 0120-4200462, 0120-4001002, 0120-4001005, 0120-6277787, E-mail id: support-eproc@nic.in
- b) Bidders information useful for submitting online bids on the CPP Portal may be obtained at: <https://etenders.gov.in/eprocure/app?page=BiddersManualKit&service=page>
- c) It is mandatory for all bidders to have Class-III Digital Signature Certificate (DSC) in the name of the person along with name of Company who will digitally sign the bid from any of licensed Certifying Agency (CA). Bidders can see the list of licensed CAs from the link <https://www.cca.gov.in>

- d) Bidder shall ensure use of registered Digital Signature Certificate (DSC) only and safety of the same.
- e) In case the Digital Signature Certificate (DSC) holder who is digitally signing the bid and the person having Authority to Sign as per Clause 11 are different, even then all the terms and conditions of the tender document will be binding upon the bidder.

5.8 CLARIFICATIONS ON TENDER DOCUMENTS

A prospective Tenderer requiring any clarification on the Tender Document may notify through queries, on line only within the specified period (refer clause 1.9-Critical Data Sheet herein before) Request for clarifications including request for Extension of Time for submission of Bid, if any, must be received not later than 10 (ten) days prior to the deadline for submission of tenders. Details of such queries raised and clarifications furnished will be uploaded in CPP website <https://etenders.gov.in/e procure/app> without identifying the names of the bidders who had raised the queries. Any modification of the Tender Document arising out of such clarifications will also be uploaded on CPP website.

6.0 AMENDMENT OF TENDER DOCUMENT

- 6.1 Before the deadline for submission of tenders, the Tender Document may be modified by RITES Ltd. by issue of addendum/corrigendum.
- 6.2 Addendum/Corrigendum, if any, will be hosted on website <https://etenders.gov.in/e procure/app> and shall become a part of the tender document. All tenderers are advised to see the website for addendum/corrigendum to the tender document which may be uploaded up to 7 days prior to the deadline for submission of tender as finally stipulated.
- 6.3 To give prospective tenderers reasonable time in which to take the addenda/corrigenda into account in preparing their tenders, extension of the deadline for submission of tenders may be given before bid submission end date and time as considered necessary by RITES. Sometimes due to administrative reasons, the deadline for submission of tenders may be extended latest by the deadline for opening of tender as stipulated including extension given earlier. All tenderers are advised to see the website for extension of deadline for submission of tenders.
- 6.4 Tenderer who has downloaded the tender from Central Public Procurement Portal (CPPP) website <https://etenders.gov.in/e procure/app> shall not tamper/modify the tender form including downloaded Price Bid Template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with RITES Ltd.

7.0 PREPARATION AND SUBMISSION OF BIDS

- a) Part-1 and Part-2 of tender document may be downloaded from CPPP and Part-3 from RITES website <https://www.rites.com> under the link 'Tender' – 'RITES GCC for Works' well before the deadline for submission of bids. The bids (Part-2 only) along with the information and documents specified in Clause 28 herein after, shall be submitted online following the instructions appearing on the screen. **Documents specified in Clause 28 of Section 1, Part-1 are required to be uploaded along with Part-2 (Financial Bid); the rest of Part-1 and the whole of Part-3 of the tender document need not be submitted online but it shall be deemed to have been submitted.** Users are requested to map their system as per the System settings available on the link <https://etenders.gov.in/e procure/app?page=BiddersManualKit&service=page> on the CPP portal.

- b) After downloading/ getting the tender document/ schedules from <https://etenders.gov.in/eprocure/app> the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected. It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidders are advised that prior to bid submission they should read the bidsubmission manual available on CPP Portal <https://etenders.gov.in/eprocure/app?page=BiddersManualKit&service=pagewebsite>
- c) Bidders may ensure that all the pages of the documents mentioned in Clause 28 must be signed & stamped by authorised signatory and serially numbered. In case, it is found that bidder has not complied with the same, the documents shall be deemed to be signed and stamped as this is a digitally signed e-tender.
- d) The bids shall be submitted online following the instructions appearing on the screen. Bidders may insert their e-Token/Smart Card in their computer and Log onto CPP portal <https://etenders.gov.in/eprocure/app> using the User-Id and Password chosen during registration. Then they may enter the password of the e-Token/SmartCard to access the DSC.
- e) Prior to bid submission, bidder should get ready with the documents to be uploaded as part of the bid as indicated in the tender document/schedule. Generally, they can be in Excel/PDF/RAR/JPG formats. No other format is accepted. If there is more than one PDF document, then they can be clubbed together in a Zip file for uploading. There is no limit for uploading file. Bids shall be submitted online only at CPP website <https://etenders.gov.in/eprocure/app>

Tenderer/Contractor are advised to follow the instructions provided in the 'Instructions to the Contractors/Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e-procurement at <https://etenders.gov.in/eprocure/app>

Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

Intending tenderers are advised to visit CPPP website <https://etenders.gov.in/eprocure/app> till the specified date and time of opening of tender to check if there is any extension of deadline of submission of tender.

f) Cost of Tender Document & Earnest Money Deposit (EMD)

During bid submission the bidder has to select the payment option as offline to pay the Cost of Tender Document and EMD and enter details of the instruments. In case of exemption from payment of cost of tender document and EMD as a matter of Govt. Policy, the scanned copy of document in support of exemption will have to be uploaded by the bidder during bid submission. The onus of proving that the bidder is exempted from payment of cost of tender document and/or EMD lies on the bidder. In this connection, it should be noted that mere opening of bid does not mean that the bid has to be considered by RITES as a valid bid. If later, it is discovered from the uploaded documents that bidder is not exempted from payment of cost of tender and/or EMD, his bid shall be treated as non-responsive. It may be noted that the benefits under Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 are applicable to only Supply and Service Contracts only. **For this tender, the benefits under Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 are not applicable**

- i. Cost of Tender Document:** The Cost of Tender Document is **Rs. 8,000.00 +18% GST i.e. Rs. 9, 440.00**, which is non-refundable. It shall be in the form of a Account Payee Banker's Cheque/Pay Order/Demand Draft in favour of "RITES Ltd." issued

by a scheduled Commercial Bank, payable at **Gurugram/Delhi**. No other mode of payment will be acceptable.

- ii. **Earnest Money Deposit (EMD)** – The total Earnest Money deposit (EMD) is **Rs 9.70 Lakh (Rupees Nine Lakh Seventy Thousand only)**. The bids shall be accompanied by Earnest Money Deposit (EMD) of an amount and in the form specified in Clause 9 hereinafter.

Bidders are required to upload scanned copy of acceptable instruments for EMD and Cost of Tender document in different files (Either in PDF or Zip format) during on-line submission of Bid. These documents shall be deposited in “ORIGINAL” in a sealed envelope within a week from the date of opening to:

R.K. Choudhary

Head PU Lucknow

RITES Ltd., Project Unit, Lucknow 13 Km. Milestone,

NH-24, Lucknow-Sitapur Road,

Lucknow-226201, Uttar Pradesh

Phone: 0522-2771892, 2734894, Fax-0522 2771893

Failing which the bid shall be rejected and the bidder shall be debarred from tendering in RITES Ltd. for a period of 02 (two) years unless the lapse is condoned by the Accepting Authority at the request of the bidder for valid reasons. The envelope should bear the tender details (Tender No., Tender Name etc.)

- (b) The bid should be submitted online in the prescribed format. No other mode of submission is accepted.
- (c) Bid shall be digitally signed by a representative of the bidder and submitted “on- line”. No hard copy of the documents (except those specifically asked for in the tender document) are required to be submitted.
- (d) The bidders will have to accept unconditionally the online user portal agreement which contains the Terms and Conditions of NIT including General and Special Terms & Conditions and other conditions, if any, along with on-line undertaking in support of the authenticity regarding the facts, figures, information and documents furnished by the bidder on-line in order to become an eligible bidder.
- (e) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the tender/bid document including terms and conditions without any exception and have understood the entire document and are clear about tender requirements which will be binding upon the bidder.
- (f) The bidders are requested to submit the bids through online e-tendering system before the deadline for submission of bids (as per Server System Clock displayed on the portal). RITES will not be held responsible for any sort of delay or the difficulties faced during online submission of bids by the bidders at the eleventh hour.
- (g) The bidder may seek clarification online only within the specified period. The identity of bidder will not be disclosed by the system. RITES Ltd. will clarify the relevant queries of bidders as far as possible. The clarifications given will be visible to all the bidders intending to participate in that tender. The clarifications may be asked from the day of “Pre Bid Query Receipt Start Date and Time” till “Pre Bid Query Receipt End Date and Time”.

8.0 TENDER VALIDITY

8.1 The Tender shall be valid for a period of **75 days** from the due date for submission of Tender or any extended date as indicated in sub para below.

8.2 In exceptional circumstances, during the process of evaluation of tenders and prior to the expiry of the original time limit for Tender Validity, the Employer may request that the Tenderers may extend the period of validity unconditionally for a specified additional period. The request and the tenderer's response shall be made in writing/ e- mail. A Tenderer may refuse the request without forfeiting his Earnest Money. A Tenderer agreeing to the request will not be permitted to modify his Bid but will be required to extend the validity of the Earnest Money for the period of the extension.

9.0 EARNEST MONEY

9.1 The Tender should be accompanied by earnest money of **Rs 9.70 Lakh (Rupees Nine Lakh Seventy Thousand only)** as per following:

Estimated Value of the Work in Rupees	Earnest Money Deposit (EMD) in Rupees
For works of estimated cost of any value	2% of the estimated cost of the work rounded off to nearest Rs 1000/ subject to a maximum of ₹ 1 Crore

The EMD shall be deposited in any of the following forms:-

Insurance Surety Bonds or Account Payee Banker's Cheque / Pay Order / Demand Draft or Fixed Deposit Receipts/ Bank Guarantee (including e-Bank Guarantee) issued by any Scheduled Commercial Bank drawn in favour of RITES Ltd. and payable at **Gurugram**.

Insurance Surety Bonds/ Fixed Deposit Receipts/ Bank Guarantee (including e-Bank Guarantee) should have validity for 180 days or more from the last date of receipt of bids. The Bank Guarantee (including e-Bank Guarantee) should be submitted in the format given at Annexure-X.

9.2 Any Tender not accompanied by scanned copies of the instruments for payment of Earnest Money and Cost of tender document in an acceptable form (or, if applicable, the scanned copy of documents in support of exemption) shall be rejected by the Employer as non-responsive.

9.3 Refund of Earnest Money

The Earnest Money of the Tenderers whose Technical Bid is found not acceptable will be returned without interest within 30 days of declaration of result of technical evaluation after scrutiny of Technical Bid has been completed by the Employer subject to provisions of Clause 9.4(a) and Clause 9.4 (b). The Earnest Money of the Tenderers whose Technical Bid is found acceptable will be returned at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract subject to provisions of Clause 9.4(a) and Clause 9.4 (b). The bidder shall submit RTGS/NEFT Mandate Form as per Proforma given in Annexure VII, duly filled in.

The Earnest Money (EMD) of the successful bidder shall be returned when the bidder has furnished the required Performance Guarantee in terms of Clause 1 of the Clauses of Contract (Section-8) and signed the Agreement in terms of Clause 9 (a) of Conditions of Contract

(Section-7).

9.4 The Earnest Money is liable to be forfeited automatically without any notice to bidder/Contractor

- (a) if after bid opening, but before expiry of bid validity or issue of Letter of Acceptance, whichever is earlier, any Bidder
 - i. withdraws his tender; or
 - ii. makes any modification in the terms and conditions of the tender which are not acceptable to the Employer
 - iii. impairs or derogates from the tender in any respect within the period of validity of the tender
 - iv. If the bidder does not accept the correction of his price during evaluation
- (b) in case any information/document which may result in the Bidder's disqualification is concealed by the Bidder or any statement/information/document furnished by the Bidder or issued by a Bank/Agency/Third Party and submitted by the Bidder, is subsequently found to be false or fraudulent or repudiated by the said Bank/Agency/Third Party.
- (c) in the case of a successful Bidder, if the Bidder fails to furnish the Performance Guarantee within the period specified under Clause 1 of "Clauses of Contract".

In case of forfeiture of Earnest Money as prescribed herein above, the Bidder shall not be allowed to participate in the retendering process of the work.

10.0 MODIFICATION/ SUBSTITUTION/ WITHDRAWAL OF BIDS

- 10.1** The Tenderers shall submit offers which comply strictly with the requirements of the Tender Document as amended from time to time as indicated in Clause 6.0 above. Alternatives or any modifications by the tenderer shall render the Tender invalid.
- 10.2** The bidder can modify, substitute, re-submit or withdraw its E-bid after submission but prior to the deadline for submission of bids or the extended deadline, as the case may be. No Bid shall be modified, substituted or withdrawn by the bidder on or after the deadline for submission of bids or the extended deadline, as the case may be. Withdrawal of bid after such deadline would result in the forfeiture of EMD.
- 10.3** Any modification in the Bid or additional information supplied subsequently to the deadline for submission of bids or the extended deadline, as the case may be, unless the same has been explicitly sought for by RITES, shall be disregarded.
- 10.4** For modification of E-bid (Technical Bid), bidder has to detach its old bid from CPP portal and upload / re-submit digitally signed modified bid.
- 10.5** For withdrawal of bid, bidder has to click on withdrawal icon at CPP portal and can withdraw its E-bid.
- 10.6** After the bid submission on the portal, an acknowledgement number will be generated by the system which should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening.
- 10.7** The time settings fixed in the server side & displayed at the top of the tender site, will be valid for bid submission, in the e-tender system. The bidders should follow this time during bid submission.

10.8 All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & will not be viewable by any one until the date & time specified for bid opening.

10.9 The bidder should logout of the tendering system using the normal logout option available in the portal and not by selecting the (X) exit option in the browser.

11.0 AUTHORITY TO SIGN

- a) If the applicant is an individual, he should sign above his full type written name and current address.
- b) If the applicant is a proprietary firm, the Proprietor should sign above his full type written name and the full name of his firm with its current address.
- c) If the applicant is a firm in partnership, the Documents should be signed by all the partners of the firm above their full type written names and current addresses. Alternatively, the Documents should be signed by the person holding Power of Attorney for the firm in the Format at **Annexure III**.
- d) If the applicant is a limited Company, or a Corporation, the Documents shall be signed by a duly authorized person holding Power of Attorney for signing the Documents in the Format at Annexure III.
- e) If the applicant is a Joint Venture, the Documents shall be signed by the Lead Member holding Power of Attorney for signing the Document in the Format at Annexure IV. The signatory on behalf of such Lead Partner shall be the one holding the Power of Attorney in the Format at **Annexure III**.

11.1 Points to be kept in mind while preparing the bid

While filling in Qualification Information documents and the Financial Bid, following should be kept in mind:

- i. There shall be no additions or alterations except those to comply with the instructions issued by the Employer or as necessary to correct errors, if any, made by the Tenderers.
- ii. Conditional Offer/ Tender will be rejected. Unconditional rebate/discounts in the Financial offer will however be accepted.
- iii. The Employer reserves the right to accept or reject any conditional rebate/discounts. While evaluating the Bid Price, the conditional rebates/discounts which are in excess of the requirements of the bidding documents or otherwise result in accrual of unsolicited benefits to the Employer, shall not be taken into account.
- iv. The bidder has to quote value only in figures in the BOQ.
- v. In case of Item Rate Tenders, the bidders have to compulsorily quote rates of all the BOQ items as also all items of Item Rate Schedule/Sheet in a Mixed (Item Rate Schedule and Percentage Schedule) Tender.
- vi. In case of Item Rate Tenders, if the same item figures in more than one section/part of Schedule of Quantities, the Tenderer should quote the same rate for that item in all sections/parts. If different rates are quoted for the same item, the least of the different rates quoted only shall be considered for evaluation of that item in all sections/parts of the Schedule of Quantities.

- vii. In case of item wise BOQ, the bidder is required to quote his rate for all items .Forthe items not quoted by the bidder, it will be presumed that the bidder has included the cost of that/those item(s) in the rates of other items and the rate for such item(s)shall be considered as Zero and the tender will be evaluated by the Employer accordingly and the work executed by the successful bidder accordingly.
- viii. In case of Percentage Rate BOQ, the bidder has to select Excess (+) or Less(-) andenter the valid percentage for that BOQ.
- ix. Deduction/recovery/credit items, if any, are placed in a separate sub-head and in aseparate sheet of BOQ. In case of credit items/recovery items/deduction items for which the bidder has to pay the amount to Employer, the bidder is not allowed to make negative entry and the rate quoted by the bidder shall be taken as negativelydefault. The amount so calculated shall be considered as negative and deducted from the total of other sub-heads of BOQ to work out the total bid amount.

11.2 INTEGRITY PACT: NOT APPLICABLE

~~(i) The Bidder/Contractor is required to enter into an Integrity Pact (Enclosed as Annexures VI/1, VI/2 and VI/3) with the Employer. The Integrity Pact (Annexure VI/1and VI/3) duly signed by the Authorized representative of RITES Ltd. for and on behalf of Principal/Employer as its Agent/Power of Attorney Holder is enclosedherewith. Bidder shall take out the printout of the Integrity Pact (Annexures VI/1, VI/2 and VI/3), sign on each page by authorized signatory of Bidder/ Lead Member of JV and duly witnessed, scan and submit/upload the same along with the Bid . **In case of failure to submit the Integrity Pact, as prescribed herein, duly signed and witnessed, along with the Bid, the Bid is likely to be rejected.**~~

~~(Note: The integrity pact (Annexure VI/1and VI/3) signed by the authority competent to sign the contract Agreement on behalf of RITES will be uploaded as part of the tender document)~~

~~(ii) The provision of this Clause 11.2 Integrity Pact (IP), shall be applicable only when so provided in Clause 11.2A below which will also stipulate the names, addresses and e-mail ids of the Independent External Monitors as well as the Name, designation, address and e-mail id of the official nominated by the Employer to act as the Liaison Officer between the Independent External Monitors and the Engineer in Charge as well as the Contractor / Bidder.~~

11.2A Whether Clause 11.2 (Integrity Pact) shall be applicable *YES/ *NO

~~In case Integrity Pact is applicable, (When estimated cost put to tender is Rs.10 crores or more), the following Independent External Monitors who have been appointed by the Central Vigilance Commission, shall monitor implementation of IP~~

~~Name, Address and e-mail ID of IEM 1~~

.....

~~Name, Address and e-mail ID of IEM 2*~~

.....

~~* In case two IEMs are in place in RITES, the names and addresses of both IEMs are to be mentioned; otherwise, name and address of the sole IEM may be mentioned.~~

~~Complaints arising from tendering process shall be, as far as possible, referred to both the IEMs for their joint investigation and recommendation.~~

Name, Designation, Address and e-mail ID of RITES' Liaison Officer

.....

11.2B The Guidelines on Banning of Business Dealings as per **Annexure-VIA** are applicable to all Tenders/contracts whether Integrity Pact is applicable as per Clause 11.2A above or not.

If business dealings with the Bidder/Contractor have been banned as per “The Guidelines on Banning of Business Dealings” as per Annexure-VIA, then such a Bidder/contractor individually and also any Joint Venture wherein such Bidder/contractor is a member, will not be eligible during the period till such ban is in force to participate in tenders of any work(s) which may be invited by RITES. In case the Bidder/contractor is a Joint Venture, the JV as well as all members of the JV individually or as member(s) of any other Joint Venture (JV) will not be so eligible. In case the Bidder/contractor is a company then, in addition to the aforesaid provisions, the Associate Companies and Subsidiary Companies (as defined under Companies Act, 2013), of the company with whom Business Dealings have been banned, will also not be eligible”.

12.0 TENDER OPENING, EVALUATION AND CLARIFICATIONS

12.1 The Employer will open all the Tenders received, in the presence of the Tenderers or their representatives who choose to attend at **11: 30 Hrs. on 25.08.2023** in the office of **PU-Head /LKO, RITES Ltd., Project Unit/ Lucknow, 13 Km. Milestone, NH-24, Lucknow-Sitapur Road, Lucknow-226201, Uttar Pradesh**. In the event of the specified date of the opening being declared a holiday by the Employer, the Tenders will be opened at the appointed time and location on the next working day.

12.2 Opening of bids will be done through online process. RITES reserves the right to postpone or can cancel a scheduled bid opening at any time prior to its opening. Information of the same will be displayed at <https://etenders.gov.in/e procure/app CPPportal>.

12.3 Bid opening committee will open the bids online in the presence of bidders or their authorized representatives who choose to attend on opening date and time. Also, the bidders can participate online during the bid opening process from their remote end through their dashboard. The bidder's representatives, who are present, shall sign in an attendance register. At the time of technical bid opening, each bidder will be able to view on-line through CPPP, the technical bids of the bidders who have participated in the tender and whose bids have been opened.

12.4 Bids will be opened as per date/time as mentioned in the Tender Critical Data Sheet unless the same is extended. On completion of Technical Bid Opening, each bidder will be able to view the technical bid documents of the bidders whose bids have been opened. Similarly, on the completion of Financial Bid Opening each bidder will be able to view the Financial as well as technical bid documents of the bidders whose bids have been opened.

(a) Mere Opening of Bid to be No Guarantee of its Validity

It may be noted that mere opening of a bid does not mean that the bid has to be considered by RITES as a valid bid. All bids will be evaluated to decide whether the bids are responsive or non-responsive.

12.5 RITES shall subsequently examine and evaluate the bids in accordance with the provisions set

out in the tender document.

- 12.6** The results of technical and financial qualification of bidders will be available on the CPP Portal at <https://etenders.gov.in/e procure/app> and intimated to the bidder through system generated email or SMS.
- 12.7** It will be the bidder's responsibility to check the status of their Bid on-line regularly after the opening of bid till award of work.
- 12.8** The bids will be checked for the eligibility as defined in clause 1.7 hereinbefore and for submission of documents as per clause 28.0 hereinafter and will be evaluated for qualification criteria as mentioned in Clause -2 hereinbefore and also in conjunction with provisions of Sub-Clauses 1.8, 12.15 and 12.16 and/or provisions given elsewherein this Tender Document. RITES shall not be responsible for any postal delay in receiptof all original documents including the cost of tender document and EMD, as applicable. In case of non-receipt of these documents in original within the specified period, the bid will be treated as non-responsive.
- 12.9** Request for clarification/deficient documents from the bidder can be asked for either through the system or through E-mail. A system generated SMS alert will be sent to the bidder when clarifications/ deficient documents are called through the system. In such a case, no separate communication will be sent in this regard. Non-receipt of email and/or SMS will not be accepted as a reason of non-submission of deficient documents or confirmatory documents within prescribed time. The date and time of submission ofdeficient documents cannot be extended.
- 12.10** After evaluation of Technical-Bid, the bidder will be able to view uploaded Tender Committee evaluation results as also the date and time of Financial Bid Opening.
- 12.11** The bidder will be able to view (through his Login Id) BOQ Sheets of other bidders, Comparative Chart and Financial Evaluation Summary uploaded by Tender Evaluation Committee. Without login, bidder will be able to view only Comparative Chart.

12.12 SINGLE PACKET SYSTEM- NOT APPLICABLE

~~Envelope 1 containing scanned copy of Earnest Money along with Mandate Form as per Annexure VII, Cost of tender document of all the Tenderers and Authority to Sign as per Clause 11.0 will be opened first and checked. If Earnest Money and Cost of Tender Document are not furnished as per tender stipulations, the Envelope 2 of Technical bid and Envelope 3 containing Financial bid will not be opened and the bid will be rejected as non responsive unless the bidder has established that it is exempted from payment of Cost of Tender Document and Earnest Money Deposit. The Envelope 2 containing Technical Bid and Envelope 3 containing Financial Bid of other Tenderers who have furnished scanned copies of Earnest Money and cost of Tender document as per tender stipulations will then be opened simultaneously.~~

12.13 TWO PACKET SYSTEM

- (a) Envelope 1 of Packet I containing scanned copy of Earnest Money along with Mandate Form as per Annexure VII, Cost of Tender Document of all the Tenderers and Authority to Sign as per Clause 11.0 and Integrity Pact document as per clause 11.2 will be opened first and checked. If Earnest Money and cost of Tender Document are not furnished as per tender stipulations, the Envelope 2 of PACKET-I (Technical Bid) and PACKET-II (Financial Bid) will not be opened and the bid will be considered as non-responsive and rejected, unless the bidder has established that it is exempted from payment of Cost of Tender Document and Earnest Money Deposit. The Envelope 2 of PACKET-I (Technical Bid) of other Tenderers who have furnished scanned copies of Earnest Money and cost of Tender document as per tender stipulations will then be opened.

- (b) PACKET-II (Financial Bid) of Tenderers whose Technical Bids are not found acceptable will not be opened. Such tenderers will be informed about non- acceptance of their Technical Bid through system generated SMS/E- mail. The tenderers whose Technical Bids are found acceptable will be advised accordingly and will also be intimated through e-mail the time and date and place where and when PACKET-II (Financial Bid) will be opened.
- (c) At the appointed place, time and date, in the presence of the Tenderers or their representatives who choose to be present, the Employer will open the online PACKET-II (Financial Bid).-

12.14 Evaluation of Bids

- (a) After opening of the Bids, as mentioned hereinbefore, The Employer will evaluate the Tenders, confidentially
 - (i) Information relating to the examination, clarification, evaluation and comparison of bids, and recommendations for the award of a contract, shall not be disclosed to bidders or any other person not officially concerned with such a process until the award to the successful bidder has been announced(unless mentioned otherwise in other clauses of this Tender document).
 - (ii) From the time of bid opening to the time of contract award, no bidder shall contact the Employer/RITES Ltd. on any matter related to the bid, except on request and prior written permission.
 - (iii) Any effort by the bidder to influence Employer/RITES Ltd. in bid evaluation, bid comparison or contract award decisions will vitiate the process and will result in the rejection of the bidder's bid.
- (b) The Employer will scrutinize the Technical Bids accepted for evaluation to determine whether each Tenderer
 - (i) Has submitted '**Authority to sign**' as per Clause 11.0 above and **Integrity Pact** (where applicable) duly signed and witnessed as per Clause 11.2 above.
A Bidder who has not submitted 'Authority to sign' and/or Integrity Pact (where applicable) duly signed by the bidder shall not be evaluated further and will be disqualified at this stage.
 - (ii) Meets the Eligibility Criteria as defined in Clause 1.7 and has submitted documents as per clause 28.0 and meets the Qualification Criteria stipulated in Clause 2.0 and also in conjunction with Provisions of sub-clauses 1.8,12.15,12.16 and/or Provisions given elsewhere in Tender document.
- (c) If required, the Employer may ask any such Tenderer for clarifications/deficient documents on his Technical Bid through CPPP or through E-mail. The tenderer shall furnish the same online only in case clarifications are sought through CPPP and through E-mail if clarifications are sought through E-mail. If a Tenderer does not submit the clarification/document requested, by the specified time, the bid of such Tenderer is likely to be rejected.
- (d) The Employer, reserves its right to, but without any obligation to do so, to waive or seek any shortfall information/ documents, as mentioned above, only in case of historical documents which pre-existed at the time of the Bid Opening, and which have not undergone change since then and does not grant any undue advantage to any bidder.

- (e) Unless otherwise stipulated in these Tender Documents, the following are some of the crucial aspects for which a bid shall be liable to be rejected as nonresponsive:
- (i) The tender is not in the prescribed format or is not submitted as per the stipulations in the Tender Document.
 - (ii) Required cost of tender document and EMD have not been submitted in the requisite form.
 - (iii) Bidder is not eligible to participate in the bid as per laid down eligibility criteria.
 - (iv) The bid validity is shorter than the required period.
 - (v) The bid departs from the essential requirements stipulated in the bidding document;
 - (vi) Non-submission or submission of illegible scanned copies of stipulated documents/ declarations
 - (vii) Any other conditions stipulated elsewhere in the tender documents
- (f) The financial bid shall be opened as follows :**
- (i) **Applicable to Single Packet System:** Both technical bid and financial bid shall be opened simultaneously and shall be evaluated.
 - (ii) **Applicable to two packet system:** PACKET-II (Financial Bid) of Tenderers whose Technical Bids are not found acceptable will not be opened. Such tenderers will be informed about non-acceptance of their Technical Bid through system generated SMS/E- mail. The tenderers whose Technical Bids are found acceptable will be advised accordingly and will also be intimated through e-mail the time and date and place where and when PACKET-II (Financial Bid) will be opened.
- (g) Financial Evaluation (Applicable to both single packet system and two packetsystem):**
After opening of Financial Bids as mentioned in sub clause 12.14(f)(i) & (ii) as applicable, all responsive bids (Qualified in technical bid) are evaluated by the TC with a view to select the lowest (L1) bidder - the lowest evaluated, bid which meets the eligibility/ qualification criteria and techno-commercial aspects. While evaluating the financial bids the following procedure shall be followed:
- (i) In case the bidder does not quote his rate for any item(s) in Item Rate Tenderor Mixed Tender containing one or more Item Wise Schedules, it will be presumed that the bidder has included the cost of that/those item(s) in the rates of other items and the rate for such item(s) shall be considered as Zero and the tender will be evaluated by the Employer accordingly and the work executed by the successful bidder accordingly.
 - (ii) In case of credit items/recovery items/deduction items for which the bidder has to pay the amount to RITES/Employer, the rate quoted by the bidder shall be taken as negative (bidder is allowed to make positive entry only) and the negative amount so calculated shall be considered to work out the total bid amount.
- (h) As part of evaluation of financial bid, written clarification from Lowest (L1) bidder including detailed price analysis of its Bid price in relation to scope, schedule, resource mobilization, allocation of risks and responsibilities and any other requirements of the bid document may

be sought by Employer.

12.15 Preference to make in India

To encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, Department of Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India, issued Public Procurement (Preference to Make in India), Order 2017 (Latest order being Order No. No. P-45021/2/2017-PP (BE-II) 16th September, 2020). The Order is applicable on the procurement of Goods, Works and Services. The Provisions of the Make in India Policy 2017 issued by Govt. of India, as amended from time to time, shall be followed for consideration of the present tender.

The salient features of the policy and specific provisions as applicable to this tender are indicated below. In case of any contradiction of the provisions mentioned herein below and the original policy as mentioned above, the provisions of the policy issued by Department for Promotion of Industry and Internal Trade (Public Procurement Section) shall take precedence:

1. Definitions:

'Local content' means the amount of value added in India which shall be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this clause.

'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this clause.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this clause.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of Purchase Preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

'Procuring entity' means RITES Ltd

'Works' means all works covered in the scope of work in this tender.

2. Eligible bidder in this tender : 'Class-I local supplier'

Notes for Guidance of Tender Preparing Authority and Tender document approving Authority:

Note 1- As per para 3 (a) of the 'Make in India', Policy issued vide No. P- 45021/2/2017-

PP (BE-II) dated 16th September, 2020 only 'Class-I Local Supplier' are eligible to Bid for "Works" tenders where sufficient local capacity and competence is available, irrespective of the Purchase value. Accordingly, only Class-I Local suppliers have been allowed to bid in this Tender.

***Note 2-** In case of special works which can allow participation of Class-II Local Supplier/ Non- Local Supplier besides Class-I Local suppliers, cases shall be dealt as per the provisions of 'Make in India Policy'. Accordingly, the Provisions of this clause 12.15 shall be prepared by Tender preparing Authority and shall be checked by Tender document approving authority before according approval.*

3. Purchase Preference

- (a) In the present tender only 'Class-I local supplier', shall be eligible to bid irrespective of purchase value.

4. Type of this Tender/Work: Works

5. The minimum local content for this tender shall be equal to or more than 50%.

6. Verification of local content:

- (a) The 'Class-I local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self- certification that the item offered meets the local content requirement for 'Class-I local supplier'. They shall also give details of the location(s) at which the local value addition is made.
- (b) In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

Note- Bidder's attention is invited to Para XV in Proforma 1

- (c) In case of false declaration by Class-I local supplier or submission of false certificate, Banning of Business Dealings shall be done with defaulter as per the Guidelines given in Sub-clause 11.2B.

12.16 Restrictions on procurement from a bidder of a country which shares a land border with India

Orders (Order No. F-7/10/2021-PPD(l) Dated 23.02.2023 issued by Department of Expenditure, Ministry of Finance ,Govt. of India (Order No. F-7/10/2021-PPD(l) Dated 23.02.2023) or any other latest order on the subject matter; also referred to as "the Order" in this clause) restricting procurement of Works from Bidders from certain countries that share a land border with India shall apply to this procurement.

Salient provisions of the policy are given below. However it will be the responsibility of the bidder to go through the complete policy and see if it is eligible in terms of the policy and meets the criteria required as per the policy. In case of any contradiction of the provisions mentioned

herein below and the original policy as mentioned above, the provisions of the policy issued by Department of Expenditure, Ministry of Finance, Government of India shall take precedence.

Any bidder from the countries sharing a land border with India, will be eligible to bid in any procurement of works (including turnkey projects) only if the bidder is registered with the Competent Authority **and if otherwise eligible to Bid as per eligibility conditions.**

Any bidder (including an Indian bidder) who has a Specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India will be eligible to bid only if the bidder is registered with the Competent Authority **and if otherwise eligible-to Bid as per eligibility conditions.**

The Competent Authority for registration will be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT), Government of India.

The provision of the Order on restrictions based on land borders will not be applicable for cases mentioned in Para 12 hereinunder:

Definitions

1. **"Bidder"** for the purpose of the Order (including the term 'tenderer', 'consultant 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated herein before, including any agency, branch or office controlled by such person, participating in a procurement process.
2. **"Tender"** for the purpose of the Order will include other forms of procurement, except where the context requires otherwise.
3. **"Transfer of Technology"** means dissemination and transfer of all forms of commercially usable knowledge such as transfer of know-how, skills, technical expertise, designs, processes and procedures, trade secrets, which enables the acquirer of such technology to perform activities using the transferred technology independently. (Matters of interpretation of this term shall be referred to the Registration Committee constituted by the DPIIT and the interpretation of the committee shall be final)
4. **"Specified Transfer of Technology"** means a transfer of technology in the sectors and/ or technologies, specified in the order.
5. **"Procuring entity"** means RITES Ltd.
6. **"Bidder (or entity) from a country which shares a land border with India"** for the purpose of the Order means
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose *beneficial owner* is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

7. **"Beneficial owner"** for the purpose of paragraph 6 (d) above will be as under:
1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation---

- a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five percent of shares or capital or profits of the company;
 - b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
11. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 111. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- 1v. Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - v. In case of a trust, the identification of beneficial owner(s), shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
8. **"Agent"** for the purpose of the Order is a person employed to do any act for another, or to represent another in dealings with third persons.

Note:

1. A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent for the purpose of this Order.
2. However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an Agent

9. Sensitive Sectors/ Technologies (relevant only for the provisions on ToT arrangements):

The Order may be referred for sectors/Technologies which have been identified

as sensitive from the National Security Point of View. The bidder with ToT arrangement in any sensitive Sector/Technology with a country which shares a land border with India shall require registration as indicated in Para 11 below. The Order may be referred for details of sensitive sectors/Technologies.

Requirement of registration

10. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority i.e. Department for Promotion of Industry and Internal Trade (DPIIT).

11. Further, any bidder (including bidder from India) having Specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority i.e. Department for Promotion of Industry and Internal Trade (DPIIT). The requirement of registration for bidders covered in this paragraph shall apply to all tenders issued/published after 01.04.2023.

12. The provision of the Order on restrictions based on land borders will not be applicable for cases mentioned herein under:

- a. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this order and without reference to the competent Authority. Exceptions to this shall be decided in consultation with DEA.
- b. This order shall not apply to procurement by Indian mission and by offices of government agencies/undertaking located outside India.
- c. This order will not apply to bidders (or entities) from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs.
- d. Procurement of spare parts and other essential service support like Annual Maintenance Contract (AMC) / Comprehensive Maintenance Contract (CMC), including consumables for closed systems, from Original Equipment Manufacturers (OEMs) or their authorized agents, shall be exempted from the requirement of registration.

13. Sub-contracting in works contracts

In works contracts, including turnkey contracts, contractors shall not be allowed to sub-

contract works to any **contractor** from a country which shares a land border with India unless such **contractor** is registered with the Competent Authority i.e. Department for Promotion of Industry and Internal Trade (DPIIT). The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 6 above. This shall not apply to sub-contracts already awarded on or before 23.07.2020.

[Note: Procurement or raw material, components, etc. does not constitute sub-contracting.]

14. Validity of registration

In respect of tenders, registration should be valid at the time of submission of bids .and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance/ placement of order, registration shall not be a relevant consideration during contract execution.

15. Model Certificates

Model Certificates, which may be inserted in tenders/obtained from Bidders are given as under:

a. Model Certificate for Tenders:

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India, I certify that this bidder is not from such a country or, if from such a country, has been registered with the competent Authority i.e. DPIIT. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. (Where applicable, evidence of valid registration by the Competent Authority i.e. DPIIT shall be attached) ”.

b. Model Certificate for Tenders for Works involving possibility of sub-contracting:

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I Certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority i.e. DPIIT and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority i.e. DPIIT. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. (Where applicable, evidence of valid registration by the Competent Authority i.e. DPIIT shall be attached.)”

c. Model additional Certificate by Bidders in the cases of Specified ToT:

“I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder does not have any ToT arrangement requiring registration with the competent authority.”

OR

“I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder has valid registration to participate in this procurement. ” (Evidence of valid registration by the Competent Authority i.e. DPIIT shall be attached)

Bidder’s attention is invited to Para xiv Of Proforma 1 in this regard

13.0 INSPECTION OF SITE BY THE TENDERERS

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their Tenders, as to the nature of the ground and sub-soil (as far as is practicable), the form and nature of the site, the means of access to the site, local conditions, working hours, working conditions, availability of water, electricity, construction Labour, construction materials and other relevant requirements connected with work, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their Tender. A Tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The Tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a Tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant etc. will be issued to him by the Employer and local conditions and other factors having a bearing on the execution of the work. The bidders may contact **Mr. Ashish Saxena (Sr.DGM/C), RITES Limited, House No. 252/C, Road No. 1C, Ashok Nagar, ranchi Jharkhand-834002 (E-mail id- ashish.1965@rites.com and Mob. No – 9389991477 and Mr. Sandeep Kumar, Asstt. Mgr (Electrical), RITES Ltd., Project Unit- Lucknow, 13 Km. Milestone, NH-24, Lucknow-Sitapur Road, Lucknow-226201, Uttar Pradesh (E-mail id- srm.sandeep@gmail.com and Mob. No – 8303672015 between 11:00 Hrs. to 17:00 Hrs. from 11.08.2023 to 24.08.2023 on working days (Monday to Saturday) regarding inspection of site.**

14.0 EMPLOYER'S RIGHT ON ACCEPTANCE OF ANY TENDER

- (i) If required, the Employer may ask any Tenderer the breakdown of unit rates. If the Tenderer does not submit the clarification by the date and time set in the Employers request for clarification, such Tender is likely to be rejected.
- (ii) The competent authority on behalf of the Employer does not bind himself to accept the lowest or any other Tender and reserves to himself the authority to reject any or all the Tenders received without the assignment of any reason. All Tenders in which any of the prescribed conditions is not fulfilled or any condition is put forth by the Tenderer shall be summarily rejected.

15.0 CANVASSING PROHIBITED

Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the Contractors who resort to canvassing will be liable to rejection.

16.0 EMPLOYER'S RIGHT TO ACCEPT WHOLE OR PART OF THE TENDER

The competent authority on behalf of the Employer reserves to himself the right of accepting the whole or any part of the tender and the Tenderer shall be bound to perform the same at the rates quoted.

17.0 MISCELLANEOUS RULES AND DIRECTIONS

- 17.1 The Tenderer shall not be permitted to tender for works if his near relations/relative is posted as Associated Finance Officer between the grades of AGM(F) and J.M (F) in the concerned SBU Unit of RITES or as an officer in any capacity between the grades of GGM/GM and Engineer (both inclusive) of the concerned SBU of the Employer/RITES. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by

him and who are near relatives to any Officer of Engineer rank and above in the organization of the Employer and RITES. Any breach of this condition by the Tenderer would render his Tender to be rejected.

No Officer of Engineer rank and above employed in Engineering, Finance or Administrative duties in an Engineering and Finance Department of the Organisation of the Employer/RITES is allowed to work as/or for a contractor for a period of Two years after his retirement from the Employer's/RITES service without the previous permission of the Employer/RITES in writing.

Further, The Bidder should not have an association (as a bidder/ partner/ director/ employee in any capacity), of retired Manager (of Gazetted Rank) or a retired Gazetted Officer of the Central or State Government or its Public Sector Undertakings if such a retired person has not completed the cooling-off period of two years after his retirement. However, this shall not apply if such managers/ officers have obtained a waiver of the cooling-off period from their erstwhile organization and bidder shall inform Employer/RITES in writing about such waiver.

The contract is liable to be cancelled if either the Contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Employer/RITES/Erstwhile organization as aforesaid before submission of the tender or engagement in the Contractor's service.

Any breach of this condition by the contractor shall be treated as concealing of information and appropriate action will be taken for banning of business dealings with such contractors as per clause 11.2 B.

17.2 If required by the Employer, the Tenderers shall sign a declaration under the official Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful Tenderers shall return all the drawings given to them.

17.3 In the case of any Item rate tender where unit rate of any item/items appears unrealistic, such tender will be considered as unbalanced and in case the Tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.

17.4 Goods and Services Tax (GST)-

GST Registration Status:

- (a) All the prospective bidders should ensure that they are GST compliant and their quoted tax structure/ rates are as per GST Act/ Rules.
- (b) Bidder should be registered under GST and furnish GST Registration number and copy of GST Registration Certificate in their offer unless they are specifically exempted from GST registration under specific notification/ circular/ section/ rule issued under GST Law and to be clearly stated.
- (c) The prospective bidder has to furnish the GST Registration Number of the State / Verticals, in case of multiple registrations in a state, from which supply / services are to be made.
- (d) If the Bidder has opted for a composition levy under Section 10 of CGST ACT, he should declare the fact while bidding along with GST Registration number and copy of GST registration certificate.
- (e) If a bidder is not liable to take GST registration, i.e., having turnover below threshold at the time of bidding, he shall submit an undertaking along with a valid certificate from practicing Chartered

Accountant (CA)/ Cost Accountant with Unique Document Identification Number (DIN) to the effect that Bidder fulfils all conditions prescribed in the notification exempting him from registration. Such bidder/ dealer shall not charge any GST (and/or cess wherever applicable) in the bill/ invoice. Further, Bidder should notify and submit to the employer within 15 days from the date of becoming liable to registration under GST Law.

- (f) State-wise registration of Employer is indicated in Annexure-XI
- (g) While quoting the basic rate, the bidder should offset the input tax credit available/ to be availed as per the GST Act, and shall inclusive of all taxes, duties, cess etc. other than GST.

Payment of GST under the contract:

- (a) The payment of GST and GST Cess to the contractor shall be made only on the latter submitting a GST compliant Tax invoice indicating the appropriate HSN code and applicable GST rate thereon duly supported with documentary evidence as per the provision of relevant GST Act and the Rules made there under. The delivery shall be shown being made in the name, location/ state, and GSTIN of the place where supply is to be made, as per applicable law; irrespective of location/state of employer where LOA is issued.
- (b) While claiming reimbursement of duties, taxes etc. (like GST) from the Employer, as and if permitted such taxes and duties from the concerned authorities at a later date, it (the contractor/supplier) shall refund to the Employer, Employer's share out of such refund received by him from the concerned authorities, immediately.
- (c) All necessary adjustment vouchers such as Credit Notes/ Debit Notes for any short/ excess supplies or revision in prices or any other reason under the contract shall be submitted to the Employer in compliance with GST provisions.
- (d) Liquidated damages or any other recoveries should be shown as deductions on the invoice, and GST shall be applicable only on the nett balance payment due. In case of Gross Invoice, Credit Note shall be issued for the amount derived for Liquidated Damages before payment and payment shall be made on net.
- (e) GST shall be paid as per the rate at which it is liable to be assessed or has been assessed provided the transaction of the supply is legally liable to such taxes and is payable as per the terms of the contract subject to the following conditions:
 - (i) The Employer shall not be bound to pay a higher GST rate if leviable due to any misclassification of HSN number or incorrect GST rate incorporated in the contract due to supplier's / contractor's fault. Wherever the contractor invoices the Goods at GST rate or HSN number, which is different from that incorporated in the contract, payment shall be made as per GST rate, which is lower of the GST rates incorporated in the contract or billed.
 - (ii) The payment against Tax Invoice shall be subject to the TDS (Tax deducted at Source) U/s 51 of the CGST Act, 2017 an addition to applicable TDS under Income Tax Act, 1961. On deduction at source, Employer shall be depositing the same to the credit of the respective Government, file return and issue TDS Certificate in favour of the contractor to that respect.
 - (iii) Payment of GST on running account bill shall be made on regular basis taking the GST Compliance behaviour of the contractor (i.e. regular/timely deposit of taxes to the credit of the Government and filing of regular and proper return under GST etc.). The GST so paid should get reflected in employer's GST portal before the payment of GST in next RA bill *unless* both the invoices are raised in the same tax period, for which time limit for deposit of taxes have not

elapsed and/or time limit for filing statutory return is not over. In such case, payment of GST may be made subject to GST Compliance Behaviour of the contractor and the claim is not against Final Bill.

- (iv) In case of final bill, GST amount shall only be paid/reimbursed after through checking in GSTR-2B of the employer, showing eligible for ITC and correctness of GST amount reflected in all running bills so far paid.
Regarding Payment/reimbursement of GST against invoices/RA bill of the contractor, the decision of the Engineer-In-Charge shall be final and binding on the contractor.
- (v) Employer has the absolute right to check the GST Compliance behaviour of the contractor through GSTIN portal, its GSTR-2B, documentary evidence submitted by the contractor etc. while making payment/reimbursement.
- (vi) Employer shall have the right to recover any GST paid against invoices, from any amount payable to such agency unless the GST amount is reflected in the GSTR-2B (and shown as eligible) for the purpose of ITC. Amount to be recovered/with held shall relate only to the extent of GST not deposited or adjusted within the due date of filing return.
- (vii) If Employer fails to take ITC, due to the non-deposit of GST/ wrong filing of return, the amount of GST paid shall be recovered from any amount payable along with interest, penalty, etc. and Contractor shall indemnify the employer all loss incurred, interest/penalty imposed by the authorities due to such bad tax behaviour of the contractor.
- (viii) Employer shall not be held responsible for the contractor's tax payment or duty under a misapprehension of the law.
- (ix) Contractor is required to adjust his basic price to the extent required by a higher tax rate billed as per invoice to match the all-inclusive price mentioned in the contract.
- (x) In case of profiteering by the contractor/supplier relating to GST tax, the Employer shall treat it as a violation of the Code of Integrity in the contract and avail any or all punitive actions thereunder, in addition to recovery and action by the GST authorities under the Act.
- (xi) The contractor shall issue Receipt vouchers, as per provision of GST, immediately on receipt of advances against provision of services as per terms of contract, wherever applicable.

Statutory Variation Clause:

Any increase or decrease in rate of taxes, duties levies, cess etc., under any law, including GST, under the period of contract on supply shall be governed by terms and conditions of contract. Any increase or decrease in rates of GST during the currency of the contract, on supply, shall be under Employer's account unless and otherwise stated in the contract.

17.5 Each Bidder shall submit only one Bid either as an individual or as a Proprietor in a Proprietary firm or as a Partner in a Partnership firm or as a Director of a Limited Company/Corporation or as a Partner in a Joint Venture. Any Bidder who has submitted a Bid for a work, shall not be a witness for any other Bidder for the same work. Failure to observe the above stipulations would render all such Tenders submitted as a Bidder and/or as a witness, liable to summary ejection.

17.6 The Contractor shall be fully responsible for all matters arising out of the Performance of the Contract and shall, at his own expense, comply with all laws/acts/enactments/orders/regulations/obligations whatsoever of the Government of India, State Government, Local Body

and any Statutory Authority.

18.0 SIGNING OF CONTRACT AGREEMENT

18.1 The Tenderer whose tender has been accepted will be notified of the award by the Employer by issue of a 'Letter of Acceptance' prior to expiration of the Bid Validity period.

The Letter of Acceptance will be sent to the Contractor in two copies one of which he should return promptly, duly signed and stamped. The Letter of Acceptance will be a binding Contract between the Employer and the Contractor till the formal Contract Agreement is executed.

18.2 Within the period as specified in Clause 1 of 'Clauses of Contract', from the date of issue of Letter of Acceptance, the successful Tenderer shall deliver to the Employer, Performance Guarantee in the format prescribed.

18.3 The Tenderer whose Tender is accepted shall be required to submit at his cost stamp papers of appropriate value as per the provisions of Indian Stamp Act within 15 days of the date of issue of Letter of Acceptance.

18.4 At the same time the Employer notifies the successful Tenderer that his Tender has been accepted, the Employer will direct him to attend the Employer's office within 28 days of issue of Letter of Acceptance for signing the Agreement in the proforma at Annexure V. The Agreement will however be signed only after the Contractor furnishes Performance Guarantee and hence, where justified, the period of 28 days stipulated above will be extended suitably.

18A Amendment to Contract

The conditions and clauses of this contract cannot be varied except through a written Supplementary Agreement with mutual consent of both the parties to the contract.

19.0 PRE-QUALIFICATION PROFORMA

The bidder shall fill the pre-qualification Proforma at Annexure VIII. The bid will be evaluated considering only those details as mentioned in Annexure VIII and corresponding documents uploaded along with the bid and no other details/certificate/document will be taken into consideration while evaluating the bid to decide whether the bidder is qualified or not.

20.0 BRIEF NOTICE INVITING E-TENDERS

PU-Head, RITES Ltd., Project Unit-Lucknow, 13-KM Milestone, NH-24, Lucknow-Sitapur Road, Lucknow, State: Uttar Pradesh, Pin: 226201 (Designation of the officer), RITES Ltd. invites on behalf of Northern Coalfield Ltd. (NCL), Online ~~item rate/percentage rate/item rate/percentage rate/lump sum~~ bids on ~~Single/Two/Three~~ Packet System for the following work. No other mode of submission shall be accepted.

S.No	NIT No.	Name of Work & Location	Cost of Tender Document	Estimated Cost put to Bid	Earnest Money	Period of Completion	Last Date & Time of submission of Bid, EMD, Cost of Tender Document and Other Documents as specified in the Press Notice	Time & Date of Opening of Bid
1	2	3	4	5	6	7	8	9
1	E-TENDER NO.: RITES/PULKO/NCLNIGAHIOHE/23/R	Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV AC OHE system for Providing Rail Connectivity to upcoming CHP & SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P	Rs. 8,000.00+18% GST i.e. Rs. 9,440.00	Rs. 4,85,03,014	Rs. 9.70 Lakh	06(Six months)	24.08.2023 & 11: 30 Hrs.	25.08.2023 & 11: 30 Hrs.

21.0 The bid document consisting of tender drawings, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen on CPP Portal <https://etenders.gov.in> free of cost.

22.0 After submission of the bid the bidder can re-submit revised bid any number of times but before last time and date of submission of bid as notified.

- 23.0 While submitting the revised/modified Financial bid, the bidder can revise/modify the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
- 24.0 The bid submitted shall become invalid if:
- (i) The bidder is found ineligible.
 - (ii) The bidder does not upload all the documents as stipulated in the bid document.
 - (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
 - (iv) The bidder does not deposit physical instruments of EMD and Cost of Tender Document within a week of opening of technical bid.
- 25.0 Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can go to CPP Portal <https://eprocure.gov.in/eprocure/app?page=BiddersManualKit&service=page> bidders manual kit.
- 26.0 The intending bidder must have valid Class-III digital signature to submit the bid.
- 27.0 On opening date, the bidder can login and see the bid opening process. After opening of bids he will be able to view the competitors' bid documents.

28.0 List of Documents to be scanned and uploaded within the period of bid submission:-

1. Account Payee Banker's Cheque/Pay Order/Demand Draft towards cost of Tender Document in accordance with Clause 7.0 (f) hereinbefore.

OR

~~Document in support of exemption from payment of cost of Tender Document, if applicable due to any Govt. Policy.~~

2. Insurance Surety Bonds or Account Payee Banker's Cheque/ Pay Order/ Demand Draft towards Earnest Money Deposit (EMD) in accordance with Clause 9 hereinbefore and Bank Guarantee if applicable in accordance with Clause 9 hereinbefore

OR

~~Document in support of exemption from payment of EMD, if applicable as per any Govt. Policy.~~

3. Authority to Sign (if required as per Clause 11.0 here in before) in the format given at Annexure III or (Annexure III & Annexure IV) as applicable.
4. Integrity Pact as per Annexure VI/1, VI/2 & VI/3 as mentioned in clause 11.2. **NOT APPLICABLE**
5. RTGS/NEFT details as per Annexure-VII.(Mandate form)
6. Self-attested copy of Documents in support of meeting the criterion of Annual Financial Turnover in accordance with Para 1 of Annexure I.
7. Self-attested copy of Certificates in support of meeting the criterion of Similar Work Experience in accordance with Para 2(a) of Annexure I.
8. Self-attested copy of Certificates in support of meeting the criterion of Construction Experience in

key activities/specified components in accordance with Para 2(b) of Annexure I. **NOT APPLICABLE**

9. Self-attested copy of Documents (Audited Balance Sheets, Profit & Loss Statements mentioning UDIN and Schedules) in support of meeting the Profitability criterion in accordance with Para 4 of Annexure I.
10. Self-attested copy of Documents in support of meeting the criterion of Net Worth in accordance with Para 5 of Annexure I.
11. Declaration by the Bidder in the format given in Proforma 1 of Annexure I, including certificates mentioned therein. In case of JV, each Partner of JV should submit Proforma 1 duly signed, dated & with seal separately.
12. Self-attested copy of Guidelines on Banning of Business Dealings as per Annexure-VIA.
13. Pre-Qualification Proforma at Annexure VIII duly filled in.
14. Self-Attested Copy of Partnership Deed/Memorandum and Articles of Association of the firm.
15. Self-Attested copy of Corrigendum(s), if any/ minutes of Pre-bid meeting, if any.
16. Self-certified copy of the Joint Venture Agreement/Memorandum of Understanding as per Annexure II (where Joint Venture is allowed) to be executed by each member of JV individually. – **Not Applicable**
17. Power of Attorney in favour of Lead Member as the Lead Member of JV (where Joint Venture is allowed) as per Annexure-IV, to be executed by all the members of JV individually. – **Not Applicable**
18. Self-attested copy of GST Registration Certificate (As applicable).
19. Self-attested copy of certificates as per requirement of sub-clause 6 (verification of local content) of clause 12.15(Preference to Make in India)
20. Self-attested documents as per clause 12.16 (Restriction on Procurement from a bidder of a country which shares a land border with India) if applicable.
21. Self-attested copy of valid registration with EPFO under 'EPF and Miscellaneous Provisions Act, 1952'.
22. Self-attested copy of any other document if specified in tender document and the correction slips to the Tender Document.
23. Declaration by Each Partner of JV (in case of Large works/Normal works) as per Para 3 (Servicing of Loan/ Credit Limit) of Annexure-I. **Not Applicable**
24. Undertaking/ Declaration by Bidder/ Each Partner of JV in case of Large works/ Lead Member of JV in case of Normal works that "Audited Balance Sheets, Profit and Loss Statements and other financial statements for the immediately preceding year are not available" as per Para 1 (g) (Annual Financial Turnover), Para 4 (Profitability) and Para 5 (Net Worth) of Annexure-I, if applicable. **Not Applicable**

Note: - Any clarification / deficient document(s) sought by RITES Ltd. as per provision of these tender documents shall be submitted by the bidder online only.

29.0 List of Documents to be submitted physically by Lowest (L1) Bidder within a week of the opening of Financial Bid:-

1. Self-attested copy of PAN/TAN issued by income Tax Department.
2. Self-attested copy of registration under Labour Laws like PF, ESI etc.
3. Self-attested copy of the statement of the details of bidder's jurisdictional GST Assessing officer (designation, address and email address)
4. Self-attested copy of ISO 9000 Certificate. (if any)
5. Self-attested copies of all the documents specified in Clause 28.0 above.

30.0 RITES Ltd. may approach any Bank, Individual, Employer, Firm or Corporation, whether mentioned in the documents submitted by bidders or not, to verify the credentials and general reputation of the bidder and where JV is allowed the credentials and general reputation of lead member & each Member of Joint Venture.

31.0 With reference to Clause 3, Sub-clause 3(a), 3(a) (i), 3(b) and Clause 52.7 of Clauses of Contract of RITES GCC for works (Section-8), the name of the contractor declared as "Poor Performer" as per clause 52.7 and the contractor, whose Contract is determined as per clause 3 and deemed to be declared as "Poor Performer" as per Sub-clause 3(a) (i) will be placed in RITES' 'Negative List of Contractors' and then such a contractor individually and also any Joint Venture wherein such contractor is a member, will not be eligible for a period of upto two years, to participate in tenders of other works and in the tendering process for balance work as per sub-clause 3(b) which may be invited by RITES. In case the contractor is a Joint Venture, the JV as well as all members of the JV individually or as member(s) of any other Joint Venture (JV) will not be so eligible. In case the contractor is a company then, in addition to the aforesaid provisions, the Associate Companies and Subsidiary Companies (as defined under Companies Act, 2013), of the company included in the Negative list, will also not be eligible.

QUALIFYING CRITERIA FOR WORKS CONTRACTS

1. ANNUAL FINANCIAL TURNOVER -

The bidder should have achieved a minimum average annual financial turnover of **Rs. 4.85 Crore** during the last 3 Financial Years.

Notes:

- a) The Annual financial turnover shall be operating revenue (excluding Income from othersources) as given under the head “Revenue/Income” in audited Profit and Loss Account.
- b) The Bidder should furnish Annual Financial Turnover for each of the last 3 Financial Years with average thereof in tabular form and give reference of the document (with page no.) relied upon in support of meeting the Qualification Criterion.
- c) The Bidder should submit self-attested copy of Audited Balance Sheet and Profit and Loss Statement mentioning UDIN and Schedules, for last three financial years. Provisional Audited financial statement or certified statements will not be accepted.
- d) If the Audited Balance Sheet for the immediately preceding year is not available in case of a work for which the last stipulated date for submission of the bids is before 30th September or in case, Government of India extends the date of conducting of AGM / Filing of Balance Sheet beyond 30th September, audited Balance Sheets, Profit and Loss Statements and other financial statements of the three Financial Years immediately preceding the previous Financial Year shall be adopted for evaluating the credentials of the Bidder. These provisions are also applicable in cases where JV is permitted.

~~g) In case JV is permitted the following provisions will apply:~~

~~i) Large Works~~

~~For each Partner, the average Annual Turnover during the last three Financial Years will be considered. This should not be less than the figure arrived at by multiplying the minimum Annual Turnover stipulated for the Bidder in Qualification Criterion multiplied by the percentage of Financial participation by that partner in the JV. Each partner should satisfy this requirement and thus automatically JV will satisfy the criterion of minimum average Annual Turnover.~~

~~ii) Normal Works~~

~~The Partner in charge/Lead Member shall singly meet this criterion.~~

2. WORK EXPERIENCE

a) **Similar Works Experience**

- aa) **In case of Railway Works involving one or more components like Earthwork, Bridges, Track Linking, Track Laying, OHE, signaling etc., the Qualifying Criterion relating to Work**

Experience shall be as under:

(i) For works in Normal Areas (other than Difficult Areas)

The Bidder should have satisfactorily completed or substantially completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of **Rs 3.15 Crore (Rupees Three Crore and Fifteen Lakh Only)**

OR

at least two similar works each of minimum value of **Rs 1.94 Crore (Rupees One Core Ninety Four Lakh Only)**

during the last **7 (Seven)** years prior to the last stipulated date for submission of the Bid. Works completed prior to the cut-off date shall not be considered.

OR

~~**(ii) For Works in Difficult Areas (Refer Clause 2.3)**~~

~~The Bidder should have satisfactorily completed or substantially completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of Rs..... OR at least two similar works each of minimum value of Rs..... during the last **7 (Seven)** years prior to the last stipulated date for submission of the Bid. Works completed prior to the cut off date shall not be considered.~~

Similar Works

Similar Works shall mean the work of “**Execution/ Modification & Commissioning of 25KV AC OHE work OR 25 KV & above AC/DC Transmission or Distribution line work**” carried out in India under a single contract (including additional work carried out under the contract)

In case the Bidder (Indian Company) wishes to rely on a work completed abroad, the value of such completed work in foreign convertible currency shall be converted into Indian Rupees. The conversion rate shall be decided by RITES based on the rates of currency on the date of completion of work (the bidder to also submit the currency conversion rate as on completion date of the Credential Certificate relied upon by the bidder for the purpose of work experience). Further, such a bidder (Indian Company) should have also completed at least one Similar work of value minimum 25% of estimated cost of work, in India in the last seven years prior to the last stipulated date for submission of the Bids.

Notes:

- I. A weightage of 7% (compounded annually from the date of completion of the work to the last stipulated date for submission of the Bids) shall be given for equating the value of works to the last stipulated date for submission of the Bids. For example, for a similar work of Rs 1,00,000/- completed on 31.12.2017 and the last stipulated date for submission of the bids was 31.08.2020, the value of work that shall be considered after giving weightage is [Rs 1,00,000*1.07*1.07] { $1 + [(7/100) * (244/366)]$ } = Rs 119832.87, rounded off to Rs 119833/-

- II. Works shall be considered as “Completed Works” where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.
- III. Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract, Functional completion of the Project has been achieved and no proceedings of termination of contract on Contractor’s default has been initiated.
- IV. In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.
- V. In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.
- VI. Certificate for substantial completion of project/work/asset should contain three parts. Part-I shall contain financial value of work done, PVC amount and present contract value. Part-II shall contain ‘certificate of functional completion of project/work/asset’. Part-III shall contain that no proceedings of termination of contract on contractor’s default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.
- VII. In case a work is considered similar in nature for fulfillment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.
- VIII. Value of a completed work done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned criteria in the tender under consideration.
- IX. In case of a Certificate from a Public Limited Company or its subsidiary, the Bidder should also submit documentary proof that the Public Ltd. Company was listed in Stock Exchange in India or Abroad when the work was executed for it.
- X. The Bidder should submit the details of such similar completed/Substantially Completed works as per the format given in Annexure-VIII.
- XI. Works carried out by another Contractor on behalf of the Bidder on a back to back basis will not be considered for satisfaction of the Qualification Criterion by the Bidder.
- XII. Credential certificates issued by Government Organizations/Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries/by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.

XIII. The cutoff date shall be calculated backwards from the last stipulated date for submission of Tender i.e. for a Tender having the last stipulated date for submission on 06.08.2014, the cutoff date shall be 07.08.2007.

XIV. In case JV is permitted the following provisions will apply:

Large Works : NA

1. ~~All the partners shall jointly meet this criterion.~~
2. ~~Each partner should have satisfactorily completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of 10 % of the Estimated cost of work during the last 7 (Seven) years prior to the last stipulated date for submission of the Bid OR should have executed at least one of the Key Activities mentioned under Construction Experience in Key Activities.~~

Normal Works: NA

1. The Partner in-charge/Lead Member shall singly meet this criterion.
2. ~~Each partner should have satisfactorily completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of 10 % of the Estimated cost of work during the last 7 (Seven) years prior to the last stipulated date for submission of the Bid OR should have executed at least one of the Key Activities mentioned under Construction Experience in Key Activities.~~

XV. The value of similar work shall be calculated excluding the element of GST on works Contract Service while evaluating on meeting the Qualifying Criteria of Work Experience.

b) Construction Experience in Key Activities :- NOT APPLICABLE

~~To qualify for award of the contract, each bidder in his own name or as a member of a Joint Venture should have, in the last 7 (Seven) years prior to the last stipulated date for submission of the bid, executed the following key activities carried out in India:~~

1. _____ (in ~~any one work individually*/maximum three works cumulatively*~~)
2. _____ (in ~~any one work individually*/maximum three works cumulatively*~~)
3. _____ (~~in any one work individually*/maximum three works cumulatively*~~)

~~(Ideally only very few and that too, specialized components of the work mentioning required quantities or amounts may be specified at the discretion of tender document approving authority)~~

Notes:

- I. ~~Credential certificates issued by Government Organizations/Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries/by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.~~
- II. ~~When key activities are expressed/specified in monetary terms, a weightage of 7% (compounded annually from the date of completion of the Key activity to the last stipulated date for submission of the Bids) shall be given for equating the value of key activity to the last stipulated date for submission of the Bids. For example, for a key activity of Rs 1,00,000/ completed on 31.12.2017 and the last stipulated date for submission of the bids was 31.08.2020, the value of key activity that shall be considered after giving weightage is $[Rs\ 1,00,000 * 1.07 * 1.07] \{ 1 + [(7/100) * (244/366)] \} = Rs\ 119832.87$, rounded off to Rs 119833/-~~
- III. ~~The work satisfying the criterion for a particular key activity may be different from a work satisfying the criterion for another key activity.~~
- IV. ~~The Bidder should furnish with his Bid a tabular statement giving contract wise quantities/amount of key activities (mentioning date of start and date of completion of key activities) executed in the last 7 (Seven) prior to the last stipulated date for submission of the bids which meet the Qualification Criterion along with documentary proof in support thereof (indicating page nos.).~~
- V. ~~Even if a work has not been completed but if the specified quantity/ specified value in monetary terms of the key activity has been completed in the last 7 (Seven) years prior to the last stipulated date for submission of the bids, the same shall be taken into consideration for the purpose of this criterion.~~
- VI. ~~Any key activity executed by the Bidder as a member of a Joint Venture will be accepted provided there is documentary proof in support of the same either in the MOU/Agreement of the JV or in a declaration by the Lead Member of that JV or the Client confirming that the Key activity was actually executed by the Bidder.~~

~~In case JV is permitted the following provisions will apply:~~

Large Works

- ~~1. All the partners shall jointly meet this criterion.~~
- ~~2. Each partner should have satisfactorily completed in his own name or proportionate share as a member of a Joint Venture, **at least one similar work of minimum value of 10% of the Estimated cost of work during the last 7 (Seven) years** prior to the last stipulated date for submission of the Bid OR should have executed at least one of the Key Activities mentioned under Construction Experience in Key Activities.~~

Normal Works

- ~~1. All the partners shall jointly meet this criterion.~~

~~2. Each partner should have satisfactorily completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of 10% of the Estimated cost of work during the last 7 (Seven) years prior to the last stipulated date for submission of the Bid OR should have executed at least one of the key Activities mentioned under Construction Experience in Key Activities.~~

~~VII. The value of Key Activity shall be calculated excluding the element of GST on worksContract Service.~~

3. SERVICING OF LOAN / CREDIT LIMIT :

(i) The bidder should furnish a declaration that he has not failed to service the principal amount or interest or both of a loan amount / credit limit from any Bank or Financial Institution during a period of one year prior to the dead line for submission of bids i.e. the last stipulated date for submission of bids.

Notes:

- a) In case a bidder has defaulted in servicing his loan/credit limit during a period of one year prior to the last stipulated date for submission of bids, he shall be disqualified.
- b) The declaration may be included in the Declaration to be submitted in Proforma 1 to this Annexure.
- e) ~~In case JV is permitted the following provisions will apply: NA~~

Large Works

~~Each partner shall sign the declaration.~~

Normal Works

~~The Partner in charge/Lead Member shall sign the declaration.~~

4. PROFITABILITY :

The Bidder should be a profit (net) making firm and should have made profit during any two of the past 3 Financial Years immediately preceding the last stipulated date for submission of bids. If the audited Balance Sheet for the immediately preceding year is not available in case of a work for which the last stipulated date for submission of the bids is before 30th September or in case, Government of India extends the date of conducting of AGM / Filing of Balance Sheet beyond 30th September, audited Balance Sheets, Profit and Loss Statements and other financial statements of the three Financial Years immediately preceding the previous Financial Year shall be considered for evaluating the Profitability Criterion. The Profit Before Tax (PBT) shall be considered while evaluating the Profitability Criterion. These provisions are also applicable in cases where JV is permitted.

The Bidder should furnish figures of net profit of last 3 years in a tabular form and submit attested copies of Auditor's Reports along with audited Balance Sheets and Profit and Loss Statements for the last three Financial Years. Specific reference with page no. of document which proves satisfaction of this Qualifying Criterion should be indicated in the tabular statement.

Notes:

~~In case JV is permitted, the following provisions will apply:~~

Large Works

~~All the partners shall meet individually this criterion.~~

Normal Works

~~The Partner in charge/Lead Member shall singly meet this criterion.~~

5. NET WORTH :

The Bidder should have positive Net Worth of at least 15% of the estimated cost i. e. Rs.0.73 Lakh

Notes:

- a) Net Worth shall be computed from the bidder's audited balance sheet of the financial year immediately preceding the last stipulated date for submission of the bids. If the Audited Balance Sheet for financial year immediately preceding the last stipulated date for submission of the bids is not available in case of a work for which the last stipulated date for submission of the bids is before 30th September or in case, Government of India extends the date of conducting of AGM / Filing of Balance Sheet beyond 30th September, audited Balance Sheet of the Financial Year immediately preceding the previous Financial Year shall be adopted for computing the Net worth of the Bidder. These provisions are also applicable in cases where JV is permitted.
- b) ~~In case JV is permitted, the following provisions will apply:~~
Large Works
~~All the partners shall jointly meet this criterion.~~
Normal Works
The Partner in charge/Lead Member shall singly meet this criterion

6. POINTS TO NOTE ON SATISFACTION OF QUALIFYING CRITERIA IN CASE OF BOTH LARGE AND NORMAL WORKS

- a) Sub-Contractor's Experiences and Resources
Sub-Contractors' Experiences and Resources will not be taken into account in determining the Bidder's compliance with the qualifying criteria.
- b) Experiences and Resources of the Parent Company and other subsidiary companies
If the Bidder is a wholly owned subsidiary of a company, the experience and resources of the owner/parent company or its other subsidiaries will not be taken into account. However, if the Bidder is a Company, only the Experience (and not the Financial Resources) of its subsidiaries will be taken into consideration.

7. DISQUALIFICATION ON CERTAIN GROUNDS

Even though the Bidders may meet the above qualifying criteria, they are subject to be disqualified if they have

- a) Concealed any information/document which may result in the Bidder's disqualification or if any statement/information/document furnished by the Bidder or issued by a Bank/Agency/Third party and submitted by the Bidder, is subsequently found to be false or fraudulent or repudiated by the said Bank/Agency/Third Party. In such a case, besides Bidder's liability to action under Clause 9.4 of Instructions to Tenderers, the Bidder is liable to face the penalty of banning of business dealings with him by RITES.

- b) Records of any contract awarded to them, having been determined during the past three years prior to the dead line for submission of bids i.e. last stipulated date for submission of bids.
- c) Been declared as Poor Performer by RITES and their name is currently in the 'Negative List' of RITES.
- d) Their business banned or suspended by any Central/State Government Department/ Public Undertaking or Enterprise of Central/State Government and such ban is in force.
- e) Not submitted all the supporting documents or not furnished the relevant details as per the prescribed format.

A declaration to the above effect in the form of affidavit on stamp paper of Rs. 10/- duly attested by Notary/Magistrate should be submitted as per format given in Proforma 1 enclosed.

DECLARATION BY THE BIDDER

(Affidavit on Non-Judicial Stamp Paper of Rs.10/- duly attested by Notary/Magistrate)

This is to certify that We, M/s....., in submission of this offer confirm that: -

- i) We (including our affiliates or subsidiaries or constituents) are not insolvent, in receivership, bankrupt or being wound up, not have our affairs administered by a court or a judicial officer, not have our business activities suspended and are not the subject of legal proceedings for any of these reasons;
- ii) We are not convicted (within three years preceding the last date of bid submission) or stand declared ineligible/ suspended/ blacklisted/ banned/ debarred by appropriate agencies of Government of India from participation in Tender Processes, for offences mentioned in Tender Document in this regard. We have neither changed our name nor created a new "Allied Firm", consequent to the above disqualifications.
- iii) Do not have any association (as bidder/ partner/ Director/ employee in any capacity) with such retired public official or near relations of such officials of Procuring Entity, as indicated, in the Tender Document.
- iv) We have no conflict of interest, which substantially affects fair competition. The prices quoted are competitive and without adopting any unfair/ unethical/ anti-competitive means. No attempt has been made or shall be made by us to induce any other bidder to submit or not to submit an offer to restrict competition.
- v) We have visited the site of work and seen the working conditions, approach road/path, availability of water, electricity, construction labour, construction materials and other relevant requirements connected with the work.
- vi) We have neither concealed any information/document which may result in our disqualification nor made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements;
- vii) During the past three years prior to the deadline for submission of bids, no contract awarded to us has been determined.
- viii) No Central/State Government Department/Public Sector Undertaking or Enterprise of Central/State Government has banned/suspended business dealings with us as on date.
- ix) We have submitted all the supporting documents and furnished the relevant details as per prescribed format and we agree to submit, without delay additional information/documents which may be demanded by RITES Ltd.
- x) List of Similar Works satisfying Qualification Criterion indicated in Annexure VIII does not include any work which has been carried out by us through a Subcontractor on a back to back basis.
- xi) The information and documents submitted with the Tender and those to be submitted subsequently by

way of clarifications are correct and we are fully responsible for the correctness of the information and documents submitted by us.

- xii) We have not failed to service the principal amount or interest or both of a loan account/credit limit from any Bank or Financial Institution during a period of one year prior to the deadline for submission of bids.
- xiii) *The original instruments of EMD and Cost of Tender Document, in physical form shall be deposited by us with RITES Ltd. within a week from the date of opening of Technical Bid failing which RITES Ltd. may reject the bid and also take action to debar us from participating in Tenders invited by RITES Ltd. for a period of two years.

OR

*We are exempted from payment of cost of Tender Document and EMD and the certified copies of original documents in support of such exemption shall be deposited by us with RITES Ltd. within a week from the date of opening of Technical Bids and original documents produced on demand, failing which RITES Ltd. may reject the bid and also take action to debar us from participating in Tenders invited by RITES Ltd. for a period of two years.

(* Delete whichever is not applicable)

- xiv) I/We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries and solemnly certify that I/we fulfill all requirements in this regard and are eligible to be considered. I/We Certify that:-
- (a) This bidder is not from such a country or, if from such a country, has been registered with the Competent Authority i.e. DPIIT (Where applicable, evidence of valid registration by the Competent Authority i.e. DPIIT shall be attached.)
- (b) I/We shall not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority i.e. DPIIT. (Where applicable, evidence of valid registration by Competent Authority i.e. DPIIT shall be attached)
- (c) *"I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder does not have any ToT arrangement requiring registration with the competent authority."

OR

*"I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder has valid registration to participate in this procurement." {Evidence of valid registration by the Competent Authority i.e. DPIIT shall be attached)

*Deleted whichever is not applicable

- xv) I have read the “Make in India Policy” and certify that I meet the eligibility criteria of Class-I Local Supplier and certify that percentage of Local content will be more than(Fill in the percentage of Local content) as specified in the tender document.

We are enclosing a certificate as per requirement of sub clause 6 (verification of local content) of clause 12.15 (Preference to Make in India)

- xvi) I/we am/ are a startup firm registered by....., Department of Industries Policy and Promotion (DIPP) and my registration number is, valid upto.....(Copy enclosed). We confirm that we are not holding more than 2 contracts under relaxed credentials at this point of time.
- xvii) We hereby undertake that observance and compliance related to Government/Regulatory/Statutory guidelines on Environmental, social and ethical aspects are ensured by us.
- xviii) We understand that in case any information/document which may result in our disqualification is concealed by us or any statement/information/document furnished by us or to be furnished by us in connection with this offer, or issued by Bank/Agency/Third Party is subsequently found to be false or fraudulent or repudiated by the said Bank/Agency/Third Party, business dealings with us may be banned.

SEAL, SIGNATURE & NAME OF THE BIDDER

Signing this document

Note: In case of JV, each Partner/member of JV should submit Proforma-1 duly signed, dated & with seal separately.

ANNEXURE II

**DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBERS OF THE JOINT
VENTURE**

(On each firm's Letter Head)

NOT APPLICABLE

ANNEXURE III

FORMAT FOR POWER OF ATTORNEY TO AUTHORISED SIGNATORY POWER OF ATTORNEY

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the firm/company who is issuing the Power of Attorney)

We, M/s..... (name of the firm/company with address of the registered office) hereby constitute, appoint and authorize Mr./Ms..... (Name and residential address) who is presently employed with us and holding the position of and whose signature is given below as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our bid for the work (name of work), including signing and submission of application/proposal, participating in the meetings, responding to queries, submission of information/documents and generally to represent us in all the dealings with RITES or any other Government Agency or any person, in connection with the works until culmination of the process of bidding, till the Contract Agreement is entered into with RITES and thereafter till the expiry of the Contract Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid Attorney shall always be deemed to have been done by us.

(Add in the case of a Joint Venture)

Our firm is a Member/Lead Member of the Joint Venture of , and

Dated this the day of 20.....

..... (Signature and name of authorized signatory being given Power of Attorney)

..... (Signature and name in block letters of *All the partners of the firm, *Authorized Signatory for the Company)

(*Strike out whichever is not applicable) Seal of firm/ Company

Witness 1: Witness 2:
Name: Name:
Address: Address:
Occupation: Occupation:

Notes:

- In case the Firm/Company is a Member of a Joint Venture, the authorized signatory has to be the one employed by the Lead Member.
- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

FORMAT FOR POWER OF ATTORNEY TO LEAD MEMBER OF JOINTVENTURE

NOT APPLICABLE

ANNEXURE V

FORM OF AGREEMENT

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

Agreement No. dated

THIS AGREEMENT is made on day of.....Two thousand
..... between RITES Ltd. a Government of India Enterprise and a Company registered under Companies Act, 1956 having its registered office at SCOPE Minar, Laxmi Nagar, Delhi - 110092 and its Corporate Office at RITES BHAWAN, Plot No.1, Sector 29, Gurgaon (Haryana)-122001 representing through, RITES LIMITED acting for and on behalf of and as an Agent/Power of Attorney Holder of.....hereinafter called the Employer (which expression shall, wherever the context so demands or requires, include their successors in office and assigns) on one part and M/s.....hereinafter called the Contractor (which expression shall wherever the context so demands or requires, include his/ their successors and assigns) of the other part.

WHEREAS the Employer is desirous that certain works should be executed viz.
..... (brief description of work) and has by Letter of Acceptance dated accepted a tender submitted by the Contractor for the execution, completion, remedying of any defects therein and maintenance of such works at a total Contract Price of Rs..... (Rupeesonly)

NOW THIS AGREEMENT WITNESSETH as follows: -

1. In this Agreement words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents in conjunction with addenda/corrigenda to Tender Documents shall be deemed to form and be read and construed as part of this agreement viz.

The Letter of Acceptance dated

Priced Schedule (Bill) of Quantities

Notice Inviting Tender and Instructions to Tenderers.Additional conditions of contract

Special Conditions of contract Schedules A to F

Technical Specifications Drawings

Amendments to Tender Documents (List enclosed)

General Conditions of Contract (read with Correction Slip Nos. 1 to --) comprising of

- (i) Conditions of Contract
- (ii) Clauses of Contract
- (iii) RITES Safety Code
- (iv) RITES-Model Rules for the protection of Health and Sanitary arrangements for Workers
- (v) RITES – Contractor’s Labour Regulations

3. In consideration of the payment to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute, complete, remedy defects therein and maintain the works in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay to the Contractor in consideration of the execution, completion, remedying of any defects therein and maintenance of the works, the contract price or such other sum as may become payable under the provisions of the contract at the time and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused their respective common seals to be hereinto affixed (or have herewith set their respective hands and seals) the day and year first above written.

SIGNED, SEALED AND DELIVERED BY

..... In the capacity of Representing RITES LIMITED
On behalf of M/s (The Contractor)	For and on behalf of NCL (The Employer)
In the presence of Witness (Signature, Name & Designation)	In the presence of Witness (Signature, Name & Designation)
1.	1.
2.	2.

ANNEXURE VI/1



NOT APPLICABLE

ANNEXURE VI/2

INTEGRITY PACT

NOT APPLICABLE



ANNEXURE VI/3

INTEGRITY PACT

NOT APPLICABLE

Guidelines on Banning of Business Dealings

1. Introduction

- 1.1 RITES, being a Public Sector Enterprise and 'State', within the meaning of Article 12 of Constitution of India, has to ensure preservation of rights enshrined in Chapter III of the Constitution. RITES has also to safeguard its commercial interests. It is not in the interest of RITES to deal with Agencies who commit deception, fraud or other misconduct in the execution of contracts awarded / orders issued to them. In order to ensure compliance with the constitutional mandate, it is incumbent on RITES to observe principles of natural justice before banning the business dealings with any Agency.
- 1.2 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity of hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstances of the case.

2. Scope

- 2.1 The procedure of (i) Suspension and (ii) Banning of Business Dealing with Agencies, has been laid down in these guidelines.
- 2.2 It is clarified that these guidelines do not deal with the decision of the Management not to entertain any particular Agency due to its poor/inadequate performance or for any other reason.
- 2.3 The banning shall be with prospective effect, i.e., future business dealings.

3. Definitions

In these Guidelines, unless the context otherwise requires:

- i) 'Bidder / Contractor / Supplier' in the context of these guidelines is indicated as 'Agency'.
- ii) **'Competent Authority' shall mean the Executive Director of the Division.**
- iii) **'First Appellate Authority' shall mean Director in charge of the Division and**
- iv) **"Second Appellate Authority" shall mean the CMD, RITES.**
- v) 'Investigating Department' shall mean any Department, Division or Unit investigating into the conduct of the Agency and shall include the Vigilance Department, Central Bureau of Investigation, the State Police or any other department set up by the Central or State Government having powers to investigate.
- vi) 'Banning Committee' shall mean a Committee constituted for the purpose of these guidelines **by the CMD**. The members of this Committee shall not, at any stage, be connected with the tendering process under reference.

4. Initiation of Banning/Suspension

Action for banning/suspension business dealings with any Agency should be initiated by the department/unit having business dealings with them after noticing the irregularities or misconduct on their part.

5. Suspension of Business Dealings

5.1 If the conduct of any Agency dealing with RITES is under investigation by any department, the Competent Authority may consider whether the allegations under investigation are of a serious nature and whether pending investigation, it would be advisable to continue business dealing with the Agency. If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Department/Unit, if any, decides that it would not be in the interest to continue business dealings pending investigation, it may suspend business dealings with the Agency. The order to this effect may indicate a brief of the charges under investigation. The order of such suspension would operate for a period not more than six months and may be communicated to the Agency as also to the Investigating Department.

The Investigating Department/Unit may ensure that their investigation is completed and whole process of final order is over within such period.

5.2 As far as possible, the existing contract(s) with the Agency may be continued unless the Competent Authority, having regard to the circumstances of the case, decides otherwise.

5.3 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informed that its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.

5.4 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension. However, if investigations are not complete in six months time, the Competent Authority may extend the period of suspension by another three months, during which period the investigations must be completed.

6. Grounds on which Banning of Business Dealings can be initiated

6.1 If the security consideration, including questions of loyalty of the Agency to the State, so warrants;

6.2 If the Director/Owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises or RITES, during the last five years;

6.3 If there is strong justification for believing that the Directors, Proprietors, Partners, owner of the Agency have been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolations, etc.;

6.4 If the Agency employs a public servant dismissed/removed or employs a person convicted for an offence involving corruption or abetment of such offence;

6.5 If business dealings with the Agency have been banned by the Govt. or any other public sector enterprise;

6.6 In case any information/document which may result in the tenderer's disqualification is concealed by the Tenderer or any statement/information/document furnished by the Tenderer or issued by a Bank/Agency/third party and submitted by the tenderer, is subsequently found to be false or fraudulent or repudiated by the said Bank/Agency/Third Party.

6.7 If the Agency uses intimidation/threatening or brings undue outside pressure on the Company (RITES) or its official in acceptance/performance of the job under the contract;

6.8 If the Agency indulges in repeated and/or deliberate use of delay tactics in complying with contractual stipulations;

6.9 Based on the findings of the investigation report of CBI/Police against the Agency for malafide /unlawful acts or improper conduct on his part in matters relating to the Company (RITES) or even otherwise;

6.10 Established litigant nature of the Agency to derive undue benefit;

6.11 Continued poor performance of the Agency in several contracts;

(Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

7. Banning of Business Dealings

7.1 A decision to ban business dealings with any Agency shall apply throughout the Company.

7.2 If the Competent Authority is prima-facie of view that action for banning business dealings with the Agency is called for, a show-cause notice may be issued to the Agency as per paragraph 8.1 and an enquiry held accordingly.

8. Show-cause Notice

8.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice has to be issued to the Agency. Statement containing the imputation of misconduct or misbehaviour may be appended to the show-cause notice and the Agency should be asked to submit within 30 days a written statement in its defence. If no reply is received, the decision may be taken ex-parte.

8.2 If the Agency requests for inspection of any relevant document in possession of RITES, necessary facility for inspection of documents may be provided.

8.3 On receipt of the reply of the Agency, or in case no reply is received within the prescribed time, the Competent Authority shall refer the case along with relevant details to the Banning Committee, which shall examine the reply of the Agency and other facts and circumstances of the case and submit its final recommendation to the Competent Authority for banning or otherwise. In case the action contemplated against the Agency includes forfeiture of EMD also besides Banning of Business Dealings, the Banning Committee will also examine whether Clause 9.4 of Tender and Contract Document is attracted and recommend forfeiture or otherwise of EMD considering all facts and circumstances of the case. A final decision on forfeiture or otherwise of the EMD and for Company-wide banning or otherwise shall be taken by the Competent Authority. The Competent Authority may consider and pass an appropriate speaking order:

a) For completely exonerating the Agency; or

b) For forfeiture of EMD but for not banning of business dealings with the Agency; or

c) For forfeiture of EMD and banning the business dealing with the Agency.

8.4 The decision should be communicated to the Agency concerned along with a reasoned order. If it decided to ban business dealings, the period for which the ban would be operative may be mentioned.

9. Appeal against the Decision of the Competent Authority

9.1 **The Agency may file an appeal against the order of the Competent Authority banning business dealing, etc. to the First Appellate Authority.**

9.2 **In the event the Agency is dissatisfied with the decision of the First Appellate Authority, it shall file**

a second appeal to the Second Appellate Authority.

93 The Appeals shall be preferred within one month from the receipt of the order of the Competent Authority or First Appellate Authority, as the case may be.

94 Appellate Authorities would consider the appeal and pass appropriate order which shall be communicated to the Agency as well to the Competent Authority.

10. Review of the Decision by the Competent Authority

Any petition/application filed by the Agency concerning the review of the banning order passed originally by Competent Authority under the existing guidelines either before or after filing of appeal before the Appellate Authority or after disposal of appeal by the Appellate Authority, the review petition can be decided by the Competent Authority upon disclosure of new facts/circumstances or subsequent development necessitating such review.

11. Circulation of the names of Agencies with whom Business Dealings have been banned.

11.1 Depending upon the gravity of misconduct established, the Competent Authority of RITES may circulate the names of Agency with whom business dealings have been banned, to the Ministry of Railways and PSUs of Railways, for such action as they deem appropriate.

11.2 If Ministry of Railways or a Public Sector Undertaking of Railways request for more information about the Agency with whom business dealings have been banned a copy of the report of Inquiring Authority together with a copy of the order of the Competent Authority/Appellate Authority may be supplied.

12. Restoration

12.1 The validity of the banning order shall be for a specific time & on expiry of the same, the banning order shall be considered as "withdrawn".

12.2 In case any agency applies for restoration of business prior to the expiry of the ban order, depending upon merits of each case, the Competent Authority which had passed the original banning orders may consider revocation of order of suspension of business/lifting the ban on business dealings at an appropriate time. Copies of the restoration orders shall be sent to all those offices where copies of BanOrders had been sent.

13. Power of Superintendence

CMD, RITES shall have overall power to take suo-moto action on any information available or received by him and pass such order(s) as he may think appropriate, including modifying the order(s) passed by any authority under these Guidelines.

ANNEXURE VII

To **MANDATE FORM**

RITES Ltd.

.....

.....

Dear Sir,

Authorization for payments through Electronic Fund Transfer System (RTGS/NEFT)

Whereby authorize RITES Ltd. to make all our payments, including fund of Earnest Money, through Electronic Fund Transfer System (RTGS/NEFT). The details for facilitating the payments are given below:

(TO BE FILLED IN CAPITAL LETTERS)

1	NAME OF THE BENEFICIARY	
2	ADDRESS WITH PIN CODE	
3	(A) TELEPHONE NO. WITH STD CODE	
	(B) MOBILE NO.	
4	BANK PARTICULARS	
A	BANK NAME	
B	BANK TELEPHONE NO. WITH STD CODE	
C	BRANCH ADDRESS WITH PIN CODE	
D	BANK FAX NO. WITH STD CODE	
E	11 CHARACTER IFSC CODE OF THE BANK (EITHER ENCLOSE A CANCELLED CHEQUE OR OBTAIN BANKCERTIFICATE AS APPENDED)	
F	BANK ACCOUNT NUMBER AS APPEARING IN THECHEQUE BOOK	
G	BANK ACCOUNT TYPE (TICK ONE)	SAVING/CURRENT/ LOANCASH/ CREDIT/ OTHERS
H	IF OTHERS, SPECIFY	
I	PERMANENT ACCOUNT NUMBER (PAN)	
J	E-MAIL ADDRESS	

I / We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or credit it not effected at all for reasons of incomplete or incorrect information, I / We would not hold RITES Ltd. responsible. Bank charges for such transfer will be borne by us.

Date:

SIGNATURE

(AUTHORISED SIGNATORY)

Name.....

BANK CERTIFICATION

E-TENDER NO.: RITES/PULKO/NCLNIGAHI-OHE/23/R

It is certified that the above-mentioned beneficiary holds bank account No with our branch and the Bank particulars above are correct.

Date:

SIGNATURE
(AUTHORISED SIGNATORY)
Name
OFFICIAL STAM

ANNEXURE VIII

PRE-QUALIFICATION PROFORMA

Name of work	Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV AC OHE system for Providing Rail Connectivity to upcoming CHP & SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P				
Tender No.	RITES/PULKO/NCLNIGAH-I-OHE/23/R				
Name of the Bidder					
Details of Cost of Tender Document paid by Account Payee Banker's Cheque/Pay Order/Demand Draft infavour of "RITES Ltd."	Name & Address of Issuing Bank	Amount	Date of Issue	Instrument placed at	Remarks
Details of EMD paid by Insurance Surety Bondsor Account Payee Banker's Cheque/Pay Order/Demand Draft/Bank Gurantee (Indemnity e-Bank Gurantee) in favour of "RITES Ltd."					

Annual Financial Turnover :

S. No.	Financial Years(The last three Financial Years Refer Annexure-1 on Qualification Criteria)	Turn Over (Rs. In Lacs)	Documents placed at:	Remarks
1				
2				
3				
	Average Annual Turnover during last 3 financialyears			

Profitability:

S. No.	Financial Years (The last three Financial Years Refer Annexure-1)	Profit with (+) sign or Loss with (-) sign (In Rs)	Document placed at:	Remarks
1				
2				

Similar Work Experience**(i) For Completed works:**

S. No.	Name of work	Name of Client and address	Agreement/ Letter of Award No. and date	Actual Date of Start	Actual Date of Completion	Actual Completion Cost(Rs)	Completion Certificates placed at:	Remarks
1								
2								
3								
4								

Notes: In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency/Consultant appointed by Owner/Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder.

(ii) For substantially completed works

S. No.	Name of Work	Name & address of client	Agreement/Letter of Award No. & date	Actual Date of start	Actual Cost of work completed (Rs)	Present Contract value (Rs)	% work completed	Status of functionality (whether functional or non-functional)	Whether any proceedings of termination of contract has been initiated. (Yes/No)	Substantial completion certificate placed at	Remarks
1											
2											
3											

Notes: Certificate for substantial completion of project/work/asset should contain three parts. Part-I shall contain financial value of work done, PVC amount and present contract value. Part-II shall contain certificate of functional completion of project/work/asset. Part-III shall contain that no proceedings of termination of contract on contractor's default has been initiated.

Construction Experience in Key Activities (if applicable) NOT APPLICABLE

S. No.	Key Activity / Component	Quantity of Key Activity/ Component Executed	Amount of Key Activity/ Component Executed	Name of work	Name of Client	Actual date of Start of Key Activity	Actual date of Completion of Key Activity	Certificate placed at:	Remarks
1									
2									

Net Worth:

S. No.	Financial Years	Net Worth (in Rs.)	Documents placed at:	Remarks
1	(Last Financial Year refer Annexure1 on Qualification criteria)			

Other Documents to be submitted along with Tender Documents:

S. No.	Particulars	Documents placed at:	Remarks
1	Declaration by the Bidder in the format given in Proforma 1 of Annexure I, including certificates mentioned therein. In case of JV, each Partner of JV should submit Proforma 1 duly signed, dated & with seal separately		
2	Self-attested copy of Partnership Deed/Memorandum and Articles of Association of the Firm		
3	Self-attested copy of Written Power of Attorney of the signatory of the Tender on behalf of the tenderer. “(Annexure-III or Annexure-III & Annexure IV) as applicable)”		
4	Self-attested copy of valid registration with EPFO under EPF and Miscellaneous Provisions Act, 1952		
5	Integrity Pact as per Annexure VI/1, VI/2 and VI/3 as mentioned in clause 11.2	NA	NA
6	Self-attested copy of Guidelines on Banning of Business Dealings as per Annexure-VI A		
7	Self-attested copy of Corrigendum/Minutes of Pre-Bid Meeting, if any.		

S. No.	Particulars	Documents placed at:	Remarks
8	RTGS/NEFT details as per Annexure- VII (Mandate form)		
9	Self-attested copy of GST Registration Certificate		
10	Self attested copy of the JV-agreement/MoU as per Annexure II(where JV is allowed) to be executed by each member of JV individually.	NA	NA
11	Power of attorney in favour of Lead member as the Lead Member of JV(where JV is allowed) as per Annexure IV to be executed by all the members of JV individually.	NA	NA
12	Self-attested copy of certificates as per requirement of Sub –clause 6(verification of Local content) of clause 12.15 (Preference to Make in India)		
13	Self-attested documents as per clause 12.16(Restrictions on procurement from a bidder of a country which shares a land border with India), if applicable.		
14	Declaration by Each partner of JV (in case of Large works/Normal works)- as per Para 3 (Servicing of Loan/Credit Limit) of Annexure I.	NA	NA
15	Undertaking/ Declaration by Bidder/ Each Partner of JV in case of Large works/ Lead Member of JV in case of Normal works that “Audited Balance Sheets, Profit and Loss Statements and other financial statements for the immediately preceding year are not available” as per Para 1 (g) (Annual Financial Turnover), Para 4 (Profitability) and Para 5 (Net Worth) of Annexure-I, if applicable.		
16	Self-attested copy of any other document if specified in tender document and correction slips to tender document		

ANNEXURE IX

List of 60 Districts covered under IAP

S. No.	State	District
1	Andhra Pradesh	Adilabad
2	Andhra Pradesh	Khammam
3	Bihar	Arwal
4	Bihar	Aurangabad
5	Bihar	Gaya
6	Bihar	Jamui
7	Bihar	Jehanabad
8	Bihar	Nawada
9	Bihar	Rohtas
10	Chhatisgarh	Bastar
11	Chhatisgarh	Bijapur
12	Chhatisgarh	Dantewada
13	Chhatisgarh	Jashpur
14	Chhatisgarh	Kanker
15	Chhatisgarh	Kawardha
16	Chhatisgarh	Koriya
17	Chhatisgarh	Narayanpur
18	Chhatisgarh	Rajnandgaon
19	Chhatisgarh	Surguja
20	Jharkhand	Bokaro
21	Jharkhand	Chatra
22	Jharkhand	Garhwa
23	Jharkhand	Gumla
24	Jharkhand	Hazaribagh
25	Jharkhand	Kodarma
26	Jharkhand	Latehar
27	Jharkhand	Lohardaga
28	Jharkhand	PachimSinghbhum
29	Jharkhand	Palamu

S. No.	State	District
30	Jharkhand	PurbiSinghbhum
31	Jharkhand	Ram Garh
32	Jharkhand	Saraikela
33	Jharkhand	Simdega
34	Madhya Pradesh	Anuppur
35	Madhya Pradesh	Balaghat
36	Madhya Pradesh	Dindori
37	Madhya Pradesh	Mandla
38	Madhya Pradesh	Seoni
39	Madhya Pradesh	Shahdol
40	Madhya Pradesh	Sidhi
41	Madhya Pradesh	Umaria
42	Maharashtra	Gadchiroli
43	Maharashtra	Gondiya
44	Orissa	Balangir
45	Orissa	Debagarh / Deogarh
46	Orissa	Gajapati
47	Orissa	Kalahandi
48	Orissa	Kandhamal / Phulbani
49	Orissa	Kendujhar / Keonjhar
50	Orissa	Koraput
51	Orissa	Malkangiri
52	Orissa	Mayurbhanj
53	Orissa	Nabarangapur
54	Orissa	Nuapada
55	Orissa	Rayagada
56	Orissa	Sambalpur
57	Orissa	Sonapur
58	Orissa	Sundargarh
59	Uttar Pradesh	Sonbhadra
60	West Bengal	Paschim Medinipur

ANNEXURE X

PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD)

(On Non-Judicial Stamp Paper of Appropriate Value)

To,
RITES LTD.

.....
.....

1. WHEREAS RITES Ltd. Acting for and on behalf as Agent/Power of Attorney Holder of..... (hereinafter called ‘The Employer’) (which expression shall unless repugnant to the subject or context include its successors and assigns) has invited bids by way of E-tender Number-..... dated (hereinafter called ‘the Tender’) for(*description of the tender work*);
2. AND WHEREAS (*name of the bidder*) (hereinafter called ‘the Bidder’) has submitted a bid for the Tender to the Employer.
3. AND WHEREAS a Bank Guarantee for Rs..... (Rupees only) (*Amount of EMD*) in favour of RITES Ltd (hereinafter called the “Beneficiary”) valid till (*the date of validity of this Guarantee from the date of the submission of Tender’s offer*) is required to be submitted by the Bidder as EMD along with theTender.
4. We (*Name of the bank*) having our office at (*Address of the bank*) (hereinafter called ‘the Bank’) hereby give this Bank Guarantee and hereby agree unequivocally and unconditionally to pay to RITES Ltd. immediately on demand and without demur to the extent of the said sum of Rs (Rupees..... only) for which payment well and truly to be made to the said Beneficiary, the Bankbinds itself, its successors and assigns by these presents on default of any of the conditions of the Tender as follows:
 - i. if the Bidder after bid opening, but before expiry of bid validity or issue of Letterof Acceptance, whichever is earlier,
 1. withdraws his tender; or
 2. makes any modification in the terms and conditions of the tender which are not acceptable to the Employer
 3. impairs or derogates from the tender in any respect within the period of validity of the tender
 4. If the bidder does not accept the correction of his price during evaluation
 - ii. in case any information/document which may result in the Bidder’s disqualification is concealed by the Bidder or anystatement/information/document furnished by the Bidder or issued by a Bank/Agency/Third Party and submitted by the Bidder, is subsequently found to be false or fraudulent or repudiated by the said Bank/Agency/Third Party.

iii. in the case of a successful Bidder, if the Bidder fails to furnish the Performance Guarantee within the period specified under Clause 1 of “Clauses of Contract”.

5. We undertake to pay to the Beneficiary up to the above amount upon receipt of its first written demand, without the Beneficiary having to substantiate its demand, provided that in its demand the Beneficiary will note that the amount claimed by it is due to its owing to the occurrence of one or more of the conditions mentioned above, specifying the occurred condition or conditions.

6. This guarantee will remain in force up to.....and any demand in respect thereof should reach the Bank not later than the above date.

7. NOTWITHSTANDING ANYTHING CONTAINED HEREIN:

I. Our liability under this Bank Guarantee shall not exceed Rs. (Rupees only)

II. This Bank Guarantee shall be valid up to

III. It is a condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before failing which our liability under the guarantee will automatically cease.

Seal:

(Authorised Signatory of the Bank)

Date:

ANNEXURE XI

STATE / UNION TERRITORY IN WHICH GST REGISTRATION OF RITES

S. No	State	Regular GST Reg. No.(Final)
1	Jammu & Kashmir	01AAACR0830Q1ZK
2	Punjab	03AAACR0830Q1ZG
3	Haryana	06AAACR0830Q1ZA
4	Delhi	07AAACR0830Q1Z8
5	Rajasthan	08AAACR0830Q1Z6
6	Uttar Pradesh	09AAACR0830Q1Z4
7	Bihar	10AAACR0830Q1ZL
8	Tripura	16AAACR0830Q1Z9
9	Meghalaya	17AAACR0830Q1Z7
10	Assam	18AAACR0830Q1Z5
11	West Bengal	19AAACR0830Q1Z3
12	Jharkhand	20AAACR0830Q1ZK
13	Orissa	21AAACR0830Q2ZH
14	Chattisgarh	22AAACR0830Q1ZG
15	Madhya Pradesh	23AAACR0830Q1ZE
16	Gujarat	24AAACR0830Q1ZC
17	Maharashtra	27AAACR0830Q1Z6
18	Karnataka	29AAACR0830Q1Z2

STATE / UNION TERRITORY IN WHICH GST REGISTRATION OF RITES

19	Goa	30AAACR0830Q1ZJ
20	Kerala	32AAACR0830Q1ZF
21	Tamilnadu	33AAACR0830Q1ZD
22	Andaman & Nicobar Islands	35AAACR0830Q1Z9
23	Telengana	36AAACR0830Q2Z6
24	Andhra Pradesh	37AAACR0830Q1Z5

SECTION 2

ADDITIONAL CONDITIONS OF CONTRACT

SECTION 2**ADDITIONAL CONDITIONS OF CONTRACT****1. GENERAL:**

1.1 Work close to railway line, road, telephone line, power line: For work close to railway line, road, telephone line, power line (both underground and overhead) and structures, all precautions should be taken for ensuring that during the execution of the work no damage is caused to such assets and also no obstruction is caused to the movement of trains/road traffic.

1.2 The contractor is required to execute the work in stretches/areas which are made available to him and which may or may not be in continuous stretches. Decision of Engineer-in-charge shall be final in this regard and binding on the contractor.

1.3 Contractor shall submit to RITES/ NCL the entry challan of incoming materials for verification of Stores and record.

1.4 Contractor should maintain the daily consumption of OHE material register. Engineer - in - charge or his representative may check the registers and the challans at any time.

1.5 Night work:

The contractor would be required to carry out the work even at night, without conferring any right on the contractor for claiming for extra payment for introducing night working. The decision of the Engineer-in-charge in this regard will be final and binding on the contractor. Contractor shall make his own arrangement for sufficient illumination at site. Nothing extra will be paid for doing works at night.

1.6 Handing over of site:

Efforts will be made by the Employer to hand over the site to the Contractor free of encumbrance. However, in case of any delay in handing over of the site to the Contractor, the Employer shall only consider suitable extension of time for the execution of the work.

(a) It should be clearly understood that the Employer shall not consider any other compensation whatsoever, viz., towards idleness of contractor's labour, equipment etc.

(b) The Employer reserves the right to hand over the site in parts progressively to the Contractor. The Contractor will be required to do the work on such released fronts in parts without any reservation whatsoever.

(c) The access roads near, to the work site may not be available at the time of Mobilization by the Contractor. The Contractor shall plan his work within the plant area as per available roads at site. All drainage of works area and allover whether truckable/haulage roads as required by the Contractor shall be constructed and maintained during the construction period by the Contractor at his own cost.

(d) The Contractor must make temporary diversion of course of water during execution of any work conveniently free of cost.

(e) An experienced Supervisor should be deployed at site by the contractor along with required tools & equipment. Nothing extra will be paid for deploying experienced Staff or equipment.

(f) Contractor's rate shall be inclusive of cost of dewatering/shoring wherever required. No extra payment shall be made for any type of dewatering/shoring during execution of the work.

1.7 Appoint specialized agencies:

Contractor shall appoint specialized agencies for execution of specialized works, i.e., Foundation, Erection and stringing of contact and catenary wires. All such agencies shall be got approved from Engineer-in-charge before commencement of work.

2. ACCOUNTING FOR ALL ASSETS AND MATERIAL:

2.1 Before commencing the work, joint inventory of existing Electrical materials in the track is to be taken by the representatives of RITES/ NCL and the contractor to make entry in the inventory register and jointly signed.

2.2 The materials as per "Schedule of Quantities" in the tender documents are required for the work and to be supplied by the Contractor as per BOQ shall have to be procured from valid RDSO/CORE approved manufacturers where such approval exists, duly inspected by Railways/RDSO/RITES. Irrespective of the BOQ quantities for the works, the contractor shall order the materials for execution of work at site only as per the approved drawings (OHE Layout Plan & Sectioning Diagram) under intimation to RITES. The contractor must obtain requisite approval of RITES for any quantity deviation in contract (upward/downward) as per the terms of the contract.

3. INSPECTION:

3.1 The quoted rates should be inclusive of Inspection Charges and all taxes and duties (Other than GST on Contract price) of Central, State, Local bodies including Loading, transportation, unloading and stacking at site store near/within the premises of (NCL) siding as per the direction of Engineer-in-Charge at NCL Site Nigahi, Dist.-Singrauli, Madhya Pradesh. The quoted rates shall remain firm during the currency of the Contract, except for applicable price variation as provided in this contract.

3.2 The inspection is to be carried out by RITES/RDSO as mentioned in the Bill of quantity. The price quoted also includes RITES/RDSO inspection and testing charges unless otherwise specified in the bill of quantities or Technical Specification. Following Inspection charges shall be applicable:

- (a) In case the inspection is carried out by Engineer of RITES Ltd/NCL at the site (based on request of agency citing valid reasons along with consent of site-in-charge & approval from competent authority thereof), then agency has to deposit inspection charges to RITES Ltd/NCL through Demand Draft (DDs) or RTGS @ 0.95% of purchase order value of the material placed to manufacturers before inspection of the material. GST rate as applicable shall be extra.
- (b) In case inspection is carried out by Engineer of RITES Ltd/NCL at works of the manufacturer (based on request of agency citing valid reasons along with consent of site-in-charge & approval from competent authority thereof), then agency has to deposit to RITES Ltd./NCL through Demand Draft (DDs) or RTGS, @ 1.5% of purchase order value of the material placed to manufacturers or Rs 12,000/- per man day per PO whichever is higher for local parties & Rs 15,000/- per man day per P.O whichever is higher for outstation parties. The definition of outstation for this purpose would be locations at a distance of more than 100 KMs from the railway station where the IE is posted. GST rate as applicable shall be extra.
- (c) Tenderer can get the material inspected by RITES (QA Wing or its Zonal Offices) at the prevailing norms for Railway material inspection.

(d) Consignee: -RITES/NCL

- (e) RITES Ltd on behalf of NCL reserves the right to undertake any test, if required, before acceptance of the materials on contractor's cost.
- (f) Any materials and accessories, found to be damaged at the time of receipt will not be accepted and shall have to be replaced by good ones free of cost after being duly inspected.

4. Payment for various items:

- (a) Contractor shall be paid only for the quantities recorded by engineer's representative in measurement book as per clause of General Conditions of Contract and duly certified by Consultant appointed by RITES.

(b) Payment against supply for items as in financial bid/ BOQ:

- (i) On production of documents along with running bill, 80% of the cost of materials received duly inspected, shall be paid to the contractor. Prior to first running bill against the supply item, the contractor shall be required to submit Indemnity Bond for 100% value of supplies of Contract.
- (ii) Balance 10% cost of supplied materials shall be paid to the contractor after satisfactory installation of the materials at site of work.
- (iii) Balance 10% cost of supplied materials shall be paid to the contractor in final bill after testing & commissioning of overhead equipment system, reconciliation of materials and after issuing the provisional completion certificate.

(c) Payment against erection of items as in financial bid/ BOQ:

- (i) On Account payments for foundations: On account payment will be made on casting of foundation blocks, with or without core holes to the extent of 50% of the prices for item, and on the total volume of foundation block inclusive of muffs, as included in the approved cross-section drawings or as installed at site with the permission of the purchaser.

Note: Contractor shall furnish the Cube test report as per RDSO specification for releasing the on-account payment/progress payment for foundation

- (ii) On completion of foundations and mast erection including muffs, the contractor shall receive on progress payment @ of 95% against above item.

(d) Payments for designs:

Payments for designs/drawings shall be made in two installments, the first 50% being paid on approval of design and Drawing and balance 50% on submission of 'As Built/Completion Drawings' and technical booklet and fulfillment of tender specification and RDSO specification or latest

4.1 Billing/ Invoicing Procedure: All invoices shall be accompanied by the following:

- (i) Suppliers Challans.
- (ii) Inspection certificate granted by the Purchasers representative.
- (iii) Certificate of receipt of material at Contractors depot/s duly accepted by Purchasers Engineers.

- (iv) Certificate that the stores have been insured.
- (v) Quality assurance documents.
- (vi) Measurement sheet duly signed by contractor and RITES/ NCL's site representative. A soft copy in excel format of measurement sheet is also to be submitted.
- (vii) Abstract of measurement sheet and work done till previous bill, the running and cumulative quantities and amount certified by RITES/ NCL's site representative and accepted by NCL.
- (viii) Declaration and documentary evidence towards payment of ESI/EPF/Minimum wages, etc., as per statute.
- (ix) All insurance policies viz. CAR policy, Workmen compensation and third- party liability policy as stipulated in contract agreement.
- (x) Any other documents as asked by Engineer in-charge/RITES
- (xi) All requisite documents for reimbursement for GST
- (xii) Comprehensive Insurance Policy for supply and safe custody of material.

The bills in triplicate are to be raised in favour of RITES and are to be submitted to Site-In-Charge, RITES Ltd. at site office at NCL Siding, District-Singrauli, Madhya Pradesh..

5. DESIGN & DRAWINGS:

- 5.1** All the basic designs, drawings of OHE issued by RDSO/Lucknow/and or CORE/Prayagraj shall be arranged by the Contractor himself.
- 5.2** The Contractor shall furnish detailed working drawings (LOP/CSD/SED) together with design calculations, if any, and to submit in quadruplicate for approval of Railway.
- 5.3** The Contractor shall prepare sectioning diagram, OHE layout plan together with type of mast, foundation and profile drawing etc. as detailed out under items 1 & 2 of the Explanatory note under schedule of quantities and submit the same for approval to Sr.DEE (TRD), of concerned Railway division within 15 days from the date of issue of work order. Contract will be rescinded at the contractor's risk if fails to submit Layout Plan within stipulated days as mentioned above. On approval of Drawings/Designs by Railway in principle, the contractor shall distribute 5 copies as required before starting the work.
- 5.4** The contractor shall also submit design calculation for special foundation of OHE mast, if required, and furnish the type of foundation at such location where standard designs, drawings or employment schedules do not cover & obtain approval of competent authority.
- 5.5** The Contractor shall prepare 'As Erected Drawing' of OHE layout 'SED' and shall finalize it after joint verification with concerned Railway. The tracing of As Erected Drawing shall be submitted for approval of concerned Rly. duly signed by the Contractor. The contractor shall furnish 2 Nos. of RTFs & 2 Nos. of soft copy covering all drawings in addition to 6 (Six) coloured Print out copies of each drawings.
- 5.6** It is to be clearly understood that all design & drawings shall be based on thorough study. General design & dimensions shall be such that the contractor is satisfied about the suitability of the design/dimension/Style of the equipment/assembly for the purpose.

5.7 Purchaser's/Railway's approval will be based on these considerations. Notwithstanding approval of design/drawing/testing of equipment and acceptance of overall performance of the system, the contractor shall in no way absolve his responsibility under the term contract for the design, drawing & equipment supplied and erected by him or his subcontractor and also for the overall performance subject to general terms of Guarantee. The Schedule of Rates is to be read in conjunction with relevant RDSO/CORE's Specifications and the General Specification enclosed with the Tender Documents.

6. EXECUTION OF WORK:

6.1 The Contractor shall arrange Dip Trolley, Ladder Trolley etc. required for execution, Testing/checking of the work at his own cost.

6.2 **Tower wagon for final adjustment/checking will be arranged by the Employer/RITES, payment of hiring of Tower wagon charges shall be paid as per actual to Railway on demand by NCL/Siding Owner.**

7. TRAFFIC/POWER BLOCK:

7.1 Contractor may arrange to obtain Traffic/Power Block of the existing Section from Sr. DEE/TRD/Dhanbad, Sr. DOM/Dhanbad of East Central Railway to modify/connect OHE through requisition /request to Railway clearly specifying work proposed to be executed under power block, proposed date of execution, Elementary Section No. involved, duration of power/traffic block or any specified format for traffic/power block requisition and the Contractor shall be solely responsible for any delay in releasing such block or any other loss of existing railway system/ assets etc.

7.2 **Necessary payment for traffic/power block shall be paid as per actual to Railway on demand by M/s NCL/Siding Owner.**

8. SURPLUS/RELEASE MATERIAL:

8.1 Any surplus materials brought to site within the schedule (Bill) of quantity will have to be deposited to NCL's store / Railway's store from site by the contractor at his own expenses under direction of Engineer-in-Charge.

8.2 All released materials should be handed over to NCL.

8.3 Contact and catenary wire shall be supplied in drum lengths. Supply of cut pieces,if required, should be done with prior approval of Employer.

10 SPECIAL INSTRUCTIONS:

10.1 OHE system created under this contract shall be handed over to Railways for commercial operation by Contractor. RITES will provide necessary assistance as and when required by the contractor.

10.2 All documents related to EIG submission shall be prepared by contractor. All kind of Liaisoning with Railway in relation to EIG sanction to be done by Contractor. RITES will provide necessary assistance as and when required by the contractor.

11 TIME SCHEDULE:

11.1 The programme shall clearly indicate major key event, indicating mobilization time of equipment,

deployment of manpower, fabrication of the various components, structure, and other ancillary works. All works are to be completed in all respects including EIG's sanction, testing & commissioning within 06 (Six) months from the date of issue of the Work Order/LOA.

12 EMPLOYMENT OF LOCAL LABOUR

The contractor should employ skilled staff for working on High Voltage system, who possess sufficient knowledge on safety rules while working near high voltage lines. However, preference may be given to local project affected people who are so suited and pay wages not less than the minimum wages fixed by the law of the land. However minimum 20% of required unskilled workers are to employ from local project affected people of nearby villages who suit the work in 25 KV OHE systems.

13. Safety and Security

The works included in this contract are to be carried out close to the running tracks and public utilities, therefore, safety of running trains and the public is paramount. Therefore, all activities undertaken by the Contractor/his Sub-contractors shall ensure safety at all times. The contractor shall comply with the instructions issued by the Railway/ Engineer/Employer from time to time to ensure safe running of trains while carrying out works. The rates quoted by the Contractor shall be deemed to include all expenditure incurred in compliance with the same.

Before starting any excavation work adjacent to existing track, the contractor shall ensure that necessary permissions have been obtained and required precautions have been taken for doing such work in terms Joint Procedure Order reproduced below:

“JOINT PROCEDURE ORDER FOR UNDERTAKING DIGGING WORK IN THE VICINITY OF RAILWAY PROPERTY

- (a) Penalty to be imposed for damages to cable shall be as under:

Cable damaged	Penalty per location
Only Quad cable or Signaling cable	Rs.1.0 Lakh
Only OFC	Rs.1.25 Lakh
Both OFC & Quad	Rs.1.5 Lakh
Electrical Cable	Rs.1.0 Lakh

- (b) Necessary debit in this regard shall be raised on the department undertaking the work who shall in turn levy the penalty on the defaulting contractor. S&T department shall raise the debits in case of damage to OFC or Quad or Signaling cable and Electrical department shall raise the debits in case of damage to Electrical cable.
- (c) Railways will not lodge FIR with RPF in case of works being executed by authorized contractors of Railways who have been duly permitted to execute the works in accordance with this JPO. Joint note by the supervisors of the concerned department shall be prepared and the responsibility of the cable cut should be decided without involving RPF. The joint note deciding the fact whether the contractor should be penalized shall be completed in a day's time from the occurrence of cable cut.
- (d) In all other cases, when the cable is cut by an agency that was not permitted to execute any work, FIR should be lodged with RPF.
- (e) While giving permission for taking up the works, concerned departments may note that earthwork by engineering contractors will normally be done by machines except in a few

isolated locations where the quantity of earth work is very less.

- (f) Railways shall make necessary correction in their future contract so that this JPO can also be enforced contractually.
- (g) In case of damages to OFC, Rail Tel should be paid 5/6th of the penalty recovered. RailTel shall raise demands on the S&T department in this regard.
- (h) All types of signaling & OHE bonds i.e., rail bond, cross bond and structure bond shall be restored by the contractor with a view to keep rail voltage low to ensure safety of personnel.

- 14. Above joint circular shall be applicable for construction as well as open line organization of Engineering, S&T and Electrical.
- 15. In addition to provisions as contained in annexure “B-1” of GCC, Material testing lab shall be fully equipped with the testing facilities for field testing of Galvanisation of Mast etc.

16. Bank Guarantee Facility in SFMS

All type of bank guarantees i.e. Performance bank Guarantee / Bank Guarantee against Mobilisation advance / Bank Guarantee against supply of Rails/ Bank Guarantee against supply of Machineries etc. will be operative as per Guidelines of RBI regarding use of SFMS facility. Following conditions are to be followed by the Vendor/Bidder/Tenderer:

- (a) Bank Guarantee issued by issuing bank must be routed through SFMS platform and IFN 760 must be sent from BG issuing Bank to Indian Bank.
- (b) The vendor/bidder shall submit to RITES LIMITED the copy of SFMS message as sent by the issuing Bank Branch alongwith the Original Bank Guarantee.
- (c) Bank Details are as follows:

- (i) **Bank Address** – INDIAN BANK, GF-3 Block B, Vipul Square, Sushant Lok, Phase 1, Gurgaon

- (ii) **Bank Account No.** – 6597266376

- (iii) **IFSC Code**—IDIB000S149

- (iv) **Branch MICR code:** 110019038

- 17. **COVID-19:-** In view of COVID-19 the agency is required to adhere strictly to the guidelines issued or to be issued during currency of the contract by central government or state government or local authority. Agency should ensure all safety to their employee and workers from COVID-19. Any negligence to adhere to the guidelines of the government will result to the penalty and action against the agency as per the government rules.
- 18. The **successful** bidder shall get himself registered for GST in UP and submit the same certificate before submission of 1st Running Account Bill.
- 19. Point 3 of Clause no. 29.0, Section-1 (NIT & ITT) i.e. “Self-attested copy of ISO 9000 Certificate. (if any)” is deleted.

SECTION 3

SPECIAL CONDITIONS OF CONTRACT

SECTION 3**SPECIAL CONDITIONS OF CONTRACT**

Special Conditions relating to existing Clauses of Contract (Section 8), RITES Safety Code (Section- 9), RITES Model Rules for Protection of Health and Sanitary Arrangement for Works (Section-10) and RITES Contractor's Labour Regulation (Section-11)

Applicable in the case of Railway Works only**SPECIAL CONDITION RELATING TO UPLOADING OF PAYMENT OF WAGES AND OTHER PAYMENTS TO CONTRACT LABOUR ON RAILWAY WORKS**

- A) Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 19 B of RITES' General Conditions of Contract for Works. In order to ensure the same, an application has been developed and hosted on website 'www.shramikkalyan.indianrailways.gov.in'. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/updation of Portal shall be done as under:
- a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramik kalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer-in-Charge shall approve the contractor's registration on the portal within 7 days of receipt of such request.
 - b) Contractor once approved by the Engineer-in-Charge can create password with login ID (PAN No.) for subsequent use of portal for all LOAs pertaining to Railway works issued in his favour.
 - c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoA)/Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer-in-Charge shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
 - d) After approval of LoA by Engineer-in-Charge, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
 - e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.
- B) While processing payment of any 'On Account bill' or 'Final bill' or release of 'Advances' or 'Performance Guarantee/Security deposit', contractor shall submit a certificate to the Engineer-in-Charge or his representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramik kalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till Month, Year"

SECTION 4
PROFORMA OF SCHEDULES

SECTION-4**PROFORMA FOR SCHEDULES****Schedule 'A'**

Schedule of quantities (As per Bill of Quantities attached)
(BOQ to be attached with Financial Bid)

Schedule 'B':

Schedule of materials to be issued to the contractor

(Refer Clause 10 of Clauses of Contract)

S. No.	Description of Items	Quantity	Rate in Figures & words at which the material will be charged to the Contractor	Place of Issue
1	2	3	4	5

-Not Applicable-

Schedule 'C'

Tools and Plants to be hired to the Contractor (Refer Clause 34 of Clauses of Contract)

S. No.	Description	Hire Charges per Day	Place of Issue
1	2	3	4

-Not Applicable-

Schedule 'D'

Extra schedule for specific requirements / documents for the work, if any

-Not Applicable-

Schedule 'E'

Schedule of components of Cement, Steel, Other materials, POL, Labour etc. for Price Escalation.

(Refer Clause 10 CC of Clauses of Contract)

(To be worked out and filled by Tender document Approving Authority. The Components and their percentages may be modified depending on the nature of work)

Clause 10 CC - NOT APPLICABLE -

Schedule 'F'

Reference to General Conditions of Contract

Name of Work: Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV AC OHE system for Providing Rail Connectivity to upcoming CHP & SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P”

Estimated cost of work: **Rs. 4, 85,03,014.00**

Earnest money: Rs 9.70 Lakh

Performance Guarantee (Ref.Clause 1) 5% of Tendered Value

Security Deposit: (Refer clause 1A) 5% of Tendered Value

Notice Inviting Tender and Instruction to Tenderers

Officer inviting tender: PU-Head/LKO, RITES Ltd., Project Unit- Lucknow on behalf of NCL

CONDITIONS OF CONTRACT

Definitions

2(iv) Principal/ Employer RITES Limited on behalf of NCL

2(v) Engineer-in-Charge PU-Head /LKO, RITES Ltd., PU-LKO

2 (vii) Accepting Authority PU-Head /LKO, RITES Ltd., PU-LKO

2 (ix) Percentage on Cost of materials and Labour 15%

to cover all overheads and profits

2 (x) Standard Schedule of Rates

Standard schedule of Rates as indicated below will be applicable to the Tender including latest amendments and corrections till the date of receipt of tender

(Delete items that are not applicable)

S.No	Item	Schedule Applicable
1	*For Railway Works	
	(a) For execution of all civil engineering works related to Building work, Road works and Horticulture works etc. {except Formation works, Bridge works and P. Way works} .	<ol style="list-style-type: none"> 1 CPWD Delhi Schedules of Rates- DSR-2021 (Vol. I&-Vol. II) 2 Market Rates for Non DSR Items. 3 CPWD DSR (E&M) -2021
	(b) For execution of Bridges works, Formation works and P.Way works.	<ol style="list-style-type: none"> 1 Indian Railways Unified Standard Schedule of Rates(IRUSSOR- 2021) 2 Market Rates for Non DSR Items. <p><i>(to be modified as per requirement and as applicable)</i></p>
	*Note- For specifications of Railway works refer Circular No 2022/CE-1/CT/8/CPWDDSR Dated 13-10-2022	

2(xiii) Date of commencement of work: 15 days from the date of issue of LOA or the first day of handing over of site whichever is later.

9 (a) (ii) General Conditions of Contract: RITES General Conditions of Contract for Works **February 2023** Editionas modified & Corrected up to Correction Slip No.1 to Up to opening of bid

CLAUSES OF CONTRACT

Clause 1

1 (i) Time allowed for submission of P.G. from 15 Days
The date of issue of Letter of Acceptance
(*subject to maximum of 15 days*)

Maximum allowable extension beyond 7 Days
the period provided in(i)above
(*subject to maximum of 07 days*)

Clause 2

Authority for fixing compensation under Clause 2 PU-Head /LKO, RITES Ltd., PU- Lucknow

Clause 2 A:

Whether Clause 2A shall be applicable No

Clause 5:

5.1 (a) Time allowed for execution of work 06 months from the dateof start
Date of start: 15 Days from the date of issue of Letter of Acceptance or the first date of handing over of Full/Part site whichever is later (*Incase only part site is to be handed over initially, indicate the time schedule for handingover of the site*)

5.1 (b) TABLE OF MILESTONE(S):

S. No.	Description of Milestone (Physical*/ Financial*)	Time allowed (from date of start)	Amount to be withheld in case of non-achievement of milestone
1	Preparation and Submission of Wiring cum Sectioning drawing, OHE Layout Plans of Entire Section.	30 days	1% of Contract Price
2	Supply @ 60% value of steel for OHE Mast/Portal, DMA, DA, TTC etc. of BOQ.	90 days	1% of Contract Price
3	Supply @ 60% value of Copper for Contact Wire, Catenary Wire, G Jumper, C/F Jumper etc. of BOQ	120 days	1% of Contract Price
4	Commissioning of entire OHE works	180 days	As per Clause 2 of GCC

Clause 5 A

Shifting of stipulated date of completion:

Competent Authority

PU-Head /LKO, RITES Ltd. PU-LKO

Clause 6 A

Whether Clause 6 or 6A applicable:

6A is applicable

Clause 7

Gross work to be done together with net Payment

Rs 40.42 Lacs (Can be reviewed/decided by Engineer-in-charge)

/adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment:

Clause 10 A

i) Whether Material Testing Laboratory is to be provided at site.

No

ii) If "YES" list of equipment to be provided

NOT APPLICABLE

Clause 10 B

Whether Clause 10 B (ii) to (vi) applicable

Yes (Except 10 B(iii))

Clause 10 CC

Whether Clause 10CC applicable

No

Clause 11

Specifications to be followed for execution Of work

1 For CPWD DSR Items

A) CIVIL WORKS

CPWD Specifications 2019, Volume-I and II with correction slips up to last date of submission of tender including extension, if any

B) ELECTRICAL WORKS

CPWD General Specifications for Electrical Works

Part I Internal 2013

Part II External 2013

Part III Lifts & Escalators 2003

Part IV Substations 2013

Part V Wet Riser and Sprinkler Systems 2020

Part VI Fire Detection and Alarm System 2018

Part VII D.G. Sets 2013

Part VIII Gas based Fire Extinguisher System- 2013 Heating, Ventilation & Air Conditioning Works 2017.

For OHE Works ACTM Part- I, II

For Railway Works

Specifications for execution of all civil engineering works related to Building work, Road works and Horticulture works etc. (except Formation works, Bridge works and P.Way works- CPWD Specifications as indicated in 1 above

Bridge Works, Formation Works and P.Way works (For items not covered by 1 above)

Indian Railway Unified Standard Specification-2021 (IRUSS-2021)

2 For Highways/ Hill Road/Major Road, Airport Pavements, Flyover, Bridge, Grade separator etc. as defined

MORT&H specifications {Specification for Road and Bridges (fifth revision), April 2013} as defined in the nomenclature of items

3 For Non DSR and/or Non (IRUSS-2021)

Items and items of Specialized nature

Technical Specifications as included under Section No. 5

Clause 12

Clause 12.2 Deviation Limit beyond which
12.3 & 12.5 Clauses 12.2, 12.3 & 12.5 shall apply

i) For Non-foundation items
Plus 25% Minus No limit

ii) For Foundation Items

Plus 100% Minus No limit

Note: For Earthwork, individual classification quantity can vary to any extent but overall Deviation Limits will be as above.

Clause 12.5

Definition of Foundation item if other
than that described in Clause 12.5

NOT APPLICABLE

Clause 16

Competent Authority for deciding reduced rates
(Authority Competent to accept tender)

PU-Head /LKO, RITES Ltd., PU-LKO

Clause 17

Maintenance Period

12 Months

Clause 18

List of machinery, tools & plants to be deployed by the Contractor at site
(Commensurate with approved work schedule)

Applicable

1. Ladder. 2. Spanner Set
3. Earth rod suitable for 25KV AC
4. Other measuring equipment's duly
calibrated and valid calibration certificate:
5. Megger 6. Multimeter
7. Vernier Calipers 8. Measuring Tape. 9.
Alkometer

Clause 25

25 (i) Appellate Authority

Regional Head /NRPO, RITES Ltd.

Appointing Authority

Vertical, (RI), RITES Ltd.

Whether Clause 31 or 32 is applicable

32 is applicable

Clause 36 (i) & (iii)

Minimum Qualifications & Experience required and Discipline to which should belong

Designation	Minimum Qualification	Minimum Working Experience	Discipline to which should belong	Number	Time of Deployment
Project Manager cum planning/quality/Site/billing Engineer	Graduate Engineer or Diploma Engineer	02 years or 5 years respectively	Electrical Engineering	1+1	Within 15 days from the date of start.

Clause 36 (iv)

Recovery for non –deployment of Principal Technical Representative/Deputy Technical Representative / Project/ Site / Planning / Billing Engineer:

Designation	Rate of Recovery per month (in Rs.) for non-deployment
Project Manager cum planning/quality/Site/billing Engineer	Rs. 15,000.00 per month per person

Clause 42

- (i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates printed by CPWD

DSR2021 –(For DSR Items)

Wherever work is carried out as per specification other than CPWD specifications the cement/bitumen content will be calculated as per the nomenclature of the item/ as per the specifications applicable/ job mix formula approved

- (ii) Variation permissible on theoretical quantities

- a) Cement

- For works with estimated cost put to tender not more than Rs.5 Lakhs 3% plus /minus
- For works with estimated cost put to tender more than Rs. 5Lakhs 2% plus /minus

- b) Bitumen for all works 2.5% plus only & nil on minus side

- c) Steel Reinforcement and Structural

Steel Sections for each diameter, section and Category 2% plus/minus

- d) All other materials Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S. No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor	
		Excess beyond permissible variation	Less use beyond the permissible variation
	NOT APPLICABLE		

Clause 46

Clause 46.10

Details of temporary accommodation including number of rooms and their sizes as well as furniture to be made available by the Contractor

. Not Applicable

Whether Clause 46.11.1A applicable

Yes/No

Whether Clause 46.13A applicable

Yes/No

Clause 46.17

City of Jurisdiction of Court:

Lucknow, (UP)

Clause 47.2.1

Sum for which Third Party Insurance to be obtained:

Rs10.0 Lakh
per occurrence with the number of occurrences limited to two.

Clause 55

Whether clause 55 shall be applicable.

No

SECTION 5 TECHNICAL SPECIFICATIONS

SECTION 5
TECHNICAL SPECIFICATIONS

1) General –

The work will be carried out as per specifications indicated in the Nomenclature of the item or elsewhere in the tender documents. The items covered by the following General specifications shall be carried out as per these specifications. The standard specification shall be arranged by the contractor and will not be supplied by RITES along with the Tender Document

2) STANDARD SPECIFICATIONS ISSUED BY CPWD

a) Civil Engineering Works

CPWD Specifications 2019, Volume-I and II with correction slips upto last date of submission of tender including extension, if any

The specifications along with amendments are available as a printed document issued by CPWD and also in soft copy PDF Format in CPWD website.

b) Electrical Engineering Works

	CPWD General Specifications for Electrical Works Part I	Internal 2013
Part II	External 2013	
Part III	Lifts & Escalators 2003	
Part IV	Substations 2013	
Part V	Wet Riser and Sprinkler Systems 2020	
Part VI	Fire Detection and Alarm System- 2018	
Part VII	D.G. Sets- 2013	
Part VIII Gas	based Fire Extinguisher System-2013	
	Heating, Ventilation & Air Conditioning Works 2017	

The above documents are available as Priced Document issued by CPWD and in soft copy PDF Format in CPWD website.

3) Standard Specifications For Railway Works

a) Specifications for execution of all civil engineering works related to Building work, Road works and Horticulture works etc. (except Formation works, Bridge works and P. Way works-

_____ CPWD Specifications as indicated in para 2 above

b) Bridge Works, Formation and P. Way works

Indian Railway Unified Standard Specification-2021 (IRUSS-2021)

The IRUSS specifications are available on the Railway Board's website.
https://indianrailways.gov.in/railwayboard/uploads/directorate/civil_engg

4) Standard Specifications Issued by Ministry Of Road Transport And Highways (MORTH Specifications)

For Highways/ Hill Road/Major Road, Airport Pavements, Flyover, Bridge, Grade separator etc.

Specifications for Road and Bridge works (Fifth Revision) April 2013 have been published by Indian Road Congress as a priced document. These Specifications cover exhaustively various Road and Bridge works.

5) Items/materials to be used in Works: Applicable when Approved List of Brands/makes is given in the Tender Document

- i) Brand names of items/materials to be used as per the scope of work listed in this tender document as Approved List are indicative only. The agency/contractor should use 'Make-in-India' products as per the Govt. of India "Make in India" policy updated upto the last date of submission of bids. The agency should also consider the availability of spare parts/components for maintenance purposes while proposing any brand/manufacture. The contractor can propose any alternate brand/make meeting the required quality/specification including minimum local content matching with those mentioned in Approved List. The rate of alternate brand/makes proposed by contractor should not vary plus/minus 10% from average rate of the brands given in Approved List. The alternate brand can be used only after the approval of Engineer-in-Charge.

If the rate of alternate brand of item/material proposed by contractor is found to be less than the lowest rate in above list, the recovery shall be affected for the difference. However no extra payment will be made if the rate is higher than the highest rate in the approved list.

- ii) The agency should submit item/materials corresponding to brands mentioned in Approved List and also alternate brands (if any) to be used in the work from local supplier along with minimum local content as specified in the contract for approval of the Engineer-in-Charge. The minimum local content is to be considered for the complete item including labour component. The agency/Contractor shall obtain the certificate for all items submitted for approval except for sundry items.
- iii) In case of non-availability of 'Make in India' brands then only the proposal for use of international brands is allowed with the prior approval of Engineer-in-Charge complying with all Government of India norms.
- iv) For any item/material not covered in the Approved List and also as given in S. No. (i) to (iii) above, the contractor shall get the samples and take approval from the Engineer-in-charge before the procurement as defined below:
- a) The contractor shall supply ISI marked item/material. In case ISI marked item/material is not available, First Quality item/material shall be accepted. The samples of the item/material shall in either case have to be got approved from Engineer-in-Charge before procurement by Contractor.
- b) The agency shall submit at least three ISI marked or Ist Quality make/brand (in case

ISI marked item/material is not available) along with the current rates (the difference in rates shall not be more than 10% of the average of three ISI marked or Ist Quality make/brand) and specifications for the approval of Engineer-in-charge before procurement.

- v) It will be contractor's responsibility to ensure timely submission of samples and relevant documents for approval of Engineer-in-Charge. Contractor will have to replace the defective and substandard materials at his own cost.

6) SPECIAL SPECIFICATIONS (NOT COVERED BY ANY STANDARD SPECIFICATIONS)

1. General

All the Supply and Erection work under this contract shall conform to the Technical Specifications of 25 KV AC Traction Equipment and relevant drawings issued by Director (T.I.), Research, Design & Standards Organization (RDSO), Manaknagar, Lucknow – 11. Copies of such specifications and drawings can be obtained from Director (T.I.), RDSO, Lucknow as required. General Manager / RITES shall not issue any drawings/specifications to the contractor

2. Definitions

The technical and other terms used are as defined in General and subsidiary Rules/AC traction manual

2.1 Bond

An electrical connection across a joint in or between adjacent lengths of rail.

- i) Continuity Bond – A rail bond used for maintaining continuity of the rail circuit at crossings and junctions.
- ii) Cross Bond: A rail bond used for connecting together two rails of a track or rails of adjacent tracks.
- iii) Impedance Bond – A special rail bond used to bridge an insulated rail joint in AC track circuited sections in areas equipped for electric traction.
- iv) Rail Bond – An electrical connection across a joint between two adjacent rails as part of the track return and also called longitudinal bond.
- v) Structure Bond – An electrical connection between the non current carrying metallic part of a traction mast or structure or support to the traction rail.

2.2 Bracket Assembly

It is an insulated swiveling type structural member, comprising of different sizes of steel tubes, to support and to keep the overhead catenary system in position so as to facilitate current collection by the pantograph at all speed without infringing the structural members. It consists of the following structural members.

- i) Stay arm – It comprises of dia 28.4 /33.7 mm. (small) size tube and an adjuster at the end to keep the bracket tube in position. It is insulated from mast by stay arm

insulator.

ii) Bracket tube – It comprises of dia 40/49 mm. (large) or dia 30/38 mm. (standard) bracket tube and insulated by bracket insulator. Catenary is supported from this member by catenary suspension bracket and catenary suspension clamp.

iii) Register arms – It comprises of dia 28.4 x 33.7 mm. tube to register the contact wire in the desired position with the help of steady arm.

2.3 Steady arm assembly – It is 32 x 31 mm. BFB section made of aluminum alloy to register the contact wire to required stagger and to take the push up of contact wire. It is always in tension.

2.4 Dropper

A fitting used in overhead equipment construction for supporting the contact wire from catenary.

2.5 Electrical Clearance

The distance in air between live equipment and the nearest earthed part.

2.6 Encumbrance

The axial distance on vertical plane between catenary and the contact wire at support.

2.7 Height of contact wire.

The distance from rail level to the underside of contact wire.

2.8 Interrupter

It is a single phase vacuum / SF6 / Oil filled Breaker used as load switch to close the circuit on fault but does not open on fault. It is operated either by remote control or manually at site.

2.9 Jumper

A conductor or an arrangement of conductors for electrical continuity not under tension, which form electrical connection between two conductors or equipments.

2.10 Mast

A single vertical post embedded in the foundation or otherwise rigidly fixed in vertical position to support the overhead equipment with Bracket assembly. It may be rolled section or fabricated. The uprights of portals and TTCs are also called mast.

2.11 Overlap

An arrangement of overhead equipment over track where two sets of traction conductors are run parallel to each other for short distance over span (s) providing a smooth passage for the pantograph of an electric rolling stock. In the uninsulated overlaps two sets of conductors are separated by 200 mm. and connected by a jumper. In insulated overlaps the two sets of conductors are separated by 500 mm. in air. Electrical continuity is provided by an isolator or interrupter.

2.12 Over-line structure

Any fixed structure provided over the track. The prescribed clearance is normally provided as laid down in the Schedule of Dimension for unrestricted movement of rolling stock.

2.13 Regulating equipment

A device for maintaining the tension of OHE conductors constant under all ambient

temperature conditions.

2.14 Setting distance (Implantation)

The horizontal distance from the nearest face of traction mast to the center line of the nearest electrified track.

2.15 Suspension distance

The horizontal distance from the center of the eye of catenary suspension bracket to the face of themast for a single Bracket assembly or the face of cross arm channel in case of multiple Bracket assembly

2.16 Span

The distance between the centerline of adjacent supporting masts for overhead equipment/lines.

2.17 Stagger

Stagger of the contact wire is the horizontal distance of the contact wire from the vertical planethrough the centre of pantograph pan at the contact surface.

The Stagger of catenary is the horizontal distance of the eye of catenary suspension bracket fromthe vertical plane through the centre of the track.

2.18 Section Insulator

A device installed in the contact wire for insulating two elementary electrical section from eachother while providing a continuous path for the pantograph without break of current.

2.19 Tension length

Length of conductor which is stretched between the two anchor points.

2.20 Versine

The versine is the maximum of offset of rail on which spans have been measured of the curvedtrack from the chord connecting two points, each opposite adjacent masts.

3.0 Electrical clearance

3.1 Clearance

3.2 The clearance between 25 KV live parts and earthed parts of fixed structures or moving loads shall be as large as possible. The electrical clearances to be maintained under the worst condition of temperature, wind etc. are given below:-

a) Minimum vertical distance between any live part of overhead equipment or pantographs andparts of any fixed structures (earthed or otherwise) or moving loads.

i) Long duration - 250 mm.

ii) Short duration - 220 mm.

b) Minimum lateral distance between any live part of overhead equipment or pantograph and partsof any fixed structures (earthed or otherwise) or moving loads.

i) Long duration - 250 mm.

ii) Short duration - 220 mm.

c) Clearance for all fixed structures should be conforming to Indian Railway schedule of dimension (Rev.2004) to suit 25KV AC Traction.

3.2 Working clearance

Minimum clearance between live conductor /equipments and such earthed structure/live parts of different elementary sections where men are required to work shall be 2 metre. where the clearance is not obtained the structure shall be protected by earthed metallic screens or prescribed warning boards.

4. Spans

4.1 Measurement

Spans shall be accurately measured by means of steel tape. On curves the measurement shall be taken on the outer rail of the middle track in the case of an odd number of tracks and in the case of even number of tracks on the inner rail of the first outside track (from the center of the formation). On single track, measurement shall be made on the outer rail.

4.2 The span shall be as large as practicable, but should enable the contact wire to be erected with permissible stagger. For a stipulated maximum stagger, the length of the span is governed by curvature, blow off of overhead equipment, sway of pantograph and deflection of the mast under wind condition. Standard span shall be used to maximum extent possible.

4.3 Mid Span Stagger

Where two adjacent spans are located on curves of different radius or when the two versines are in opposite direction, the span shall be determined so as to keep the mid span stagger in the two spans within the limit given in the span and stagger chart (ETI/OHE/G/00202) taking into account the stagger at common supports and the stagger of the extreme support.

4.4 Restriction

On main track, the length of two consecutive spans shall not normally differ by more than 18 metres.

5. Mast

5.1 Type of mast

OHE conductors are suspended from swiveling Bracket assembly generally erected on individual mast.

5.2 Selection of mast

Mast for standard applications viz mast of single OHE, anticreep and overlaps should be selected from the mast employment schedule. Separate mast employment schedules have been made for each wind pressure.

6. Foundation

6.1 Volume Charts

Foundation bending moment codes (FBM) for each location are obtained from the mast employment schedules or by actual calculation. Bearing capacity of the soil is

determined at the outward toe of bottom of foundation at representative number of locations. Where foundations are placed on the slope of banks due increase in setting distance, the bearing capacity of the soil should be determined on the slope. Bearing capacity determined thus would be considerably less than those determined on the top of foundation.

6.2 Type of foundation

The following type of foundation is for OHE mast

For mast

i)	(A) Side bearing (Type B)	Drg. No. EPI/C/0058/SH 1
	(B) Side gravity (Type BG)	-do-
	(C) Pure gravity (Type G)	-do-
	(D) Pure gravity for black cotton soil (TypeWBC)	-do-
ii)	New Pure Gravity (Type NG)	-do- SH 2A
iii)	NBC type foundation for dry black cotton soil(16500 & 11000 kgf/sqm.) 3.0 m. depth	-do- SH 4
iv)	New pure gravity for different soil and siteconditions (500 mm. exposed) (Type NG orSPL)	
v)	New pure gravity for black cotton soil (for 8000 kgf/sqm. Soil pressure 2.5 m. depth (Type NBC)	-do- SH 5
vi)	Foundations in soft rock (bearing capacity45000 kgf/sqm)	Drg. No. ETI/C/0059
vii)	Foundation in hard rock (bearing capacity90,000 kgf/sqm.)	Drg. No. ETI/C/0060
		-do- SH 3A Drg. No.
		ETI/C/0060

6.3 Selection of foundation

- i) Side bearing foundations are used for masts where the soil bearing capacity is 11000 or 21500 kgf/sqm. and 300 mm. wide shoulder is available on the banks. However, the overlap intermasts and masts on the inside of curves, 550 mm. wide shoulder is necessary (Drg. No. ETI/C/0023).
- ii) New pure gravity foundations may be used for mast where soil bearing capacity is 5500, 8000 and 11000 kgf/sqm. or where adequate shoulder width as mentioned in Para (i) is not available. In such cases, it should be ensured foundation is not exposed.
- iii) Side gravity foundations may be used for masts where soil bearing capacity is 8000 and 11000 kgf/sqm., or adequate shoulder width is not available. No portion of the foundation should be exposed.
- iv) Pure gravity foundations (Type G) are used for independent mast where soil surrounding the foundations is loose and cannot exert passive pressure on the foundations. G type foundations have been designed for soil bearing capacity of 5500, 8000 and 11000 kgf/sqm. Pure gravity foundations (Type P) are used for portals and are designed for soil bearing capacity of 8250 and 11000 kgf/sqm.

7. Contact Wire Height

7.1 Standard height

Normally the height of contact wire above the track plane shall not be less than 5.50 mts. at mid span under the worst temperature conditions. To ensure this, the normal height at the suspension point shall be as under:-

- i) Regulated
Normal with 10 cm. Pre sag - 5.60 mts.
- ii) Unregulated
 - a) Unregulated OHE designed for areas - 5.75 mts.
With a temperature range of 4 °C to 65 °C
 - b) Unregulated OHE designed for areas - 5.65
mts. With a temperature range of 15 °C to 65 °C

7.2 The height may be reduced under overline structures after a clearance study. The minimum height should be 4.92 mts. for the Broad Gauge section. In case C class ODC movement is not required, the height could be reduced to 4.80 mts. (B.G.). Height may be further reduced to 4.65 mts. if rolling stock higher than 4.265 mts. are not allowed for such lines.

7.3 At electric locomotive sheds and loco instruction pits, the minimum height shall be 5.80 mts. (B.G.)

7.4 At level crossings, the minimum height of contact wire shall be 5.50 mts.

8. Stagger

8.1 Tangent track

On tangent track, the contact wire is normally given a stagger of 200 mm..at each support alternately on either side of center of track.

On tangent track, the catenary stagger is zero for mast supporting a single equipment. The catenary is fixed vertically over the contact wire at all supports at which more than one equipment is supported.

8.2 Curve track

On curves, the stagger of the contact wire at supports should not exceed 300 mm. The stagger of the catenary on the curve track shall be determined with reference to drawing No. ETI/OHE/G/00202. The standard values adopted for contact wire are 0, (+)200mm and (-)200mm.

9. Encumbrance

9.1 Encumbrance shall normally be 1.40 mts.

10. Droppers

The standard arrangement of dropper assembly shall be as per drawing No. ETI/OHE/P/1190.

11. Section Insulators

11.1 Location

Section insulator is so located that the following conditions are fulfilled.

- i) At location of section insulators, the axial distance between the catenary and contact wire shall not be less than 450 mm. in the case of single wire section insulator and 600 mm. in the case of double wire section insulator.
- ii) The section insulator is to be located beyond the point where the center distance between two tracks is equal to or more than 1.65 mts.
- iii) The stagger of the contact wire at the location of the section insulator should normally be zero, but in no case should it exceed □ 100 mm.
- iv) On loops, the section insulator shall, as per as possible, be located closed to the first support of the overhead equipment for the loop.
- v) The preferred location of the section insulator on main running track is 2 to 10 mtrs. from the support in direction of traffic, though its provision on the main line should be avoided.
- vi) In double line section, the runners should be in the trailing direction.

12. Arrangement of Jumpers

12.1 In span jumpers

In span jumpers between the contact and catenary wire are provided at suitable equidistance intervals as indicated in Drg. No. ETD/OHE/G/05101

12.2 'G; Jumpers

The arrangement of jumpers at uninsulated overlap is indicated in Drg No. ETI/OHE/G/05102.

12.3 Potential equalizing jumpers

The arrangement of potential equalizing jumpers is indicated in Drg No. ETI/OHE/G/05104.

12.4 Antitheft Jumpers

The arrangement of antitheft jumpers should be as indicated in Drg. No. ETI/OHE/SK/432.

13. Tension lengths

13.1 Regulated equipment

With regulated overhead equipment every tension length is equipped with an automatic tensioning device at each end with an anticreep located approximately midway between the tensioning devices. The distance between the anticreep and the anchor mast

/structures on either side should not exceed 750 mts. or 15 supporting mast.

13.2 Half tension length

Half tension length of regulated overhead equipment, not greater than 750 mts. between Anchoredges may be adopted where necessary. The equipment is fixed at one end and provided with an automatic tensioning device at the other, the fixed end being determined to suit convenience of erection.

14. Bracket Arrangement

14.1 Overhead equipment is supported from the mast by Bracket bracket assembly made ofgalvanized steel tubes. The bracket assembly shall be swiveling type.

14.2 Bracket Arrangement.

The arrangement of Bracket depends upon the height of contact wire, encumbrance, suspension distance, stagger and super elevation. Standard Bracket arrangements are given in Drg. No. ETI/OHE/G/02106, SH – 1 & 3.

14.3 Allowance for adjustment

The bracket assembly shall be such as to permit easy adjustment of the whole equipment after erection to cater for displacement of track during maintenance to the extent of 100 mm.on either side of track center.

14.4 Adjustment on bracket tube

It shall be ensured at the time of selection of bracket assembly that the free length of the bracket tube beyond the catenary suspension bracket fitting is at least 150 mm. to facilitate future adjustment.

14.5 Adjustment on stay tube

The selection of stay tube at any location shall be such that its adjuster is free for adjustment

of minimum 90 mm. in either direction.

14.6 Size of tubes

The size of stay tube and register arm tube is 28.4 /33.7 mm. dia for all Bracket arrangements. The size of bracket tube is either 30 /38 mm. or 40 /49 mm. designated as standard or large respectively depending upon the location (see Drg. No. ETI/OHE/G/00158 SH 1, 2 & 3 and 00159 SH 1, 2 & 3.

14.7 Bracket chair

Bracket assembly can be designed up to suspension distance of 3.50 mts. only. If the suspension distance is more, bracket chair to Drg. No. ETI/OHE/P/3050 and RE/33/P/3100 shall be used.

15. Setting of Mast

15.1 Tangent Track

The standard setting i.e. the normal distance of the nearest part of the traction mast from the center line of tangent track shall be 2.80 mts. for the Broad Gauge.

15.2 Curved Track

The minimum setting distance of mast including portals, on curves is obtained by adding the curve allowance and 150 mm. slewing allowance to the setting distance specified for tangent track in Para

15.1. Normally, the standard setting distance on Broad Gauge Main Line on curves should not be less than the values given below:

a) On outside curves	Standard settings (m)
i) Radius of curvature greater than or equal to 875mts.	2.80
ii) Radius of curvature less than 875 mts.	2.95
b) On inside curve	
i) Radius of curvature greater than or equal to 3500mts.	3.20
ii) Radius of curvature greater than or equal to 2350mts. but less than 3500 mts.	3.35
iii) Radius of curvature greater than or equal to 1150mts. but less than 2350 mts.	3.50
iv) Radius of curvature greater than or equal to 300mts. but less than 1150 mts	3.80

15.3 Mast with counter weights

In the case of mast with counter weights, the terms 'Setting' refers the minimum distance of the counter weight from the track center in the worse condition. For this purpose, the displacement of the counter weight due to wind transverse to the track may be taken \square 50 mm.

16. Mast and Rail Bonds**16.1 Structure Bonds**

All traction masts shall be bonded to a non-track circuited rail as shown in Drg. No. ETI/OHE/P/7000.

16.2 Rail Bonds

The Rail Bonds to connect the running rails longitudinally across a rail joints shall be in accordance with Drg. No. ETI/OHE/P/7030.

17. The cross bonds connecting two rails of track or rails of adjacent track shall be in accordance with Drg. No. ETI/OHE/G/05251.

18. Type of number plates

The number plates shall be in accordance with Drg. No. RE/33/P/7501

19. The Specifications at **Annexure A** should be read in conjunction with the Schedule (Bill) of Quantities. Where there is conflict between the provisions in **Annexure A** and in BOQ, the provisions in BOQ shall prevail.

Annexure-A

The supply and testing of materials, component items and equipment shall be in accordance with the latest specifications, Codes and guidelines issued by RDSO, Lucknow. In the absence of RDSO specification the same issued by BIS shall be applicable. Some important specifications are listed below (latest revisions may be ascertained from

RDSO/BIS):

Structural steel	IS: 2062
	IS: 800
	IS: 808
Tensile testing	IS: 2004 IS: 1608 (for steel products etc.)
Welding	IS: 816
Disc Insulator	S: 731 IS: 3188

Dropper Wire	IS: 282
Al. Jumper wire	IS:398
Conductor, Material for Aluminum Tubular Busbar	IS:5082 (Grade 91E)
General requirement for the supply of metals& metal products.	IS: 1387
Galvanized stay strand	IS: 2141 (Grade-2)
PVC insulated cables	S: 1554 (Pt. I)
Tin bronze castings	IS: 306
Aluminum bronze castings	IS: 3091
Malleable iron castings	IS: 2108 (grade (BM-340) (46/4600A)
Coarse and fine aggregate from natural sources of concrete	IS:
383Code of practice for general construction of plain & reinforced concrete	IS:
456Method of tests for strength of concrete	IS:
516	
Grey iron casting	IS: 210 (Grade-15)
Aluminum castings	IS: 617 (Grade 4600/4600A)
Hard drawn grooved copper contact wire for AC electric traction	
	ETI/OHE/4
2Annealed stranded copper conductors for jumper wire	ETI/OHE/3
Copper Busbar	RE/30/OHE/5
Structural Steel tubes	
	TI/OHE/11Hot
dip galvanization of steel masts (Rolled and fabricated) tubes and fittings used on 25 KV ac OHE	ETI/OHE/13
Stainless steel wire rope	
	ETI/OHE/14(1/9
7)25 KV solid core insulator including those for polluted zones.	ETI/OHE/15

Bolts, Nuts and Washers	ETI/OHE/18
Aluminum Alloy section and tube	ETI/OHE/2
Standard drawings for traction overhead equipment.	RE/OHE/25
Section insulator assembly without Sectioning insulator	ETI/OHE/27
Enameled steel plates	TI/OHE/33
3-pulley type regulating equipment	ETI/OHE/48A
Fittings for 25 KV 50 Hz AC traction equipment	ETI/OHE/49
Galvanized steel wire	TI/OHE/36(12/73)
7.5 KV Lightning Arrestor	ETI/PSI/3(8/75)
25 KV Interrupter	ETI/PSI/4
25 KV Potential Transformer	TI/PSI/8
Battery Charger for 110 V Battery, 40AH	ETI/PSI/1
Aluminum copper Bi-Metal Strips	ETI/OHE/75
25 KV single and double pole Isolators (1600 A)	ETI/OHE/16 Rev.-2 (3/04)

Explanatory Notes for Items under**BOQ FOR RAILWAY ELECTRIFICATION EXPLANATORY NOTES (Dec'2021)**

Explanatory notes for various items of work in Railway Electrification works are mentioned below. This shall be read in conjunction with latest standards/Guidelines /Rules/Instructions/Codes/Technical specification issued by RDSO/ Railway Board/CORE/Zonal Railway/RVNL/Other statutory body like BIS, Electricity act 2003, CEA rules/regulations/safety measures, CERC rules, National Grid Code etc.1. The separate erection rate has been mentioned for execution of work under Power Block (for the period below 04 hrs) and Extra rate on Manual Erection. The common explanatory note for applicability of extra on erection rate under Power Block and Extra rate on Manual Erection is mentioned below.

1.(a) COMMON EXPLANATORY NOTE FOR EXTRA ERECTION RATE FOR EXECUTION OF WORK UNDER POWER BLOCK(FOR THE PERIOD LESS THAN 04 HRS) :

In case the erection/dismantling of the portion of the work is carried out during power block (only for the power block of less than 04 Hrs in a day), the extra erection rate will be paid over and above the normal accepted erection of relevant item on certification by engineer. This shall be paid only for erection/dismantling of equipment in the vicinity of energized overhead equipment and feeders or erection of equipment with joints equipment already energized or on energized equipment which calls for a power block (shut off of traction power). The price payable under this item shall be extra over the normal erection rates of the item referred against the item, provided such work is not called for on account of non-compliance with specifications, approved drawings and instructions given by the Employer from time to time. The extra erection rate under this item will not be payable, if power block is given for a total duration of 04 hour or more in a day. Where the prices under this item are applicable, the contractor shall finalize the quantities of various items of work to be done under a power block, jointly with the Employer's Engineer prior to taking the work in hand.

1.(b) COMMON EXPLANATORY NOTE FOR EXTRA ON MANUAL ERECTION FOR MAST / UPRIGHT / BOOMS & CATENARY/CONTACT WIRE

(i) No manual erection to be carried out, whether on existing lines or new lines, without prior written approval of GM/CPM In-charge/Project.

(ii) In existing lines, erection of masts/uprights/booms is usually done by BFR mounted cranes and wiring by wiring train. However, in case of existing single line/doubleline/triple line where electrification is carried out and Rail crane is not arranged by employer and GM/CPM In-charge advises to expedite work in writing to undertake erection manually, manual erection rates are also applicable in such case for masts/upright/booms. In case of wiring, wiring deck & reel wagon is to be

fabricated by executing agency using non AC coach and BFR given by employer. If executing agency fails to fabricate reel wagon & wiring deck & wiring is to be carried out manually to expedite work, no extra payment for manual erection of wiring will be allowed.

(iii) In case of new single line or double line or third line or fourth line where Rail crane/wiring deck movement is not possible, manual erection is to be carried out with the prior written approval of GM/CPM In-charge of the project.

Explanatory Notes for Items under**Schedule-16000(RE-General)****SOR ITEM OHE-1**

PREPARATION AND SUBMISSION OF DESIGNS AND DRAWINGS FOR OVERHEAD EQUIPMENT, SWITCHING STATION, SECTIONING DIAGRAM, POWER SUPPLY DIAGRAM, SCHEMATIC DIAGRAM OF SWITCHING STATIONS, TRACTION WORKING RULE DIAGRAM AND INSTRUCTIONS ETC. REQUIRED FOR COMMISSIONING OF OHE:

The price shall cover preparation and submission of overhead equipment plans indicating location of structures in stages, and preparation of all drawings and designs relevant to the tendered works and required to be finalized by the Contractor in the format approved by Engineer along with 3 paper copies of the drawings for approval. The price shall include the following:

- (i) Preparation and submission of pegging plans layout plans incorporating span, height, chainage, curves, gradients, type of masts/portals, foundations, ATD locations, stagger, location of cut-in-insulators, signal locations etc, making minor modifications with the approval of the Employer/Engineer to the layout of the structures and overhead equipment, if necessary.
- (ii) Preparation and submission of cross section drawings and structure erection drawings for each structure locations.
- (iii) Choice of type and size of foundations to suit soil and loading conditions.
- (iv) Preparation and submission of long section drawings of overhead equipment where such drawings are required including detailed study of over line structures such as foot over bridges, road over bridges, track over bridges, overhead Pipelines etc. for maintaining the specified height of contact wire and requisite clearances.
- (v) Preparation and submission of other designs and drawings including drawings of small parts steel work (other than those for which RDSO standard drawings are available) and detailed designs for LT Supply Transformer stations, design and drawings of OHE structures for bridges etc.
- (vi) Preparation and Supply of Bonding Plan drawings and buried rail earthing drawings.
- (vii) Design, preparation and submission of switching station drawings including survey, investigation of soil bearing pressure from National Test House or at any other laboratory approved by the Engineer-in-charge, preparation of general arrangement drawings, detailed layout of equipment, bus-bar connections and insulators, layout of earthing system and earth connections, cable run layout, detailed designs and drawings for steel work and structural support, excluding the ones for which supply is made by the Employer/Engineer, suitable concrete plinths for equipment and drawings for equipment's, components, fitting and materials supplied by the Contractor. The price shall include supply of six number of copies of all drawings, including completion drawings.
- (viii) Preparation, supply and fixing of Sectioning / Schematic / TSWR diagram boards for stations / Cabins / SWS / RCC/ Section Controller and 25 KV AC Traction Station Working Rule instructions including supply & fixing of shock treatment chart etc as directed and approved by Engineer.
- (ix) Supply of soft copy (in Auto Cad drg format) and requisite eight (8) number of hard copies, one copy on non-tearable tracing (Engineering matte film of 75 micron or more thickness) of all drawings including completion/approved/as erected drawings for OHE and Switching stations. In addition one copy in RTF to be given of all completion/As erected drawings. Soft copy to be given in DVD(R).

NOTES FOR MEASUREMENTS: For the purpose of payment against this item, the length of track shall be measured as under :-

1. General: By the difference in the chainages of the length under consideration, as incorporated in the layout plans.
2. Turnouts: The track taking off shall be deemed as starting from the SRJ of the Turnout.
3. Cross-over's: The length of track shall be taken as the difference in the chainages of the toes of switches of the two turnouts constituting the crossover.
4. Diamond crossing with or without slips: The two tracks crossing each other shall be measured independently as per note 1 above as though there were no crossing. No extra payment shall be provided for slip points.
5. Dead ends and tops of loops: The lengths for payment under this item shall be up to the chainage of anchor mast of the terminating OHE.
6. Feeders and return feeders from grid sub-station to feeding station: This item will also be applicable independently in case of feeders / return feeders / conductors from grid sub-station to overhead equipment feeding stations or in a case of feeders / conductors running on independent structures (not supporting OHE) along or across tracks. In such a case the length of line to be considered for purpose shall be measured by (a) the distance between the center of gantries of the grid sub-station and feeding stations in case of feeder / return feeders / conductors line from grid sub-station, or (b) by the distance between the center line of the two structures to which the feeders / return feeders / conductors are anchored in case of feeders running along the track if such feeder / return feeders / conductors are running completely

on independent structures or (c) by the distance between the center of the two structures supporting the OHE on either side of the first and last independent structure or (d) in case of feeders / return feeders / conductors running along the track supporting OHE.

7. No extra payment shall be made for any revision/changes/Modification in OHE/PSI drawings on account of changes in ESP/SIP/L-section etc or incorporation of existing lines in unmodified portion of existing track in doubling/III/IV line etc.

SOR ITEM OHE-2(a) &(b)

SUPPLY AND ERECTION OF LARGE SPAN WIRE (130 SQ.MM) INCLUDING ITS FITTINGS WITH INSULATORS:

The price shall cover supply of all components including large span wire, adjusters, terminal fittings and mast attachments required to attach a large span wire or a Head span wire or Cross span wire or Steady span wire or a Support span wire for supporting contact wire only, at both ends, to traction masts/structures or special brackets, solid core insulators. The price shall cover erection of all components including mounting arrangements, span wire, 9 Ton solid core insulators and all small part steel work if any.

SOR ITEM OHE-3(a) &(b)

SUPPLY AND ERECTION OF MATERIALS FOR TERMINATION OF SINGLE CONDUCTOR OF OVERHEAD EQUIPMENT OR A TERMINATING WIRE WITH INSULATORS:

The price shall cover supply of all material necessary for the termination of single conductor of overhead equipment or terminating wire on a traction mast or structure, all SPS work as required including appropriate mast anchor fittings, clevis assembly, adjuster, anchor double straps, ending clamp for the catenary or contact wire or terminating wire and fittings including 9-tonne insulators. The price shall cover erection of all materials including 9-tonne insulator assembly and terminating wire, if any.

Note: In case of "V" type anchorage is adopted for terminating a single conductor such an arrangement would be counted as two off under this item for the purpose of payment.

SOR Item OHE-4(a) &(b)

SUPPLY AND ERECTION OF ALL ALUMINIUM 25 KV FEEDER CONDUCTOR (SPIDER) INCLUDING TERMINATION ALONGWITH SUSPENSION/ TERMINATION INSULATORS:

The price shall cover supply of all materials required for the termination of an all-aluminium 25 KV feeder (SPIDER), all SPS work as required including appropriate mast anchor fittings, adjuster, strain clamp and fittings including feeder wire and 9-tonne insulators. The price shall cover erection of all materials including 9-tonne insulators assembly. The price also covers supply and erection of along feeder wire with suspension insulators at SSP/SP or from TSS to nearest overlap or for any other purpose.

SOR Item OHE-5(a) &(b)

SUPPLY AND ERECTION OF MATERIAL FOR TERMINATION OF COPPER CROSS FEEDER WITH GANTRIES INCLUDING CROSS FEEDER WIRE ALONGWITH INSULATORS:

The price shall cover the supply of all materials required for termination of copper cross feeder wire (37/2.25mm HDBC) with all SPS work as required including appropriate mast anchor fitting (3231), 18mm single clevis (5040), 9-tonne adjuster (5020-2), feeder ending clamp (1130), double clevis (3010) and other components as necessary including feeder wire (37/2.25 mm HDBC) and 9- tonne insulator assembly. The price shall also cover the erection of all these materials/components including 9 ton insulator and termination of cross feeder at either ends. Fittings/Components required for termination of one cross feeder at both ends constitute onaset. The price covers supply and erection of along feeder wire with suspension/termination insulators.

SOR Item OHE-6

SUPPLY AND ERECTION OF TERMINAL BOARDS IN CONTROL CUBICLES:

The price shall cover supply and erection of a wall mounted terminal boards with six numbers of two way terminal blocks for connecting the cables from the outdoor equipment of a switching station as per RDSO Drawing.

SOR Item OHE-7

SUPPLY AND ERECTION OF IRON CLAD 240V AC AND 110V D.C. BOARD WITH FUSE BOX IN CONTROL CUBICLES:

The price shall cover supply and erection of a 15A, 240V, A.C. iron clad 4 way fuse box and a 15A, 110V DC iron clad two way fuse box on the wall inside the remote control cubicles. The fuse boxes shall be complete with four fuses and two fuse carriers and bases respectively.

SOR ITEM OHE-8(a)

SUPPLY, ERECTION, TESTING AND COMMISSIONING OF LOW MAINTENANCE LEAD ACID BATTERY 110 VOLTS, 40 AH:

The price shall cover Supply, Erection, Testing and Commissioning of 110V, 40AH, low maintenance lead acid batteries complete with stand of approved design, accessories, tool board, thermometer, hydro meter, voltage Tester as per RDSO specification no ETI/PSI/216/81) with A&C slip No.1 of 7/81 or latest . The price for erection shall include installation, connecting, filling up of electrolyte, initial/final charging, painting of stand with anticorrosive paint etc and commissioning of the battery set at site as per direction/approval of engineer. Details of battery like make, capacity, No of Cells and temperature Vs Specific Gravity to be specified/painted on the wall in the battery room is also included in the scope.

SOR ITEM OHE-8(b)

SUPPLY, ERECTION, TESTING AND COMMISSIONING OF BATTERY CHARGER SET SUITABLE FOR 110V 40AH LOW MAINTENANCE BATTERY SET:

The price shall cover Supply, erection, testing and commissioning of battery charger suitable for 110 V, 40 AH battery set as per RDSO specification no ETI/PSI/1/(6/81) or latest. The price also includes grouting of the charger in position or mounting it on the wall and connecting it to 240V single phase AC distribution board, connecting cables, earthing of charger and other associated works etc for final commissioning.

SOR item OHE-9 (a) & (b)

SUPPLY, ERECTION, OIL FILTRATION, TESTING AND COMMISSIONING OF 25 KV/240 VOLT, 5 KVA, LT SUPPLY TRANSFORMER WITH 25 KV D. O. FUSE SWITCH ASSEMBLY, ANTICLIMBING DEVICE, ARCING HORNS, POST INSULATORS, COPPER JUMPER AND EARTH ELECTRODE ETC:

The price shall cover Supply of 25KV/240V, 5KVA LT supply transformer with suitably filled transformer oil, DO fuse assembly (including fuse carrier) and all other mounting accessories, SPS as required at site, as per the RDSO's latest specification and erection of the same complete with terminal connectors on a mast or gantry. The price shall also be applicable for transformers mounted on steel pedestals at switching stations also. The price shall cover supply and erection of an enameled number plate of approved design. The price shall also cover oil filtration and pre-commissioning tests as approved by the Employers or Engineer. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/checks/tests/commissioning shall be arranged by the contractor. The price shall also cover supply & erection of a DO fuse switch assembly complete with all mounting accessories, post/pedestal insulator for DO fuse switch assembly. The price also includes supply and erection of split arcing horn across HT bushing and arcing horn across 9T insulator. The price shall also cover on a lump sum basis the supply and erection of anti-climbing device consisting of galvanized steel fixtures mounted on the masts below the transformer.

The price shall also cover supply and erection of conductor/ jumper wires, dropper wire and the supply of all components including parallel clamps, bi-metallic Aluminium-copper (Al-Cu) strips wherever required. The price shall also cover the erection of complete jumper assembly including conductor/jumper wire to be provided between the Over Head Equipment and L.T. Transformers, drop out switch assembly. The price shall also cover supply and erection of an earthing station with a single pipe embedded into the ground by driving or otherwise complete with protective concrete box and ugs suitable for directly connecting two mild steel flats of minimum size 50 mm x6 mm and copper earthing strip 25X3 mm at LT side earthing point to mast. The price shall not include cost of and supply

and provision of structure bonds connecting LT transformer with structure and then to rails which will be paid for under item OHE-22.

NOTE: 1. Contractor at his own cost shall do the replacement of the transformer oil on account of testing and leakages during the warranty period.

One unit of measurement for the purpose of ONA payment includes the following:

- a) 5 KVA Transformer – 1 off
- b) 9 Ton solid core porcelain/composite insulator – 1 off and
- c) DO Fuse switch assembly – 1 set
- d) 25 KV Post Insulators – 2 off

SOR Item OHE-10

MODIFICATION TO EXISTING OVERHEAD EQUIPMENT:

The item price covers all inclusive cost of all the associated works of OHE modification including transfer, dismantling/erection, slewing/re-slewing/re-adjustment, extension of OHE by providing splices or otherwise etc of all the components of OHE including brackets, insulators, feeder wire/return conductor/contact wire/catenary wire, terminations, ATDs, isolators, section insulators, PTFE type neutral section, traction bonds, cross-over, OHE etc in a particular length of track except items which are excluded specifically under this schedule. The price shall cover transfer of overhead equipment to a bracket assembly on a new mast or support and dismantling of the existing erected bracket assembly from old mast or support, supply and provision of a multiple cantilever cross arm wherever required and erection of bracket assemblies on the multiple cantilever cross arm and consequent adjustment to overhead equipment required such as re-spacing of droppers or provision of new droppers, leveling etc.

The price shall not include supply and erection of an additional bracket assembly, which will be paid for under item OHE-18. Dismantling of masts/portals/TTC/DA is covered under item OHE-34.

The price shall also cover the re-adjustment of the head span polygon to enable the additional equipment's to be suspended from the head span. Payment for the suspension of additional overhead equipment shall be made for under item OHE-2 as extra to this item. The price shall also cover the cost of dismantling of overhead equipment including terminations, auto tensioning devices, guy rod assemblies, anti-creep, suspension assemblies, super masts, feeder wire/contact wire//Catenary wire, return conductor, section insulator, PTFE neutral section, isolator, (single or gang operated), including dismantling of connections to the overhead equipment, a pedestal/ pin insulator including dismantling of jumper connections and traction bonds if any, etc, temporary slewing or lowering of erected OHE adjusted and/or unadjusted to ground for special works and restoration and readjustment of the equipment after completion of special works and associated small parts steel work. The price shall also cover the cost of splicing of terminated overhead equipment for extension and consequent adjustment of the affected equipment. The extended overhead equipment shall be deemed as starting from the centre line of the structure preceding the old terminating structure and the extended overhead equipment shall be paid for under item OHE 23 (a). The price under this item shall cover various modifications required to be carried out to the existing overhead equipment, under power block, on account of electrification of the section provided such modifications are not on account of non-compliance of specifications, approved drawings and instructions given by the Employer for the execution of the work from time to time, during the progress of the work.. The price covers various modifications to existing OHE or OHE not yet charged due to modification to track.

All the prices are on a flat rate all inclusive bases and cover only the important and most frequent type of modifications required to compensate the contractor for the work involved. No extra payments shall be admissible for any other associated work, minor modifications, which may be necessary in the course of work. All work done shall be paid for at normal rates as per BOQ.

In all these cases, the dismantled equipment shall be handed over by the contractor to the Employer's Engineer at the Employer's go-down/depot as required by Engineer. The cost of loading / unloading and transportation shall be paid under item OHE-13.

Where prices under this item are applicable, the contractor shall finalise the quantities of work jointly with the Engineer before taking the work in hand.

NOTES:

1. In case modification / dismantling is carried out at particular location i.e. dismantling of an isolator, bracket assembly, pin/ post insulator, guy rod etc., for the purpose of payment, half of the span on both ends will be considered.

2. All claims under this item have to be supported by the following certificate to be furnished by the contractor on the connected bill.

a) The modifications are not on account of non-compliance of specifications approved and instructions given by the Engineer for execution of works.

b) The quantities of work involved for modification have been finalised jointly with the Engineer-in-charge before taking the work in hand.

c) The dismantled materials shall be/have been handed over to Engineer's/Railway's representative if the item is not reusable.

2. The price of SPS work complete with bolts & nuts wherever required, is not included in the item and will be payable under Item CS-9.

SOR Item OHE-11

MANNING OF SWITCHING STATION i.e (SP/SSP), TSS AND ANTI-THEFT TRANSFORMER:

The prices shall cover the payment/wages to the staff to be deployed on administrative account at each switching station or TSS or anti-theft transformer location as directed by Employer's Engineer on flat rate basis per month per location. Manning shall be done round the clock in three shifts (each of 8 Hrs). The staff, holding minimum ITI qualification, shall be deployed in each shift. They shall be fully conversant with operation of various equipments installed in the switching station/ TSS/ anti-theft transformer. The staff shall be deployed after test and trial by Employer/Engineer and on issue of competency certificate by ADEE/TrD of division. The staff deployed shall act in accordance with instructions / directions given by Traction Power Controller (TPC)/representative of Employer. The staff shall not leave the working place (Switching station/ TSS/ anti-theft transformer) in any case without permission of Employer's representative. The price shall cover conveyance charges to the staff for going and coming to the working place. The period of manning shall be decided by the Employer during the execution of contract and manning shall commence on receipt of intimation in writing from the Employer.

No payment shall be admissible if manning is necessitated due to fault of contractor due to any reasons such as delay in SCADA commissioning, non completion of related works etc as decided by Engineer.

Note: Unit of the item shall be 'per month each location'.

SOR Item OHE-12(a)

ELECTRIFICATION OF SWITCHING STATION (SP/SSP) BUILDING AS PER SPECIFICATION:

The price shall cover all cost of supply, erection, testing and commissioning of wiring work as per approved wiring diagram. Wiring work shall be done in accordance with IE rules, IS-732, RVNL tech specifications The various activities involved in the work are as follows:-

i) Fixing of PVC conduits in recess on wall and drawing of wires for circuit and point wiring.

ii) Provision of GI switch boxes of appropriate size concealed in wall at appropriate height with modular PVC/fibre sheet for fixing of switches, plugs etc.

iii) Provision of main board and distribution boards and connection thereof.

iv) Provision of light fittings, exhaust fan, outdoors luminaries complete with tubes and lamps.

v) Provision of earthing station and connection between earthing station to main board with the help of 8 SWG GI wires. Earthing work shall be done in accordance with IS: 3043/1987.

vi) Materials such as light fittings, ceiling fan, exhaust fan, switches, sockets, ceiling rose, socket outlets all shall be with ISI mark and shall be one of the make mentioned in technical specification. Light fittings shall be 18-20W LED tube light of 4 feet as per RVNL specifications. All switches plug points and sockets shall be modular type.

Ceiling fan and exhaust fan shall have min 3-star energy rating.

vii) Provision of switches, sockets out lets, ceiling roses on respective switch boards and points in appropriate numbers and connection thereof.

viii) Provision of 45 watts LED street light fitting, complete in all respect including lamp on the wall of the building as approved by Engineer.

ix) After completion of wiring work necessary testing of wiring and earthing stations shall be done and results submitted to the site-in-charge duly signed by representatives of both the contractor and purchaser.

Note: - Scale of fitting shall be as per latest RDSO guidelines and RVNL specifications.
Drawing and fittings shall be got approved by the Engineer before taking up the work.

SOR Item OHE-12(b)

SUPPLY & ERECTION OF EARTHING ARRANGEMENT AT SWITCHING STATION:

The price shall cover supply and erection of an earth bus, earthing stations with a single pipe embedded into the ground by driving or otherwise complete with protective concrete box & lugs suitable for directly connecting two mild steel flats of minimum size 50mm x 6mm.

The price shall also cover supply of all materials including 50 mm x 6 mm mild steel flats for providing earth bus. The price shall also cover erection of earth bus either buried at a depth of 300 mm below ground level painted with 02 coats of red oxide zinc chromate primer and 02 finishing coats of bitumen or fixed on wooden gutties on walls. It shall include connecting the earth bus to earth electrodes and to various floor-or-wall-mounted equipment's or structures to be earthed and also connections to non-track-circuited rails, wherever required. It shall also cover the cost of making recesses in concrete foundation blocks for floor or cubicles and covering them up. The connection of earth strips to each other shall be made either by riveting or by welding. The connection of earth strips to various equipment, structures or fencing post shall be made with G.I. bolts and nuts and spring washers/locknuts.

The price shall cover supply and erection of 8 SWG G.I. wire used for earthing for all LT electrical equipment's including remote control cubicles and fencing panels.

Price shall also cover measuring and painting of earth values of all the earth pits, combined earth value etc as per standard.

Price however does NOT include cost of buried Rail earthing and its connections to Rail which are paid as per other BOQ item(s).

SOR Item OHE-13

LOADING/ UNLOADING, TRANSPORTATION AND HANDING OVER OF ALL TYPE OF MATERIALS ETC (OTHER THAN CONTRACTOR MATERIAL):

The price shall cover loading/unloading and transportation charges to (from) site/depot and handing over of material (if required) for all type of steel structures, portals, copper/ aluminium conductors, SPS, CBs, BMs, ATs, PTs, CTs, LAs and other electrical equipments etc. into/from BFR/ trailer/ truck etc, other than contractor's material, or handing over of released material to specified location as instructed by the engineer.

Explanatory Notes for Items under Schedule-17000(Switching Post Building)

SOR item OHE-15, 15(a), (b), (c)

CONSTRUCTION OF SWITCHING STATION BUILDING, RCC WORK, PLASTERING, BRICK MASONRY, RETAINING WALL, FILLING, COMPACTING AND LEVELLING WORK ETC AS PER RDSO STANDARD DRAWING AND SUPPLY AND ERECTION OF NAME BOARD OF SWITCHING STATION:

- i) RCC, PCC, masonry work, including earthwork, leveling, stone pitching, retaining wall in high embankment (if required) for switching post building.
- ii) RCC work in plinth, lintels, chhajja, Roof slab, steps at main entrance to SSP/SP and to control room.
- iii) Pre-cast RCC Slab, RCC jali.
- iv) Cement concrete in flooring and anti skid verified floor tiles of approved design and cable trenches. It also includes provision of chequered plates above cable trench etc as per RDSO drawing as well as sealing of cable outlets and inlets through glands etc.
- v) Brick masonry in walls.
- vi) Plastering works.
- vii) Provision of Doors, Windows, Grills, Rolling shutters, Water pipe line, Ventilators and painting thereof.
- viii) Provision of 2 coats of acrylic (lappam) wall putty for inside walls, roof.
- ix) Acid proof tiles on the floor and upto min 1.5m height on the wall in battery room.

x) Provision of RCC pipe etc.

xi) Any other item of work required to complete the work which has not been mentioned/included above shall also be done by the contractor and nothing extra shall be paid for the same.

Construction of Switching station shall be done as per RDSO's drawing No: ETI/C/0067(Mod- B) or latest and Technical specifications.

The price shall cover the provision of all shuttering, frame works, arrangement of water, all tools and plants required for the work, consumable, materials etc. The materials used for the work such as brick, sand, stone aggregates, steel for door frame, grill / rolling shutters; RCC Pipe shall be of best quality in accordance with Railway's specifications and

as approved by Engineer.

The price shall cover the cost of concreting required for foundation with 40 mm stone ballast rammed in layers of 15 mm thick in cement, aggregate and sand of ratio 1:4:8, RCC work for construction of column, brick work, retaining wall drainage etc. required for building.

The price shall also cover the provision of opening on the wall of suitable size, for installation of exhaust fan in the battery room.

The price shall also cover the cost of supply and erection of name board for switching station. The payment shall be on uniform basis. The price shall also include supply of necessary clamps, nuts, and bolts etc., required for the erection of the boards. Name boards shall be made in bi-lingual or Hindi/English and vernacular language. The boards to be supplied shall be as per the standard size and standard specification of RDSO/Railways. However, keeping in view local soil type and its bearing pressure, firm may adopt different design for foundation/plinth adhering to the min inside dimensions as per RDSO drawing and taking prior approval of the engineer. No extra payment is payable for such redesigned basic structure except as detailed under 15(a) to (c).

The price for Supply and spreading of stone metal shall be payable under CS-14.

Note: Construction of retaining wall, plastering, earth filling etc of switching yard is not included in the scope and is payable separately under relevant item, if required. However, cost of retaining wall, plastering, earth filling etc of switching station building is included in the scope of this item.

EXPLANATORY NOTES FOR SCHEDULE-19000(OHE - FERROUS OTHER THAN STEEL STRUCTURES AND SPS)

SOR Item OHE-16

SUPPLY AND ERECTION OF A GUY ROD ASSEMBLY:

The price shall cover supply and erection of a guy rod assembly of various lengths for traction masts/Portals/TTC, feeder line towers or supports etc complete with mast guy rod fittings, guy rod with adjustments and part/s to be grouted in the anchor block. The price shall not include the cost of supply and erection of a dwarf or stub mast with anchor plates drilled and welded in position, where required for anchorage, and small parts steel work, complete with bolts and nuts

etc., if any for attaching the mast guy rod fittings to the mast/structure which shall be paid for separately under the relevant item.

COMPONENTS REQUIREMENT

Rly. Id No.

Description of components

Qty. for unit

1 2 3

3232 Mast guy rod fitting (welded) complete with 4 short bolts, nuts, lock nuts and washers for attachment to mast/S.P.S including appropriate fittings

1 off

5001/5001-1

or

5001-3

Anchor bolts (complete with nuts, lock nuts and

split pins)

1 Set

5002 Guy rod stirrup 1 off

5004 or

5005 or

5006-1 or

5070 or

5071

Guy rod with nut, washer and split pin

1 off

5007-1 Anchor 'v' bolt 1 off

5008 Anchor loop 1 off

5220 Guy rod double strap assembly 1 off or 2 off (as required)

NOTE :

1. In case the Contractor desires to adopt a different design for guy rod assembly, the same shall be indicated by him in the Tender and the components required should be clearly listed under this item as deviation.

2. Supply and erection of guy rod assembly at anticreep portals will also be paid for under this item.

One unit of measurement for the purpose of ONA payment includes the following:

a) Guy rod – 1 off and

b) Anchor Loop – 1 off

SOR Item OHE-17

SUPPLY AND ERECTION OF PROTECTIVE SCREEN ON FOBS/ROBS:

The price shall cover the cost of supply and erection of protective screen on ROBS/FOBS/etc. The price shall cover the cost of all material required for fabrication of protective screen including MS Angle, Tee, expanded metal (Jali), GI sheet, paints, suitable fixtures for fixing on the ROB/FOB etc. The price shall also include the labour cost for fabrication, erection on ROB/FOB and painting. The fabrication and erection work shall be done as per as per latest

RDSO drawing. The protective screen on FOB to be erected continuously throughout the length of the FOB without any gaps. Further, above live conductor locations, opaque sheet to be provided.

SOR Item OHE-18 (a), (b)

SUPPLY AND ERECTION OF BRACKET ASSEMBLY WITH INSULATORS:

The price shall cover on a flat rate basis for supply and erection of any bracket assembly on a traction mast or support or drop arm and shall include those on high/low level platform, in the vicinity of turnouts, over bridges or over-laps and at locations with reduced encumbrance or terminating wires. The price shall include the cost of supply of all components including galvanized steel tube, dropper wires and small parts steel work complete with bolts and nuts

etc., if any. The price shall cover erection of all components including solid core insulators and dropper wires, small parts steel work, if any. However, this does not include the anticreep arrangement at masts/ structures.

The price shall include the cost of components:

Rly. Id No. Description of components Qty. for unit

1 2 3

3020 Mast fitting for hook insulator (forged) with 2 off bolts, nuts, lock nuts and washers of 16 mm dia.

1 set

2400 Tubular stay arm assembly (forged type including galvanized steel tube).

1 set

2110/

2130/2380

Catenary suspension bracket assembly or hook bracket

1 off

1160 Suspension clamp 1 off (as required)

2120/2140/

2040/2080

Bracket tube assembly complete with tube cap and sleeve where required (including galvanized steel tube).

1 set

3070-1/2 Mast bracket fitting assembly including 2 off

bolts, nuts, lock nuts and washers of 16 mm for attachment to structure or to small part steel

work.

1 set

2150-1 &

2160-1&

2161-2 &

2162-2

Register arm hook assembly complete with bolts, nuts and lock nuts (top/bottom forged type).

1 off

2420 or

2430

Register arm assembly or raised register arm assembly (including galvanised steel tube).

1 set

2422-2 Register arm eye piece 25 mm (Forged) 1 set 2270-4 or 5, 2460 Style- 02 or 2470 Style

Register arm dropper assembly including dropper wire complete with bolts, nuts etc.

1 set

- 02

2390/2540/2520

BFB steady arm or bent steady arm (As required)

2391-1 & 2491-2

BFB steady arm hook/clamp (forged)

2360/2490-2

25 mm steady arm drop bracket/clamp (forged) -do-

1220/1370/-1

Contact wire swivel clip or raised register arm 1 off 2550-1/2 Anti wind clamp As required 7mm/5mm inclined copper/steel dropper (on girder bridges use steel wire droppers) As required Bracket insulator/Stay arm insulator one set. The price is also applicable for the provision of any additional fitting & required to support an additional OHE on a single bracket assembly payable under this item. The price shall include supply of all extra fittings including the double contact wire swivel clip. Wherever applicable, fittings shall be forged type.

One unit of measurement for the purpose of ONA payment includes the following:

- a) Stay arm insulator (Porcelain/Composite) – 1 off
- b) Bracket arm insulator (Porcelain/Composite) – 1 off
- c) 25mm Stay/RT Tube – 6 mtr
- d) 40 mm/49mm Charge Bracket Tube – 3 mtr
- e) BFB Steady arm – 1 mtr
- f) Catenary suspension bracket assembly – 1 off

SOR Item OHE-19

SUPPLY AND ERECTION OF REGULATING EQUIPMENT (3 PULLEY TYPE) WITH COUNTER WEIGHT ASSEMBLY FOR CONVENTIONAL OHE:

The price shall cover supply and erection of a 3-Pulley type counter weight assembly suitable for 2000 or 2200 kgf tension (3:1 ratio) as per the Employer's requirement including 9 tonadjuster with double strap assembly and

normal/anti-theft guide tube assembly, the supply of regulating equipment, provision of adequate length pipe on Hex-Tie rod at crossovers and short tension length ATDs wherever required and stainless steel wire rope required for the regulating equipment, anti slipping device assembly (Spacer Angles as per RDSO latest drawing NO. TI/DRG/OHE/ATD/RDSO/00009 , forged fittings (mast bracket clevis 3071-1, clevis pin 3072) and small part steel work, if any. Wherever applicable, fittings shall be forged type The price shall also cover adjustment of the entire regulating equipment. The price shall not include supply and erection of termination, which will be paid under SOR item OHE-20.

SOR ITEM OHE-20(a),(b)

SUPPLY AND ERECTION OF MATERIAL FOR TERMINATION OF DOUBLE OVERHEAD EQUIPMENT CONDUCTOR WITH INSULATORS:

The price shall cover supply of all material necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure, including all SPS such as appropriate mast anchor fittings, clevis assembly , two adjusters, ending clamps for catenary and contact wires, anchor double strap assembly, equalizing/compensating plates, and double eye distance rods (if required) and fittings and terminating wire ,if any including 9-ton insulators assembly The price shall also cover erection of all materials with 9 ton insulator. Wherever applicable, fittings shall be forged type including following:

Rly Id. Wherever applicable, fittings shall be forged type including following:

Rly Id	No	Description of components	Qty	for unit
5021	9T	buckle	As required	
5022/5023	9T	eye bolt left/right	As required	
5024/5025	9T	clevis bolt left/right	As required	
5041-1	18 mm	single clevis Assy modified	As required	
5322-1		Clevis and eye	As required	

SOR Item OHE-21 (a),(b)

SUPPLY AND ERECTION OF ANTI CREEP WITH GALVANIZED STEEL WIRE INCLUDING INSULATORS:

The price shall cover supply of all materials for an anti-creep including adjusters, galvanized steel wire, mast anchor fittings at its terminations on either side of structures, ending clamps, fittings and including 9- ton insulators assembly conforming to RDSO specification.

The price shall cover erection of all materials including 9- ton insulator assembly with small parts steel work, if any.

Rly. Id

No.

Description of components

Qty.

for unit

1 2 3

- G a l v a n i z e d steel wire

(19/2.50 mm

As

required

9 Ton Insulators

2 off

1360 Steel wire ending clamp 2 off

5020-1/

5020-2

9 -ton adjuster (forged

type)

2 off

5030 A n chor double strap assembly

(forged type)

As required

3010/5040 Clevis assembly 2 off
 3231 Mast anchor fitting with bolts, nuts etc. 2 sets.
 1170 Double suspension clamp 1 off
 1160 Suspension clamp (-) 1 off
 5183 Double eye distance rod
 (forged type)
 As required.

NOTE -1. In case the anti-creep extends beyond one span on either side of anti creep center, payment for the supply and erection of extra length shall be paid additionally at the rate of 20% of the rate per extra span which includes erection of any additional 9 Ton insulators.

SOR Item OHE-19

SUPPLY AND ERECTION OF REGULATING EQUIPMENT (3 PULLEY TYPE) WITH COUNTER WEIGHT ASSEMBLY FOR CONVENTIONAL OHE:

The price shall cover supply and erection of a 3-Pulley type counter weight assembly suitable for 2000 or 2200 kgf tension (3:1 ratio) as per the Employer's requirement including 9 ton adjuster with double strap assembly and normal/anti-theft guide tube assembly, the supply of regulating equipment, provision of adequate length pipe on Hex-Tie rod at crossovers and short tension length ATDs wherever required and stainless steel wire rope required for the regulating equipment, anti slipping device assembly (Spacer Angles as per RDSO latest drawing NO. TI/DRG/OHE/ATD/RDSO/00009, forged fittings (mast bracket clevis 3071-1, clevis pin 3072) and small part steel work, if any. Wherever applicable, fittings shall be forged type The price shall also cover adjustment of the entire regulating equipment. The price shall not include supply and erection of termination, which will be paid under SOR item OHE-20.

SOR ITEM OHE-20(a), (b)

SUPPLY AND ERECTION OF MATERIAL FOR TERMINATION OF DOUBLE OVERHEAD EQUIPMENT CONDUCTOR WITH INSULATORS:

The price shall cover supply of all material necessary for the yoked termination of two overhead equipment conductors on a traction mast or structure, including all SPS such as appropriate mast anchor fittings, clevis assembly, two adjusters, ending clamps for catenary and contact wires, anchor double strap assembly, equalizing/compensating plates, and double eye distance rods (if required) and fittings and terminating wire, if any including 9-ton insulators assembly The price shall also cover erection of all materials with 9 ton insulator.

Wherever applicable, fittings shall be forged type including following:

Rly Id No	Description of components	Qty	for unit
5021	9T buckle	As required	
5022/5023	9T eye bolt left/right	As required	
5024/5025	9T clevis bolt left/right	As required	
5041-1	18 mm single clevis Assy modified	As required	
5322-1	Clevis and eye	As required	

SOR Item OHE-21 (a),(b)

SUPPLY AND ERECTION OF ANTI CREEP WITH GALVANIZED STEEL WIRE INCLUDING INSULATORS:

The price shall cover supply of all materials for an anti-creep including adjusters, galvanized steel wire, mast anchor fittings at its terminations on either side of structures, ending clamps, fittings and including 9-ton insulators assembly conforming to RDSO specification. The price shall cover erection of all materials including 9-ton insulator assembly with small parts steel work, if any.

Rly. Id	No.	Description of components	Qty.	for unit
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1 2 3

- Galvanized steel wire

(19/2.50 mm

As

required

9 Ton Insulators

2 off

1360 Steel wire ending clamp 2 off

5020-1/

5020-2

9 -ton adjuster (forged

type)

2 off

5030 Anchor double strap assembly

(forged type)

As required

3010/5040 Clevis assembly 2 off

3231 Mast anchor fitting with bolts, nuts etc. 2 sets.

1170 Double suspension clamp 1 off

1160 Suspension clamp (-) 1 off

5183 Double eye distance rod

(forged type)

As required.

NOTE -1. In case the anti-creep extends beyond one span on either side of anti creep center, payment for the supply and erection of extra length shall be paid additionally at the rate of 20% of the rate per extra span which includes erection of any additional 9 Ton insulators.

SOR ITEM OHE-22**SUPPLY AND ERECTION OF A STRUCTURE BOND/ LONGITUDINAL BOND/ TRANSVERSE AND SPECIAL BOND:**

The price shall cover supply of all materials including mild steel flats size 40 x 6 mm required to provide all kinds of bonds such as a structure bond connecting a traction mast or structures to the nearest non-track-circuited rail, longitudinal bond/ transverse bonds connecting to rails at the rail joint, special bonds at level crossings, foot over/road over bridge/protective screen, girder bridge, metallic sheds, fencing, water pipe lines, oil pipe lines, etc. connection or earthing terminals of equipment's like LT Transformers with structure and then to rails as per relevant drawings, connection to earth electrodes etc, including all fastenings at both ends as per approved bonding plan drawings, ACTM guidelines and as directed by Engineer. The price shall include shaping and drilling of the bonds, drilling and chamfering of rail hole, initial two coats of red oxide painting and one coat of bitumen black painting including provision of heat shrinkable PVC tube for structure bond under track circuit rail.

The item covers the new bonds to be provided in the complete yard as well as main lines due to modifications involved as per revised bonding plan of the station/open route.

The price covers provision of bonds at platforms, COP etc including supporting works like cutting of concrete/stone and restoring back the surface wherever applicable. Bonds shall be properly buried under ballast to avoid accidents. Entire work shall be carried out as per directions of the engineer. Clamps to bonds to be provided at Platform locations on coping side.

All kinds of bonds needed as per bonding & earthing code of ACTM and RDSO guidelines and directions of EIG & CRS are deemed to be included under this item.

Explanatory Notes for Items under Schedule-20000(OHE - Non Ferrous 'A')

SOR ITEM OHE 23 (a)**SUPPLY AND ERECTION OF OVER HEAD EQUIPMENT I.E. CONTACT AND CATENARY WIRE (EXCLUDING COST OF CONTACT AND CATENARY WIRES), JUMPER WIRE, DROPPER WIRE, CONTACT/CATENARY CLIPS, FASTENERS AND ALL OTHER MATERIAL REQUIRED AT TURN**

OUT/OVERLAPS/DIAMOND CROSSINGS ETC, STENCILING, NUMBER PLATES etc., FINAL CHECKING OF OHE AND ADJUSTMENT, INSPECTION TO BE DONE BY TOWER WAGON FOR COMMISSIONING OF CONVENTIONAL OHE:

The price shall cover supply & erection of complete overhead equipment with all components and wire and conductors including contact wire (107 or 150 sq mm), catenary wire, droppers, various types of jumpers like G jumpers (105 sq. mm), in-span jumpers (50/65 sq. mm), Potential Equaliser/ F jumpers (50 sq. mm) & anti-theft jumpers (50 sq. mm) and terminating wires at turn outs/ overlaps/ diamond crossings/ cross overs etc, if any.[Excluding the cost of contact & catenary which will be paid under Item No. 23(b) & (c)]. The price shall also cover supply & erection of contact wire as false contact wire (if demanded by Zonal Railways in place of insulated catenary wire) under overline structures with all associated components [Cost of contact wire shall be payable under item OHE 23(b). Provision of insulated

catenary shall be payable under item OHE-30)]. Provision of long cross type G-jumper on parallel run side instead of cross-over/turn out side as per RDSO drawing No ETI/OHE/G/02141 Rev 'C' or latest shall be ensured.

The price shall also cover supply of all components like dropper clips, parallel clamps for jumpers and splices (where their use is approved) suiting particular size of contact and catenary wire, small parts steel works complete with bolts and nuts etc. for attachment of number plates to mast/structure. The price shall include the provision of retro reflective structure number plates, retro reflective sigma boards before stop signals (as per RB and zonal Railway guidelines, different types of boards required to be provided as per ACTM (caution/warning, DJ - ON/OFF, DJ - ON/OFF for MEMU, 500m & 250m distance board to Neutral section, caution unwired turnouts boards, electric engine stop boards, power block limit boards etc.) on traction masts or structures. Various boards shall be provided on OHE masts/structures as per Rly Board letter no 2001/Elect (G)/170/1 pt. dt.07.05.2012 or as decided by engineer.

The price shall also include the cost of painting the setting distance of masts/structures, rail level on masts/structures, stenciling of symbol for direction of emergency telephone socket and Y marking at BWA locations as per temperature and local instructions of the Railway. The price shall also include the cost of re-installation of number plates (i.e. dismantling from existing mast/equipment and installation on another mast/equipments) of number plates to match the revised sequence of numbering of masts/portals/equipments as per approved LOP /GAD in case of OHE/PSI modification for doubling, third line etc works as per the site condition & as decided by engineer.

Major components to be used (but not limited to), along with RI no. are mentioned below

Rly. Id No. Description of components

Qty. for
unit

1 2 3

1040-2 or

SK-534/1 &

SK-575/2 or

SK-576/1 &

SK-535/2 or

1041-3

Contact wire parallel clamp small As
required

1180/SK-572/1

& SK-572/2

Contact wire dropper clip(107) -do-

1192 Catenary dropper clip complete with bolts,
nuts etc.

-do-

7501 Retro reflective number plates complete

with 2 Galv. MS bolts M- 10x35/30, nuts

and lead washer for M-10 bolts but

excluding SPS for attachment of number
plate to masts/structures.

-do-

1110-2 Contact wire ending clamp -do-

1120 Catenary ending clamp -do-
 1140 Large span wire clamp(130) As
 required
 5020-1/5020-2 Adjuster -do-
 5030 Anchor Double Strap Assembly -do-
 5191/5192 Compensating Plate/Equalising Plate -do-

All the warning boards provided on OHE structure shall be of retro reflective type as per latest Rly. Board/RDSO guidelines. Similarly, structure Number plates on all OHE mast/structures shall also be retro reflective types as per latest Rly. Board/RDSO guidelines. Separate DJ close Boards to be provided for MEMU/EMU wherever required for MEMU/EMU operation. The price shall cover supply of all components required for a pull-off arrangement to pull one equipment only including head-span mast fittings complete with M.S. angle, equalizing plate assembly, steady-arm, catenary wire dropper clip, contact wire swivel clip and fittings including solid core insulators. The price shall cover erection of all components including solid core insulators, small jumper wire, large jumper wire and conductors. The price shall cover supply and erection of all additional fittings required including the supply of required conductors / jumper wires, in case the pull off pulls more than one equipment. The price shall cover final checking, adjustment and inspection of OHE by Tower Car. The price covers erection of OHE in turnouts/overlaps and diamond crossings etc also as required at site. The unit of measurement for the payment purpose shall be in TKM and procedure of measurement will be as per Note 1 to 5 of SOR item OHE-1. No additional payment shall be made on account of overlap etc.

SOR ITEM OHE 23 (b)
SUPPLY OF HDGCC 107 /150 SQMM COPPER CONTACT WIRE:

The price shall cover the cost of supply of hard drawn grooved continuous cast copper contact wire 107/150 sq mm for overhead equipment. The cost of erection of contact wire shall be payable under Item No. 23(a). Reconciliation of material should be done as per actual use taking into account anchor and overlap and weight density of wire as specified in ACTM. The measurement will be from centre line of anchoring mast. The unused cut pieces generated during erection shall not be measured and cost of such cut pieces shall be deemed to be included in the rates.

SOR ITEM OHE-23 (c)
SUPPLY OF 65 SQ MM COPPER CATENARY WIRE:

The price shall cover the cost of supply of stranded copper catenary wire for overhead equipment. The cost of erection of catenary wire shall be payable under Item No. 23(a). Reconciliation of material should be done as per actual use taking into account anchor and overlap and weight density of wire as specified in ACTM. The measurement will be from centre line of anchoring mast. The unused cut pieces generated during erection shall not be measured and cost of such cut pieces shall be deemed to be included in the rates.

Schedule-21000 (OHE - Non Ferrous 'B')

SOR ITEM OHE-24 (a), (b)
SUPPLY AND ERECTION OF ANTI CREEP WITH CADMIUM COPPER CATENARY WIRE INCLUDING INSULATORS:

The price shall cover supply and erection of all materials for anti-creep including cadmium copper catenary wire, adjusters, mast anchor at its terminations on either side of structure, ending clamps & fittings, 9-ton insulators assembly and SPS work if any. The price shall cover erection of all materials for anti-creep including 9 ton insulators assembly and SPS work if any. RDSO drawing No. TI/DRG/OHE/GENL/RDSO/00001/12/0 REV '0' or latest, Ref.ETI/OHE/G/02111 Rev-A dt.23.05.1994 or latest is to be followed for use of catenary wire in place of GI wire at ACC locations in polluted areas as decided by zonal Railways.

SOR ITEM OHE-25(a),(b)
SUPPLY AND ERECTION OF SECTION INSULATOR ASSEMBLY AND ASSOCIATED FITTINGS & FASTENERS FOR OHE WITH BAR INSULATOR:

The price shall cover supply, erection and adjustment of all components required for a standard section insulator assembly (serving both the overhead equipment conductors) including 9 ton insulator, bar insulator special droppers etc. for supporting the equipment and all terminal fittings for conductors and the section insulator assembly, dropper wires as required.

Rly. ID No.

Description of

Components

Qty. for

unit

1 2 3

1120/or SK/436 or 1122 & 1123

Catenary

Ending Clamp

2 off

1192/ETI/OHE/SK/333

Catenary Dropper Clip

Assembly

As required

6170

Parallel Clamp for Double

Contact Wire

12 off

6180

Section Insulator Dropper

Assembly

3 sets

6100

Section Insulator

Assembly

1 set

6020

9 ton Insulator

Assembly

1 off

6110 Bar Insulator 1 off

One unit of measurement for the purpose of ONA payment includes the following:

(a) Section Insulator assembly – 1 off

(b) 9 Ton solid core porcelain/composite insulator – 1 off

(c) Bar Insulator – 1 off

SOR ITEM OHE-26

SUPPLY AND ERECTION OF PTFE TYPE SHORT NEUTRAL SECTION ASSEMBLY AS PER LATEST RDSO SPECIFICATION:

The price shall cover supply, erection and adjustment of PTFE type short neutral sections assembly as per latest RDSO specification. The price shall also cover supply and erection of, all fittings for contact and catenary wire as necessary including supply of required dropperwire.

SOR ITEM OHE-29

SUPPLY AND ERECTION OF ALL TYPES OF COPPER JUMPERS:

The price shall cover the supply of large jumper wire size 105 sq. mm (19/7/1.02mm), small copper jumper size 50 sq. mm (19/1.80mm), 65 sq. mm Cadmium copper conductor and on a flat rate basis, the supply of all components and

fittings required for providing a flexible, and bolted type terminal connectors wherever required for connection, including supply of parallel clamps, bi-metallic aluminium-copper (Al-Cu) strips, wherever required, and bolted type terminal connectors wherever required. The prices shall also cover the erection of the complete jumper assembly including jumper wire. item shall not, however, be applicable for jumper connections already included under a particular item (e.g. OHE-23, OHE-9, CS-2, CS-5 etc), but shall be applicable for any jumper connection in any combination between feeders, isolators and booster stations. Continuity jumper at boom anchor anti-creep will be payable under this item.

SOR ITEM OHE-31

SUPPLY OF MATERIALS AND ERECTION OF A LARGE COPPER JUMPER (160SQMM) BETWEEN ALUMINIUM/COPPER BUSBAR AND OHE, CROSS FEEDER TO OHE ETC WITH ALL ASSOCIATED FITTINGS:

The price shall cover the supply of 160 sq. mm flexible copper jumper wire made of annealed stranded 100% pure copper conductor as per RDSO's spec No. ETI/OHE/3 (2/94) with A & C Slip No.1 or latest, all components and fittings required for providing a flexible copper jumper 160 sq. mm and connection between aluminium bus/OHE & copper cross feeder including terminal connector 19 mm multiple hole bolted type (1009), parallel clamp (1050-3) aluminium-copper bimetallic strips fasteners etc. This jumper shall be provided between aluminium/copper busbar and OHE and the copper cross feeder at SSP, SP and FP OR for connecting OHE/bus bar with 1600A isolators.

The price shall also cover the erection of the complete jumper assembly including jumper wire, connectors and fasteners etc.

SOR ITEM OHE-32 (a)

SUPPLY AND ERECTION OF SOLID COPPER BUSBAR 18 MM DIA INCLUDING ALL CONNECTORS, BUS SPLICE ETC:

The price shall cover supply and erection of solid copper bus bar 18 mm, bus splice and its all types of connectors. The price shall include bending and shaping of bus bar.

OHE-32(b)

SUPPLY & ERECTION OF TUBULAR ALUMINIUM BUS BARS 36X 28MM DIA INCLUDING ALL CONNECTORS, BUS SPLICE ETC:

The price shall cover supply and erection per meter length of 36x28mm dia. Aluminium tube to serve as bus bar or equipment to equipment bus bar connection in the switching station, wherever required. The price shall include bending, shaping and connecting/clamping of the Aluminium tube to the equipment terminals/ bus bar supports, post insulators as required, busbar splice, junction and all types of connectors as per site requirement including nuts, locknuts, bolts, washer, ALCU bimetallic strip (wherever required), etc. NOTE - For purpose of payment for this item fraction of a meter in the total length used at a sub-station shall be rounded off to the nearest meter (0.5 m and below being ignored).

SOR ITEM OHE-34

DISMANTLING OF TRACTION STRUCTURES, PORTALS, TTC AND ASSOCIATED SPS BY CUTTING:

The price shall cover on flat rate basis dismantling of OHE structures or portals by cutting the same below ground/formation level to the required depth and handing over the same to the nominated person at nominated place as directed by Engineer. The price shall also include dismantling of drop arms and booms of the portal and their all associated fittings like SPS, bonds etc. Crane charges for the purpose are included in the flat rate. The transportation of dismantled structures shall be payable under item no OHE-13.

SOR ITEM OHE-35

SUPPLY AND ERECTION OF SAFETY ITEMS i. e. FIRE EXTINGUISHERS, SET OF FIRE BUCKET WITH STAND AND FIRST AID BOX, KEY BOX WITH SUITABLE KEY CHAIN, LOCKS AND OTHER MISC ITEMS REQUIRED FOR COMMISSIONING OF SWITCHING STATION:

The price shall cover supply and erection of following items as a set:

- (i) Fire extinguishers, 5 kg capacity of Dry chemical powder type (DCP), ISI marked and duly filled - 2 Nos. The fire extinguishers supplied shall be of approved brand and as per relevant specification and manufacturing date shall be less than six months on the date of commissioning.
- (ii) Standard first Aid box of made of GI Sheet with pad lock as approved by the Employer. The list of items/medicines to be supplied along with in the first aid box shall be obtained from Engineer as per concerned zonal Railway instructions.
- (iii) Six number of fire buckets with stand of standard size, cover shed, and locking arrangement duly painted as per standard practice of concerned Railway and as approved by the Engineer.
- (iv) GI key box in SSP/SP with suitable key chains and locks as approved and directed by Engineer.
- (v) Registers of appropriate size in printed proforma (if required in newly electrified section and as per local Railway practice),
- (vi) Misc items for maintenance staff -1 no wooden stool of appropriate size, 1 no steel arm cushion chair, gum boots- 1 pair, rubber gloves-1 pair etc as approved and directed by Employer/Engineer.

SOR ITEM OHE-36

SUPPLY AND ERECTION OF RETRO/ NON RETROREFLECTIVE TYPE BOARDS-25 KV AC OHE DANGER BOARD, DANGER BOARD FOR HEIGHT GAUGE,PUBLIC, STAFF CAUTION BOARD AND SPECIAL BOARDS REQUIRED FOR COMMISSIONING OF OHE/SWS.

The payment under this item shall cover supply and erection of Retro / Non retro-reflective type boards 25 KV AC danger board, danger board for height gauge, public/ staff caution boards and special boards on uniform basis as decided by the engineer. Purchaser will advise the requirement of the various types of boards and location to contractor. The above payment shall also include supply of necessary clamps, nuts, and bolts etc., required for the erection of the boards. Caution boards shall be made in bi/Tri-lingual languages i.e Hindi/English and vernacular language, where ever required and same will be advised to contractor. The various types of above boards to be supplied shall be as per the standard size and standard specification of Railways/RDSO.

This item shall also cover special caution boards to be provided on all departmental vehicles, track machines, platform shelters as per Railway board letter No. 2009/RE/161/4 FTS-748dtd.26-08-14 as per directions of the engineer.

Explanatory Notes for Items under Schedule-24,000(TSS)

SOR Item CS-5(a), (b) & (c)

SUPPLY, ERECTION, OIL FILTRATION, TESTING AND COMMISSIONING OF 25kV/240VOLT, 5kVA/10kVA/25kVA, AUXILIARY SUPPLY (LT) TRANSFORMER OIL TYPE WITH 25 V D. O. FUSE SWITCH, ANTICLIMBING DEVICE, INSULATOR, ARCING HORNS, COPPER JUMPER AND EARTH ELECTRODES ETC:

The price shall cover Supply of 25kV/240V, 5kVA/10kVA/25kVA LT supply transformer at site with DO fuse assembly (including fuse carrier) and all other mounting accessories, as per the RDSO's latest specification and its erection complete with terminal connectors on a mast or gantry. The price shall also be applicable for transformers mounted on steel pedestals at switching stations. The price shall also cover supply and erection of an enamelled number plate of approved design. The price shall also cover oil filtration and pre-commissioning tests as approved by the Employers or Engineer. The contractor shall make his own arrangement for oil filtration equipments, as well as power supply required for the same. All necessary tools, equipments, instruments required for carrying out oil filtration/checks/tests/ commissioning shall be arranged by the contractor. The price shall also cover supply & erection of a DO fuse switch assembly complete with all mounting accessories, post/pedestal insulator for DO fuse switch assembly. The price also includes supply and erection of split arcing horn across HT bushing and arcing horn across 9T insulator. The price shall also cover on a lump sum basis the supply and erection of anti-climbing device consisting of galvanized steel fixtures mounted on the masts below the transformer. The price shall also cover supply of conductor / jumper wires, dropper wire on a flat rate basis and the supply of all components including parallel clamps, bi-metallic and Aluminium copper Al-Cu strips wherever required. The price shall also cover the erection of complete jumper assembly including conductor/jumper wire to be provided between the Over Head Equipment and L.T. Transformers, drop out switch assembly. The price shall also cover supply and erection of an earthing station/ stations

with a pipe/pipes required to achieve permissible earth resistance value embedded into the ground by drilling or otherwise complete with protective concrete box and lugs suitable for directly connecting two mild steel flats of minimum size 50 mm x 6 mm and copper earthing strip 5X3 mm at LT side earthing point to mast. The price shall not include cost of supply and provision of structure bond connecting LT transformer with structure and then to rails which will be paid for under item OHE-22.

NOTE:

1. Contractor at his own cost shall do the replenishment of the transformer oil on account of testing and leakages during the warranty period.
2. One unit of measurement for the purpose of ONA payments cover the following
 - (i) 5 or 10 or 25kVA AT – 1 off
 - ii) 9 tonne/25kV Post insulator (porcelain/composite) – 1 off
 - iii) DO Fuse switch assembly with insulators – 1 set

SOR Item CS-6 (a)

PROVIDING AND LAYING OF CONCRETE FOR FOUNDATION AND PLINTH IN ALL TYPES OF SOILS USING M-10 GRADE CONCRETE FOR MAIN FOUNDATION AND M-15 GRADE CONCRETE FOR GROUTING AND MUFFING INCLUDING NOMINAL REINFORCEMENT WHEREVER REQUIRED AS PER RDSO DRAWINGS:

The price shall cover excavation, supply and handling of all materials and accessories, temporary arrangements for excavation in all types of soils and soft/hard rock, concrete/masonry drains/walls, shoring wherever necessary, casting concrete including frame work wherever necessary, tamping of concrete, grouting of masts and finishing the top of concrete foundation or anchor blocks using M-10 grade concrete for main foundation and M-15 grade concrete for grouting and muffing including nominal reinforcement wherever required as per RDSO drawings. The price also includes dismantling of all connected temporary arrangements, back filling with excavated earth and compacting the same to the required height and width as per drawing to ensure safety of foundation, confining the exposed height of foundation block to within 10 cm., and removal of spoil. The price shall also include the cost of supply of cement.

SOR Item CS-6(b)

Providing and laying of concrete for foundation and plinth in all types of Soils using M-15 grade concrete for main foundation and M-20 grade concrete for grouting and muffing including nominal reinforcement wherever required as per RDSO drawings. The price shall cover excavation, supply and handling of all materials and accessories, temporary arrangements for excavation in all types of soils and soft/hard rock, concrete/masonry drains/walls, shoring wherever necessary, casting concrete including frame work wherever necessary, tamping of concrete, grouting of masts and finishing the top of concrete foundation or anchor blocks using M-15 grade concrete for main foundation and M-20 grade concrete for grouting and muffing including nominal reinforcement wherever required as per RDSO drawings. The price also includes dismantling of all connected temporary arrangements, back filling with excavated earth and compacting the same to the required height and width as per drawing to ensure safety of foundation, confining the exposed height of foundation block to within 10 cm., and removal of spoil. The price shall also include the cost of supply of cement. The item is applicable for conventional as well as cylindrical foundations. Nominal reinforcement (wherever applicable in conventional foundations, in all cases of cylindrical foundations) as per RDSO drawings is included in the price and NO EXTRA payment shall be admissible on this account. The earth excavation for cylindrical foundations shall be done using augur of adequate size.

SOR Item CS-6(c)

Providing and laying of concrete for foundation and plinth in all types of Soils using M-20 grade concrete for main foundation and M-20 grade concrete for grouting and muffing including nominal reinforcement wherever required as per RDSO drawings. The price shall cover excavation, supply and handling of all materials and accessories, temporary arrangements for excavation in all types of soils and soft/hard rock, concrete/masonry drains/walls, shoring wherever necessary, casting concrete including frame work wherever necessary, tamping of concrete, grouting of masts and finishing the top of concrete foundation or anchor blocks using M-20 grade concrete for main foundation and M-20 grade concrete for grouting and muffing including nominal reinforcement wherever required as per RDSO drawings. The price also includes dismantling of all connected temporary arrangements, back filling with excavated earth and compacting the same to the required height and width as per drawing to ensure safety of foundation,

confining the exposed height of foundation block to within 10 cm., and removal of spoil. The price shall also include the cost of supply of cement.

Notes for measurement of CS-6(a), (b) & (c)

1. The payable volume of the foundations under the above item shall be as per the designed one as shown in the drawings without deducting scroll and muff volume.
2. The depth of the excavation shall be measured from the formation level to the maximum excavated point.
3. The prices shall be calculated for the individual volume of concrete, fraction of a cubic metre beyond the third decimal shall be rounded off to the next nearest third decimal.
4. The prices shall apply for concreting of all foundations for mast, gantries, portals, anchor blocks for guy rods, and fencing uprights.
5. For purposes of computation of volume of concrete, the volume of steel work embedded in the foundation block shall be ignored.
6. For the purpose of computation of volume of concrete, the volume of concrete shall include the volume of sand and bitumen in sand cored foundation. However, for the purpose of computation of quantity of cement utilized in sand core foundations, the volume of the sand and bitumen used in core hole should be deducted from the total volume of the foundation.
7. For purposes of computation of volume of concrete, the volume of each muff for all masts shall be taken as 0.02 cu.m. except for masts with balance weights and for each column of portal, BWA mast, 2 or 3 track cantilever masts, and special fabricated masts for which the volume of muff shall be taken as 0.08 cu.m. Irrespective of the size and shape of muff, on a flat basis.
8. The item shall also be applicable to include the concrete of equipment's, at the switching stations/traction sub-station (except building foundations) as well as embedded drain pipes, wherever required.
9. The prices shall also cover the cost of diversion of earth drain wherever necessary for casting of foundations. Price for diversion of masonry drain will be made under relevant civil SBOQ items.
10. (a) RDSO guidelines shall be followed for grade of concrete, type of foundations etc. Generally concrete for foundation shall be nominal mix of Grade-M-10 and for grouting, muffing, embedding of structure in foundation concrete of M-15 Grade as per latest RDSO guidelines shall be used.
(b) In Soft/Hard rock area or foundations in contact/Buried under Non-aggressive soil/ground water: Foundation concrete shall be of M-15 grade and core concrete shall be of M-20 grade.
(c) Foundations in coastal area: Foundation as well as core concrete shall be of M-20 grade.
11. No extra payment shall be made for OHE foundations casted with nominal steel reinforcement as per RDSO drawing.

SOR Item CS-7 (a)

100% EXTRA PAYMENT OVER CS-6(a), (b), (c) FOR FOUNDATION AND PLINTH IN HARD ROCK /HEAVY CONCRETE REQUIRING CHISELING/ BLASTING/MACHINE BREAKING:

The price shall cover extra payment over CS-6(a), (b), (c) for provision of concrete of any grade as per RDSO design or special design for excavation, supply and handling of all materials and accessories, temporary arrangements for excavation in hard rock/heavy concrete requiring chiselling/blasting/machine breaking. The Employer's Engineer shall certify where use of chisel and hammer or blasting or machine breaking has been necessary. The contractor shall arrange for supply of explosives and all tools and plants, safety arrangements for blasting operations at his own cost. Volume chart of RDSO drawing no ETI/C/0080 Mod-A or latest shall be used for such areas.

Notes: If half or more of the volume of excavation is in hard rock requiring chiselling / blasting/machine breaking, entire foundations shall be paid for under this item.

SOR Item CS-9

SUPPLY AND ERECTION OF ALL TYPES OF GALVANISED STEEL STRUCTURES, SMALL PARTS STEEL etc:

The price shall cover the cost of supply, pit cleaning, erection, alignment and setting before grouting of individual traction masts/portals and main masts of switching stations/TSS including those for head spans of traction mast as per follows:-

- i. Rolled mild steel beam (BFB) 152 mm x 152 mm (37.1 Kg/m), designated SC-150, Table 3.1 of IS: 808/1989.
- ii. Rolled Mild Steel Joist (RSJ) 203 mm x 152 mm (52.0 Kg/m), designated WB-200, Table 2.2 of IS: 808/1989.

iii. All types of B-Series traction mast, Bridge mast, Emergency mast, double/fabricated 'S' series masts/Dwarf masts of various structures & TTC masts along with Booms.

iv. N, O, R, G, P, BFB type and special portals.

v. Gantries, including tower / steel tower / steel work for feeders for traction substation, drop arms, standard super masts and suspension brackets for feeders and return conductors and other special type structures which are not mentioned.

The details of drawings of important galvanized steel structures are as under –

Description Drawing No. Mod

1 2 3

For Conventional OHE

Drilling schedule of 9.5 m long mast ETI/OHE/G /00144 Mod -C or latest

Drilling schedule of 9.5 m B-series mast ETI/C/0071 Mod -E or latest

Drilling schedule of 11.4 m (S1) mast ETI/C/0030 Mod -F or latest

Drilling schedule of 11.4 m (S2) mast ETI/C/0031 Mod -D or latest

Drilling schedule of 11.4 m (S3) mast ETI/C/0180 Mod -C or latest

Drilling schedule of 8.0 m (S4) mast ETI/C/0036 Mod -E or latest

Drilling schedule of 11.4 m (S5) mast ETI/C/0042 Mod -E or latest

Drilling schedule of 12.4 m (S6) mast ETI/C/0181 Mod -C or latest

Drilling schedule of 12.4 m (S7) mast ETI/C/0182 Mod -C or latest

Drilling schedule of 12.4 m (S8) mast ETI/C/0183 Mod -C or latest

Drilling schedule of 9.4 m (S9) mast ETI/C/0184 Mod -B or latest

S-100, for LT Transformer at SWS ETI/C/0043 Mod -B or latest

S-101, for Isolators inside SWS ETI/C/0180 Mod -A or latest

T-150, for LT Supply Transformer ETI/PSI/037 Mod -C or latest

'N' type Portal (General Arrangement) ETI/C/0008 Latest

'O' type Portal (General Arrangement) ETI/C/0017 Latest

Standard 'R' type Portal Rod Laced

General Arrangement ETI/C/0011/69 Latest

Standard 'P' Type Portal General Arrangement and details of upright &

End pieces ETI/C/0048 Mod -B or latest

'G' Type Portal special upright and end piece ETI/C/0056 Mod -C or latest

Special 'BFB' Portal for 5 tracks (General Arrangement) ETI/C/0026 Mod -B or latest

For High Rise OHE Drilling schedule of 11.4m B series mast ETI/DRG/CIV/B -Mast/00001 /13 /0 Latest

Drilling schedule for S-6 H mast (length 13.0 m) ETI/C/HR/0181 Latest

Drilling schedule for S-7 H mast (length 13.0 m) ETI/C/HR/0182 Latest

Drilling schedule for S-8 H mast (length 13.0 m) ETI/C/HR/0183 Latest

Two Track Cantilever (TTC) General Arrangement TI/DRG/CIV/TTC/ 00001/13/0 Sh 1 Latest

Standard 'N' Type Portal General Arrangement TI/DRG/CIV/N - PORTAL/00001/13/0 Latest

Standard 'O' Type Portal General Arrangement TI/DRG/CIV/O - PORTAL/00001/13/0 Latest

Standard 'R' Type Portal TI/DRG/CIV/R - PORTAL/00001 /13/0 Latest Standard 'P' Type Portal General

Arrangement and details of upright & End pieces TI/DRG/CIV/P - PORTAL/00001/13/0 Latest

'G' Type Portal special upright and end piece TI/DRG/CIV/G - PORTAL/00001/13/0 Latest

Special 'BFB' Portal for 5 tracks

(General Arrangement) TI/DRG/CIV/BFB - PORTAL/00001/13/0 Sh No. 1

Latest The price shall also include the supply and erection of small parts steel (SPS) which are not covered under the various other items of work. The price shall also include the cost of steel, fabrication, galvanization and supply at site for erection.

The price shall also cover the cost of assembly of boom components of TTC/portals & any special structures across the track, not covered under this item and erection of the same. The prices shall also include supply and erection of galvanized bolts, nuts washers etc. wherever required as per approved designs and drawings.

The structures shall be fabricated and galvanized from steel conforming to IS: 2062/ 2011 {Gr E 250 (Fe 410W) Quality-A} or latest, dimensions conforming to IS-808/1989 or latest, Zinc conforming to IS: 209/1997 or latest) and galvanization conforming to RDSO specification No. ETI/OHE/13 (4/84) with A&C slips 1 to 4 or latest.

The price shall cover cost of erection, alignment and setting before grouting, wherever required, gantries, including tower / steel tower / steel work for feeders for traction sub-station, drop arms, standard super masts and suspension

brackets for feeders and return conductors. Dwarf masts of stub masts for anchoring, complete with anchor plates drilled and welded in position multiple cantilevers cross arm, chairs, adopters, backing angles for bracket assemblies and all other small part steel works, the erection of which is carried out by the contractor irrespective of whether they are supplied by purchaser/contractor. The price shall also include the cost of repairing of platform shelters in case the shelter is dismantled/removed/damaged during the course of erection of a mast / portal at platforms. For standard fabricated steel work for which RDSO'S approved drawings are available, the weight of steel work as specified in RDSO'S drawings shall be considered for payment. However, in case the unit sectional weight of any member indicated in RDSO's drawing is not in conformity with the unit sectional weight as per the latest IS specification, the weight of the fabricated steel work shall be calculated on the basis of latest IS specification and the same will be considered for payment. For the non-standard fabricated steel work, the calculated weight to be considered for payment under this item shall be included in the relevant drawing based on, latest IS sectional weight at the time of submitting the designs for approval of the Employer.

Note:

(i) The prices for the items shall also include the cost of stenciling of location number on masts/portal uprights in the manner as directed by the Purchaser.

(ii) The price shall also include straightening of masts/portals uprights wherever approved by the purchaser and cutting of mast/portals/upright to suit the site condition.

(iii) The payment shall be made on the basis of the final lengths/weight of the structures, in case the same are cut or modified as indicated above before erection.

(iv) For the purpose of payment against items, weight of structures or fabricated steel work will be calculated according to the weight of black steel given in section books for the lengths of various members shown in the approved drawings duly issued by CPM/GGM/GM. There will be no addition for increased weight due to galvanizing or painting or weld material or reduction for holes or skew cuts.

(v) The rates against item shall be applicable to the erection of small part steel work which are not covered under the various other items of work.

(vi) In case of difference between actual weight and weight as specified in RDSO drawings or calculated weights (for structures whose weights are not available as per RDSO drawings), payment shall be made as per least of these weights.

SOR Item CS-11

SUPPLY AND ERECTION OF ALUMINIUM JUMPER WITH FASTENERS:

The price shall cover on flat rate basis the supply and erection of an aluminium jumper complete with all components and fittings required for providing jumper connection including parallel clamps, bi-metallic Aluminium-Copper strips wherever required and terminal or tee clamps at either end. The price shall be applicable for any aluminium jumper/ connection in any combination between feeders, return conductors, overhead equipment, isolators, and out-going bus bars or switching stations and booster stations. Jumper connections for 25 KV feeding stations will also be paid under this item.

SOR Item CS-12

SUPPLY AND ERECTION OF COPPER STRIPS FOR EQUIPMENT EARTHING:

The price shall cover supply and erection of 25mm x 3mm copper strips to connect the earth terminals of equipment like potential transformers, lighting arrestor, and LT supply transformers to the main masts of the gantries on which they are mounted. The price shall also cover all fastenings required for fixing the copper strip along any structure member of the gantry.

SOR Item CS-15(c)

SHIFTING OF MAST ALONG WITH FOUNDATION BLOCK AND UNSUPPORTING AND SUPPORTING BACK THE OHE, IF REQUIRED.

The price includes excavation of surrounding earth, shifting of any type of mast/ upright along with the foundation block either along or across the track manually using jacks or by any machine including covering back the foundation and compacting the earth. The price also includes un-supporting and supporting back the OHE and its adjustment (wherever

needed) under power block or without power block, touching up of foundation damaged during shifting as directed by Engineer. The price includes arrangement of all required material, tools, machines etc by the contractor. No price is payable for shifting of any foundation due to fault of contractor.

SOR Item CS-23(a)

SUPPLY AND ERECTION OF 25 KV SINGLE POLE ISOLATOR 1600 AMP WITH INSULATORS WITH /WITHOUT EARTH CONTACT ASSEMBLY, WITH/ WITHOUT INTERLOCK:

The price shall cover the supply and erection, alignment and connecting up 25 kV single Pole Isolator (1600Amp capacity) complete with mounting base, operating rod, operating mechanism and all accessories required for its smooth and trouble free operation. The price including solid core Post Insulator, operating rod insulator etc. Price shall also cover supply and erection of an enamelled number plate and a pad lock for each isolator, bus bar connector provided for making connection to Isolator terminal pad shall be paid under Item TSS-13 or OHE-29/OHE-31.

SOR Item CS-23(b)

SUPPLY AND ERECTION OF 25 KV DOUBLE POLE ISOLATOR 1600 AMP WITH INSULATORS WITH /WITHOUT EARTH CONTACT ASSEMBLY, WITH/ WITHOUT INTERLOCK:

The price shall cover the supply and erection, alignment and connecting up 25 kV Double Pole Isolator (1600Amp capacity) complete with mounting base, operating rod, operating mechanism and all accessories required for its smooth and trouble free operation. The price including solid core Post Insulator, operating rod insulator etc. Price shall also cover supply and erection of an enamelled number plate and a pad lock for each isolator, bus bar connector or Copper jumper provided for making connection to Isolator terminal pad shall be paid under Item TSS-13 or OHE-29/OHE-31.

SOR Item CS-23(c)

SUPPLY AND ERECTION OF 25 kV, 1250A, S P ISOLATORS WITH INSULATOR, WITH/ WITHOUT EARTH CONTACT ASSEMBLY AND WITH/WITHOUT INTERLOCK:

The prices shall cover supply and erection of isolator switches of approved make 1250 Amp capacity, complete with arcing horns, operating rods, operating rod guides, and mounting base including supply and erection of 25 KV Solid Core Post and Operating rod insulator. The price shall also cover supply and erection of a number plate of approved design, supply and erection of small parts steel work complete with bolts and nuts etc. for support of each isolator and for support of operating rods on gantries/ masts, jumper connectors and post insulator to support jumper. The price shall also cover supply and erection of pad lock, integral lock and interlock if required. The price excludes provision of pipe electrode earthing.

Note: 1. Payment of jumper shall be payable under SOR item OHE-29.

2. One unit of measurement for the purpose of ONA payment includes the following:

- a) 25 kV SP Isolator 1250 amps – 1 off
- b) 25 kV Post Insulators – 2 off
- c) 25 kV Operating rod insulator – 1 off

SOR Item CS-23(d)

SUPPLY AND ERECTION OF 25 KV, 1250A, DOUBLE POLE ISOLATOR, WITH INSULATOR WITH/WITHOUT EARTH CONTACT ASSEMBLY AND WITH/ WITHOUT INTERLOCK:

The price shall cover supply and erection of a double pole isolator 1250 Amp capacity complete with mounting base, operating rod, operating rod guides required for the operation of the isolator, jumper connectors. The price shall also cover supply and erection of aluminium-copper strips, a pad-lock, integral lock and interlock if required, a number plate of approved design for each isolator, supply and erection of small parts steel works for support of isolators and for support of operating rods on gantries masts including supply and erection of 25 kV Solid Core Post and Operating rod insulator. The price shall also cover for supply and erection of an earth contact assembly in the isolator. The price shall cover the cost of supply and erection of 3 x 25 mm copper connections between earth contact assembly and the

structures. The price shall cover supply and erection of an interlocking mechanism on an isolator along with small parts steel if any, to permit working of two or more isolators. The price excludes provision of pipe electrode earthing.

Note :

1. All Isolators are to be supplied with required numbers of 25 kV operating rod insulators with complete accessories and small parts steel. Isolator key box of appropriate size shall be provided for at each station on the section, one number at the nearby OHE depot in charge of the section and one number at SSP/SP, as desired by the Engineer at site.

2. Payment of jumper shall be payable under SOR item OHE-29.

3. One unit of measurement for the purpose of ONA payment includes the following:

- a) 25 kV DP Isolator 1250 amps – 1 off
- b) 25 kV Post Insulators – 4 off
- c) 25 kV Operating rod insulator – 2 off

SOR Item CS-23(e)

SUPPLY & ERECTION OF 25 KV SINGLE POLE ISOLATORS (3150A) WITH INSULATOR WITH /WITHOUT CONTACT ASSEMBLY, WITH/ WITHOUT INTERLOCK :

The price shall cover the supply and erection, alignment and connecting up 25 KV Single Pole Isolator (3150 Amp capacity) complete with mounting base, operating rod, operating mechanism and all accessories required for its smooth and trouble free operation. The price including solid core Post Insulator, operating rod insulator etc. Price shall also cover supply and erection of an enamelled number plate and a pad lock for each Isolator, Bus bar connector provided for making connection to Isolator terminal pad shall be paid under Item TSS-11.

SOR Item CS-23(f)

SUPPLY AND ERECTION OF 25 KV DOUBLE POLE BUS COUPLER ISOLATORS (3150A) WITH INSULATORS WITH /WITHOUT EARTH CONTACT ASSEMBLY AND WITH/ WITHOUT INTERLOCK:

The price shall cover the supply and erection, alignment and connecting up 25 kV Double Pole Isolator (3150 Amp capacity) complete with mounting base, operating rod, operating mechanism and all accessories required for its smooth and trouble free operation. The price including solid core Post Insulator, operating rod insulator etc. Price shall also cover supply and erection of an enamelled number plate and a pad lock for each Isolator, Bus bar connector provided for making connection to Isolator terminal pad shall be paid under Item TSS-11.

SOR Item CS-23(g)

EXTRA ON ERECTION UNDER POWER BLOCK FOR SINGLE POLE/DOUBLE POLE ISOLATORS:

The price shall cover the supply and erection, alignment and connecting up 25 KV Double Pole Isolator (3150 Amp capacity) complete with mounting base, operating rod, operating mechanism and all accessories required for its smooth and trouble free operation. The price including solid core Post Insulator, operating rod insulator etc. Price shall also cover supply and erection of an enamelled number plate and a pad lock for each Isolator, Bus bar connector provided for making connection to Isolator terminal pad shall be paid under Item TSS-11.

SOR Item CS-24(a)

EXCAVATION OF EARTH TO THE REQUIRED DEPTH BELOW GROUND LEVEL, BURYING 13 MTRS LONG RAIL AND CONNECTING IT AS PER LATEST RDSO DRAWINGS AT TSS/SWITCHING STATIONS/MID SECTION INCLUDING COVERING BACK AND PROPER DRESSING UP OF EARTH (RAIL WILL BE SUPPLIED BY RVNL).

The price under this item shall cover the cost of excavation of earth 13 meters in length to the required depth below ground level upto top of the buried rail [02 meters for TSS and 1 meter for SP/SSP] as per RDSO drawings. The price shall also cover the cost of burying 13 meters long rail and connecting it with mat in TSS/running rails (in case of switching station/mid-section) as per latest RDSO drawings and covering back the excavated earth and proper dressing up of earth as directed by Engineer. (Rail will be supplied by RVNL) but excluding cost of /GI flat. The price shall also cover the cost of loading, unloading and transportation of rail to site. The price shall cover all the cost of material, labour, tools and machines for satisfactory completion of work such as provision of copper rivets/bolts to be

buried and by GI Bolts to running rails, painting of buried rail, flats etc. The price covers drilling of holes on buried and running rail. Price shall NOT cover the cost of supply of earth flat required for connection to buried rail which is covered under item CS-24(c).

The work shall be done as per following RDSO drawings:

- (a) For TSS: ETI/PSI/0212 or latest and
- (b) For Switching post:
 - i. TI/DRG/PSI/E.STN/00001/14 Rev-1 or latest
 - ii. SMI No TI/SMI/0031 Rev-2 or latest

SOR Item CS-24(b)

20% EXTRA PAYMENT ON CS-24(a) FOR EXCAVATION IN HARD SOIL:

The price shall cover the payment for excavation for item CS-24(a) in hard soil which involves extra labour/machine breaking.

SOR Item CS-24(c)

SUPPLY AND ERECTION OF EARTH LEAD 75X8MM GALVANISED FLAT, LAID IN THE GROUND / EXPOSED AT THE SWITCHING POST/MIDSECTION/TSS:

The price shall cover supply, bending /twisting and installation of 75x8mm Galvanised flat and connecting to running rails, buried rail and earth pipe with bolts & nuts in accordance to RDSO drg no TI/DRG/PSI/E.STN/00001/14 Rev-1 (or latest) as included in Special Maintenance Instructions No. TI/SMI/0032 Rev-2 (or latest) for switching station / Mid sections etc and as per directions of the Engineer. The price shall cover all the cost of material, labour, tools and machines for satisfactory completion of work such as provision of rivets/bolts to running rails and buried rail as per RDSO drawing, painting of buried rail, flats etc. The payment of Earth Electrode station shall be made under item No. TSS-20 for buried rail earthing at TSS and under item 33032 for buried rail earthing at switching station/mid-section.

SOR Item CS-25(a), (b)

WATCHING AND GUARDING OF OHE ALONG THE TRACK AFTER EIG FOR 12 HRS EACH DAY ON ADMINISTRATIVE REASONS:

Price shall include provision of watchman/guard armed/unarmed for guarding of OHE along the track for 12 hours each day as per timings specified by Engineer after EIG in case there is abnormal delay in energisation of OHE due to administrative reasons and not due to any fault of the contractor. In such cases specific approval of Employer shall be taken by contractor prior to deployment of persons. However this arrangement shall not in any way absolve the contractor of any responsibilities against theft of OHE which shall remain the contractor's liability including recoupment/rework of stolen material as mentioned in agreement. The armed guard(s) shall have proper arms, ammunition and license issued by the competent authority to operate arms.

SOR Item CS-26

SUPPLY & ERECTION OF 25 KV SUPPORT/POST INSULATORS WITH FITTINGS AND FASTENERS:

The price shall cover supply and erection of 25 kV support /post insulators with required fittings and fasteners to support copper or aluminium jumper/busbars. The price shall cover supply and erection of all component and fittings/angle iron (outrigger) to support the jumpers. The price of small parts steel works with bolts and nuts etc., if any shall be paid under item no.

Schedule-33000(GENERAL ELECTRICAL WORKS)

(Quarters, Service buildings, Pumps, Track crossings etc.)

Explanatory notes for various items of work in Electrical General Services Schedule are given below:

- i All electrical works should comply with Indian Electricity Act 2003 and Rules framed there under.
- ii All electrical installations shall conform to the relevant Indian Standard and shall be carried out as per the relevant safety Code of Practices and guidance for Safety Procedures in Electrical Works as per IS:5216/Pt I & II/1982.

iii Notwithstanding the ratings specified in the BOQ, all components proposed to be used in the installations, shall be of appropriate rating of voltage, current and frequency without any additional financial implication on RVNL. Discrepancies, if any, in this regard, shall be brought to the notice of the Engineer by the Contractor.

iv All minor items viz. hardware items, foundation bolts, termination lugs for electrical connections etc. as required and necessary for proper working of the equipment shall be deemed to have been included in the Bill of Quantities, whether such items are specifically mentioned or not.

v (a) The basic quantities of components & materials required to make up a unit of work for selected items are approximate. The Contractor shall plan the work, estimate the actual quantities required and get the same approved by the Engineer before placing orders.

(b) In estimating the prices for various items of work, provision for loss or wastage in transit and erection including freight, handling, taxes and duties, insurance if any etc. should be taken into account and firm unit price offered for a complete unit of work to be done by the contractor.

vi The various items to be supplied/provided/erected should be as per the list of approved suppliers included in RVNL's Technical Specifications/list followed by concerned zonal Railway. Items not appearing in the approved list shall be procured from good quality sources in line with best industries practices and shall be either ISI marked or conforming to latest IS (if any). Before procurement, vendor approval shall be obtained from the Employer.

vii. Good workmanship and total compliance with safety and other statutory rules and regulations, shall invariably be observed by the Contractor.

viii .All approvals from the relevant and appropriate government & statutory authorities shall be the total responsibility of the Contractor unless specified otherwise.

ix All quoted rates shall cover supply of materials, handling of materials, labour required, civil works, taxes and duties, fabrication, installation, testing and commissioning, training and free maintenance till handing over to the Employer's representative.

x. If any activity of work is essential for the satisfactory completion of the work but is not mentioned specifically in the Bill of Quantities or elsewhere in the bidding documents, the same shall be deemed to be included in the scope of work and shall be executed by the contractor within the accepted cost. The work shall be handed over in a functional manner complete in all respects.

xi. The inspection of various items shall be carried out by the agencies as specified in RVNL specifications. The prices quoted also include RITES/RDSO representative inspection and testing charges unless otherwise specified in the bill of quantities or Technical Specification. In case of change of inspection from RDSO/RITES to RVNL/CONSIGNEE, 1% of the cost of material will be deducted by RVNL as inspection charges.

xii The inspection of above items will be done at the manufacture's works/place decided by the Employer based on item, its quantity, Inspecting Authority etc.

2. DRAWINGS

2.1 The contractor shall prepare drawings in Auto Cad for all LT/HT installations, indicating proposed works and shall obtain approval of Engineer prior to taking up the work. Such drawings shall be prepared in coordination with all other agencies executing works at the same site and a maximum of 10(ten) copies as are required by RVNL with one tracing on RTF paper.

2.2 After commissioning, these drawings shall be duly updated as per erection work at site and submitted in six copies and one tracing in RTF paper, as Completion Drawings, along with a soft copy to the Employer.

2.3 Where the contractor proposes to use an item of equipment, other than that specified or detailed on the drawings, which requires any redesign of the structure, partitions, foundation, piping, wiring or any other part of the mechanical, electrical or architectural layouts, he shall inform the Engineer well in advance and obtain his approval. Delays resulting from such re-design shall be On Contractor's account. He shall also submit all related information as may be required for approval of such redesign, to the Engineer.

2.4 Where the work of the Contractor has to be executed in close proximity to or will interfere with work of other agencies, the Contractor shall work out space/time adjustments in coordination with other agencies. If the contractor installs his work before coordinating with other agencies, so as to cause any interference with their work, he shall make the necessary changes without extra cost to the owners of the installation.

33002: ELECTRIFICATION OF GATE MAN LODGE AT LEVEL CROSSING

(a) The item price includes cost of labour & all materials required to electrify the gate man lodge in all respect complete with ceiling fans, luminary with lamps and other items indicated in scale of fittings including cost of wiring cables (sizes indicated for point wiring, circuit wiring), PVC conduits with accessories, junction boxes, modular switches, metal boxes, lamp holders and ceiling roses, modular plate, pre wired sub distribution board, earth electrodes etc.

(b) Scale of fittings, wiring points, fans, luminary etc. and Cable sizes, no. of wires permissible in each circuit and sub main, etc has been indicated below.

(c) Payment for providing bracket on wall is included under item for GI pipe and shall be made on measurement of length basis.

(d) Panel to be connected to earth electrode. Payment for earth electrode will be paid as per relevant item of BOQ.

33035 (iii) Supply and laying copper strip on surface or in recess or in 50 mm dia G.I. pipe

The item price includes labour & cost of all materials including cost of copper strip on surface or recess or digging in ground 0.50 meter below ground/ making suitable holding arrangements on transformer /D.G. Set end, making good the damages, Connections of strip including soldering/riveting etc as required. Rates for G.I. pipe are payable separately under relevant BOQ item.

33036(i) to (xiii): Supply, laying, testing and commissioning of LT cable.

The item price includes labour & cost of all material including cost of LT XLPE cable conforming to IS:7098/Pt I (latest version), bricks, sand, cement, termination lugs/crimping socket, including fixing. Inscription on the plate shall be as specified in RVNL tech. spec. Cable markers shall be provided as instructed by Engineer at not more than 50 m interval and at locations where cable route is changing or cable joint provided. In substation area, laying of cable includes construction of suitable trench. Trench shall be filled with dry sand up to 300mm above the cable after it is laid. 'U' frame shall be manufactured with MS angle 50x50x6mm & grouted vertical in floor for holding cable on transformer end. Cable shall be held vertical with clamps of MS flat 50x6mm at two places on frame on transformer and panel side. Painting of U' frame and clamps shall be done with approved shade paint. Cables shall be terminated with LT panel & on the transformer side with aluminium crimping sockets & tested and commissioned as required. The price covers laying of cable in all Cables in all types of piping, horizontally & vertically, underground on wall, in air or under the Rly track or Road wherever required. Cables on vertical wall shall be fixed with clamps of MS flat 50x6 mm with all fixing accessories. Rates for RCC/G.I /HDPE pipe are payable separately under relevant BOQ item. Rates for cable route markers (MS or RFID type) are payable separately under relevant BOQ item.

33038 (i) to (iv): Supply, laying, testing and commissioning of 33 /11 KV XLPE (E) insulated, armoured aluminium conductor cable.

The item price includes the cost of supply of cable conforming to IS:7098/Pt.II/85 and all other materials including bricks, sand and cement. The item price also includes laying of cable, , miscellaneous works such as digging of trench, provision of suitable clamps as per site requirements and testing & commissioning. Price covers laying of cable in all type of pipes, horizontally or vertically, underground, on wall or in air or under the Railway track/road wherever required. It also includes coordination for arranging shut down from state Electricity authorities and returning/ transporting of released materials to state electricity authorities. In substation area, laying of cable includes construction of suitable trench. Trench shall be filled with dry sand up to 300mm above cable after laying. 'U' frame shall be manufactured with MS angle 50x50x6mm & grouted vertical in floor for holding cable on transformer and HT panel end. Cable shall be held vertical with clamps of MS flat 50x6mm at two places on frame on transformer and panel side. Painting of U' frames and clamps shall be done with approved shade paint. The cable shall be laid as per RVNL's technical specifications. The cost of GI/RCC/HDPE pipe and cable route markers is payable under separate BOQ items.

33039 (ii): CABLE ROUTE MARKER-MS TYPE

The item price includes labour & cost of all materials including cost of cable route markers of size not less than 200x150x3mm thick M.S.Plate and welded to MS rod of min 12 mm dia or MS flat of min 40x3 mm thick including bending and fixing with the cable.

33040 (i) & (ii): Supply, termination, testing & commissioning of 33 KV/11KV outdoor types, heat shrinkable end termination kit.

The item price includes labour & cost of all materials including cost of 33KV/11KV outdoor type, heat shrinkable end termination kit, making termination and connecting to the overhead lines.

33042 (i): Supplying and erection of pre-stressed, cement concrete (PSCC)/RSJ double pole structure 9-11 meters long complete with galvanized stay set, anti climbing devices and fixing of Danger plates on the erected pole.

The item price includes coordination with SEB/concerned authorities, labour & cost of all materials including cost of prestressed, cement concrete (PSCC)/RSJ (As per site requirement) double pole structure(H-pole) 9-11 meters long, 4 nos. channel cross arms & 2 nos cross bracing angles, clamps, bolts, nuts etc. including erection, casting of foundation , muffing etc. The item price also includes supply and erection of galvanized stay set with 19/20 mm dia x1.8 meters long stay rod, anchor plate of size 45cm.x45cm x 7.5mm thick, thimble, stay clamp of galvanised MS flat 50 x 6 mm, turn buckle (20mmx600 mm), 7/4.00 mm dia G I stay wire conforming to IS 2141-1968, 11KV strain insulators etc. including digging of pit, casting of foundation for poles & stays with cement, concrete M10 grade and refilling, supply and erection of anti climbing devices, and danger plates on the erected poles. Above items are for guidelines purpose. The entire work has to be done in coordination and as per standards of concerned State Electricity Board.

33042 (ii): Supply of material, fabrication and erection of 'H' pole structure 9 to 11 meters long complete with galvanized stay set, anti climbing devices and fixing of Danger plates on the erected pole.

The item price includes coordination with SEB/concerned authorities, labour & cost of all materials including cost of fabrication & erection of 9 to 11 meters long 'H' pole fabricated from I section MS Beam ISHB 150mm x 150mm (weight not less than 27.1 kg/meter, Tolerance as per Relevant IS permitted). The 'H' poles shall be fabricated as directed by Engineer and drawing approved by RVNL, Railway and SEBs. Drawing shall be made by contractor and get it approved from concerned authorities before taking up the work. The guiding details of the poles are: Cross bracing of M.S. angle size 65x65x6mm (Total length of different pieces should be greater than 0.3 meter from length of pole), 4 nos. channel cross arms & 2 nos cross bracing angles, clamps, bolts, nuts etc. including erection, casting of foundation , muffing etc. The item price also includes supply and erection of galvanized stay set with 19/20 mm dia x1.8 meters long stay rod, anchor plate of size 45cm.x45cm x 7.5mm thick, thimble, stay clamp of galvanised MS flat 50 x 6 mm, turn buckle (20mmx600 mm), 7/4.00 mm dia G I stay wire conforming to IS 2141-1968, 11KV strain insulators etc.including digging of pit, casting of foundation for poles & stays with cement, M15 grade and refilling, supply and erection of anti climbing devices, and danger plates on the erected poles. The contractor shall have to erect the 'H' pole structure, terminate and connect the existing/new HT line and commission complete in all respect. Above items are for guidelines purpose. The entire work has to be done in coordination and as per standards of concerne Electricity Board ready for their final acceptance/handing over.

33048:Conducting check survey for the existing LT, HT and EHT Power line Electrical crossings on the section and measurements of clearances to identify modification required/not required .

The item price includes cost for conducting check survey of complete section for all the existing LT, HT and EHT Power line Electrical crossings, power lines running parallel to track from the proposed track route and requiring modification keeping in view Regulations for Electrical crossing of Railway Track 1987 and IRSOD-2004 with latest amendments, measurements of horizontal distances of structures (up to next two.

structures on each side) from the existing & proposed tracks etc, vertical clearances of lowest conductors & guard wires from existing & proposed rail level, angle of crossings, height and type of towers/poles, preparation of "list of crossings requiring modification" & " list of crossings not requiring modifications" etc. (Height/ clearances shall be accurate with zero tolerances) measurements shall be recorded on a format as approved and be submitted considering all aspects including details required as indicated above. Proposal for modification arrangement of infringing power line crossing shall also be submitted.

33064: SUPPLY AND ERECTION OF ALL TYPES OF GALVANISED STEEL STRUCTURES, SMALL PARTS STEEL ETC.

The price shall cover cost of erection, alignment and setting before grouting, wherever required, gantries, including tower /steel tower / bus bar, poles, channels for sub-station, and all other small part steel works, the erection of which is carried out by the contractor irrespective of whether they are supplied by purchaser/contractor. The prices shall also include supply and erection of galvanized bolts, nuts washers etc., wherever required as per approved designs and drawings. The item price also includes provision of anti climbing devices, and danger plates on the erected structure. The gantry structure is required, to terminate/extend 11 or 33 KV OH line in sub-station yard. The steel shall be conforming to IS-2062/1992 (latest) Gr 'A' SK zinc conforming to IS-209/1992 or latest.

NOTES :

1. For the purpose of payment against items, weight of structures or fabricated steel work will be calculated according to the weight of black steel given in section books for the lengths of various members shown in the approved drawings. There will be no addition for increased weight due to galvanizing or painting or weld material or reduction for holes or skew cuts.
2. The rates against item shall be applicable to the erection of small part steel work which are not covered under the various other items of work.
3. The payment shall be made on the basis of the final weight of the structures, in case the same are cut or modified as indicated above before erection.

SECTION 6
DRAWINGS

SECTION 6

Drawings

List of Drawings Enclosed

NIL

PART-2

FINANCIAL BID

**PART-2 FINANCIAL
BID
SCHEDULE (BILL OF QUANTITIES)**

Name of the Work- Design, Drawing, Supply, Erection, Testing & Commissioning of 25 KV AC OHE system for Providing Rail Connectivity to upcoming CHP & SILO (10 MTPA) of Nigahi Project of NCL, Singrauli, M.P

Points to be noted while quoting rates:

- 1) Where Tender has been invited on Percentage Rate basis, Percentages on the Estimated Cost (whether above or below) are to be quoted for each of the Schedules.
- 2) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender documents, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the Sky Blue coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the file name. If the BOQ file is found to be modified by the bidder, the bid will be rejected.