



दक्षिण रेलवे / SOUTHERN RAILWAY

Madurai Division

Traction Distribution Branch

E-TENDER NOTICE NO. U-TRD-OT-26-27-IV-2

**Tender for**

“MDU Division - Preparation of design and drawings for Over head Equipments (OHE) for TPJ- MDU section in MDU Division.”

Tender value (Approx.)	Rs.25,06,540 /-
Bid Security	Rs.50,100 /-
Period of Completion	6 Months

Issued By

Divisional Railway Manager (Traction Distribution),  
Madurai Division,  
Southern Railway, Madurai– 625 016

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**SPECIAL CONDITIONS OF CONTRACT (GENERAL)**

1. This is a works contract. The special conditions of contract (both General and Technical), should be read in conjunction with the Indian Railways Standard General Conditions of Contract (GCC, April 2022) along with correction slips. The GCC, April 2022 is also uploaded along with this document. The said GCC, April 2022 along with the Amendments/correction slips issued from time to time shall be binding on the contract.
2. Completion period: The contractor should complete the entire works within Six months from the date of issue of LOA. Further extension of contract if required, is subject to Clause No. 17 of Part-II, GCC April 2022.
3. Payment: No advance payment will be made against this contract. Payment for completed portions of work Schedule will be made as per clause no.21 of chapter-2, special conditions of contract (technical). Payment will be arranged only through Electronic Fund Transfer System. Tenderers should furnish the details in Electronic Fund transfer mandate form attached (Annexure–VI) with the tender document for arranging payments/refund of EMD to unsuccessful tenders through EFT/RTGS. Payment will be arranged through the Senior Divisional Finance Manager, Southern Railway, Madurai.
4. Contract value: The contract value quoted shall be inclusive of all taxes, GST and duties etc. The accepted contract value must be firm till the completion of works.
5. Income Tax, GST/other taxes, if any, as applicable will be deducted from Contractor's bill at the percentage notified by the government.
6. Conservancy cess charges as applicable (Annexure–VII) will be recovered from contractor's bills.
7. The contractor is liable to pay the taxes as stipulated in the GST Act and Rules and as per the clause No.6 of Part-I, GCC April 2022. Also, the contractor should furnish the details of GST to be deducted from the contractor's bill.
8. Bid Security:
  - 1) (a) The tenderer shall be required to deposit Bid security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender. The Bid security shall be as under:

<b>Value of the Work</b>	<b>Bid Security</b>
For works estimated to cost up to Rs.1 crore	2% of the estimated cost of the work

**Note:**

- (i) The Bid security shall be rounded to the nearest Rs.100. This Bid security shall be applicable for all modes of tendering.
  - (ii) Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Start ups' shall be exempted from payment of Bid security detailed above.
  - (iii) Labour Cooperative Societies shall deposit only 50% of above Bid security detailed above.
- b) It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the

tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited to the Railway.

- c) If his tender is accepted this Bid security mentioned in sub clause (a) above will be retained as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.
- 2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as mentioned in tender documents. The Bank Guarantee bond shall be as per Annexure-VIII and shall be valid for a period of 90 days beyond the bid validity period.
- 3) In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:
- i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
  - ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before closing date for submission of bids, (i.e. excluding the last date of submission of bids)
  - iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.
  - iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.
  - v. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected.
  - vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification "Bid for the \*\*\*\*\* Project" and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right hand top corner of the envelope.
  - vii. The envelope shall be addressed to the officer and address as mentioned in the tender document.
  - viii. If the envelope is not sealed and marked as instructed above, the Railway assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.

**Bid Security in the form of Bank Guarantee shall be submitted to:**

**The Senior Divisional Electrical Engineer (Traction Distribution branch),  
DRM office, Southern Railway, Madurai, Tamilnadu – 625 016.**

#### 9. Performance Guarantee:

Performance Guarantee at a rate of 5 % of the contractual value shall be deposited by the successful tenderer as per Clause No. 16(4), Part-II of GCC, April 2022 and Additional Performance Guarantee as per clause 16(4)(h)

#### 10. Security Deposit:

The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the Railways as part of security for the due and faithful fulfillment of the contract by the Contractor. Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India, or may be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered as per clause No. 16(1), Part-II of GCC, April 2022.

#### 11. Participation of Joint Ventures:

Joint Venture Firms are not allowed to participate in this tender since the value of the work is below 10 Crore. (Authority: Railway Board letter No. 2002/CE-I/CT/37 JV Pt.VIII, dated 14.12.2012)

#### 12. Execution of contract Document:

Indian Railway has launched a web-enabled application IR-Works Contract Management System (IR-WCMS), designed and developed by CRIS (Centre for Railway Information Systems) and it has been hosted on IRCEP (<https://ircep.gov.in>). The application covers all the activities associated with contract handling which inter-alia include the submission of Performance Guarantee, Preparation of signing of the contract agreement, Billing and its integration with IPAS for payment, NS site preparation and sanction, Variation Statement preparation and sanction, Extension of DOC, Release of PG/SD & Correspondence between Railway with the contractor, etc., The Tenderer whose tender is accepted shall be required to sign the agreement shared through the IRWCMS duly using their digital signature certificate used for bidding in IREPS.

The Contract Agreement shall be entered into by Railway only after submission of valid Performance Guarantee by the Contractor. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender.

#### 13. Price Variation Clause(PVC):

Price Variation Clause (PVC) shall be applicable only in tender having advertised value above Rs. 2 Crores as per Clause No. 46A, Part-II of GCC, April 2022.

#### 14. Workmanship & Deployment of qualified Engineers in respective discipline:

1. Good workmanship is an essential requirement. The work shall be carried out under the direct supervision of a person holding a certificate of competency issued by the Government for the type of work involved.
2. The Contractor shall employ a qualified technical staff at worksite for supervision. Normally, one qualified graduate engineer shall be employed for all works costing Rs.200 lakhs and above and one diploma holder engineer when the work is costing more than Rs.25 lakhs but less than Rs.200 lakhs.
3. The Contractor's Site Engineer shall be permitted to work only after taking the approval of the Engineer-in-charge. In this regard, the Contractor shall submit the details of the Site Engineer along with his request seeking approval of Engineer-in-charge of Railways.

4. In case, the contractor fails to employ the technical staff as aforesaid, he shall be liable to pay an amount of Rs.40000/- in case of graduate engineer and Rs.25000/- in case of diploma holder for each month or part thereof for the default period.
15. The Contractor shall comply with the provision of the contract labour (Regulation and Abolition) Act, 1970 and the Contract labour (Regulation and Abolition) Central Rules 1971 as modified from time to time, wherever applicable and shall also indemnify the Railway from and against any claims under the aforesaid Act and the Rules as detailed in clause No. 55A of 'General Conditions of Contract'
16. The contractor shall comply with the provisions of para 30 and 36-B of the Employees provident Fund Scheme, 1952; Para 3 and 4 of Employees' Pension Scheme, 1995; and Para 7 and 8 of Employees Deposit linked Insurance scheme, 1976; as modified from time to time, through enactment of "Employees Provident Fund & Miscellaneous Provisions Act, 1952, wherever applicable and shall also indemnify the Railway from and against any claims under the aforesaid Act and the Rules" as per Clause No. 55B of 'General Conditions of Contract'
17. The Tenderer shall adhere payment of minimum wages act and all other labour legislations.
18. Updating of Labour data on Railway's Shramikkalyan portal
  - (i) Contractor is to abide by the provisions of Payment of Wages Act & Minimum Wages Act in terms of clause 54 and 55 of Indian Railways General Conditions of Contract. In order to ensure the same, an application has been developed and hosted on website '[www.shramikkalyan.indianrailways.gov.in](http://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 Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration on the portal within 7 days of receipt of such request.
    - (b) Contractor once approved by any Engineer, can create password with Login ID (PAN No.) for subsequent use of portal for all LOAs issued in his favour.
    - (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptance (LOA)/Contract Agreements on shramikkalyan portal within 15 days of issue of LOA for approval of concerned Engineer. Engineer 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, contract shall fill the salient details of contract labours engaged in the contract and ensure uploading 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.
  - (ii) While processing of any 'On Account bill' of 'Final bill' or release of 'Advances' or 'Performance Guarantee/Security Deposit', contractor shall submit a certificate to the Engineer or Engineer's 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 Shramikkalyan portal at [www.shramikkalyan.indianrailways.gov.in](http://www.shramikkalyan.indianrailways.gov.in) till \_\_\_\_\_Month,\_\_\_\_\_Year"

19. Variation:

Variation in quantities during execution of work will be dealt as per Clause No. 42 of GCC, April 2022.

20. Vitiating during variation in contract quantities:

(Authority: Railway Board letters No.2017/Trans/01/Policy dated 08.02.2018)

As a result of variations, a contract shall be considered "vitiating" only when, the following percentage variation in contract value between tenderers are noticed to have been exceeded.

S. No.	Value of contract	Percentage difference between present contractor and new L-1 as a result of variation. (Percentage shall be calculated with base as the revised contract quantities multiplied by the rates of the present
1	Small value contracts (Tender value less than Rs.50 lakhs)	10
2	Other than small value contracts (Tender value equal to or more than Rs.50 lakh)	5

(i) In the event of Vitiating occurring due to increase or decrease in quantities among the first, second and third lowest valid tenderers, the vitiating shall be to contractor's account. The total value of the work done shall be calculated at the rate offered by those tenderers and the amount payable shall be limited to the lowest aggregate value as worked out.

(ii) Vitiating as above shall be worked out as a whole for Agreement including all variations in quantities.

The above shall be regulated as under:

- The case shall be decided by the tender accepting authority (Competent for the revised quantity) and shall not be treated as a case of single tender.
- These instruction will be similarly to earning contracts with H-1, H-2, substituted for L-1, L-2 and so on.
- Vitiating should always be computed with respect to items, rates, quantities as available at the time of tender opening and subsequent changes/additions by way of new items will not be counted for computed vitiating.

21. Documents to be submitted along with the Tender:

i. Certificate on documents submitted:

Certification of the bidder stating all their statements/documents submitted along with bid are true and factual is to be submitted along with the bid as per Annexure- V of GCC. *In this connection, on IREPS module a facility has been created for online submission of Annexure-V. Therefore, the provision of downloading of Annexure-V of GCC & uploading of physically signed Annexure-V by the tenderer had been discontinued on IREPS.* Hence, uploading of physically signed copy of Annexure-V need not be required. (Authority: Rly.Brd Lr.No.2022/CE-1/CT/GCC correspondence Dt:14.05.2024)

Whereas, in case of other than Company/Proprietary firm, Annexure -V(A) shall be submitted by the each member of a Partnership Firm / Joint Venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc, as the case may be. Non submission of a copy of this certificate by the bidder shall result in summarily rejection of his/their bid.

ii. Statement on Employment/Partnership etc. of Retired Railway Employees:

The Contractor shall abide by the instructions contained in the Clause No.16 of Annexure I of Part I and Clause No. 59(9) of Part II of Indian Railways Standard General Conditions of Contract, April 2022. In this connection, the contractor shall clearly furnish the details of employment/partnership, etc., of retired Railway employees, if any. In case of no retired railway employee associated with the firm, a statement as per the sample format at Annexure –IV to be furnished by the tenderer.

iii. Company Ownership details:

The tenderer shall clearly specify whether the tender is submitted on his own (proprietary firm) or on behalf of a partnership Firm/Company/Joint Venture/Registered Society/Registered Trust etc. The tenderer(s) shall enclose the attested copies of constitution of their concern, and copy of PAN card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the Firm, Company, Association, Trust or Society, as the case may be.

Following additional documents shall be submitted by the tenderer in respect of the following:

(a) Sole Proprietorship Firm:

(i) The tenderer shall submit the notarized copy of the affidavit and a copy of Pan card.

(b) HUF:

(ii) A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.

(c) Partnership Firm:

(i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.

(ii) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the firm.

(iii) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

Note: Participation of Partnership Firms in Works Tenders shall be governed by the conditions specified in para 18 of Annexure-I (Tender Form – Second sheet) of Part-I, GCC, April 2022.

(d) Company registered under Companies Act 2013:

(i) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company

(ii) A copy of Certificate of Incorporation



- (iii) A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
- (e) LLP (Limited Liability Partnership):
  - (i) A copy of LLP Agreement
  - (ii) A copy of Certificate of Incorporation
  - (iii) A copy of Power of Attorney/Authorization issued by the LLP in favour of the individual to sign the tender on behalf of the LLP and create liability against the LLP.
  - (iv) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- (f) Registered Society & Registered Trust:
  - (i) A copy of Certificate of Registration
  - (ii) A copy of Memorandum of Association of Society/Trust Deed
  - (iii) A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.
  - (iv) A copy of Rules & Regulations of the Society

**NOTE:**

- a) If it is not mentioned in the submitted tender that the tender is being submitted on behalf of a sole proprietorship firm/partnership firm/joint venture/Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.
  - b) The tenderer whether sole proprietor / a company or a partnership firm / joint venture (JV) / registered society / registered trust / HUF / LLP etc if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement except in case where such specific person is authorized for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association/Board resolution, failing which tender shall be summarily rejected.
- iv. All other documents required for fulfilling the eligibility criteria and mentioned therein should be submitted.

**22. Jurisdiction of the court binding the contract**

For the smooth operation of the contract, any suit or proceedings to enforce the rights of either of the parties here to under the agreement shall be instituted in and tried only by the courts under the jurisdiction of Honourable High Court of Madras (and its subordinate courts) and by no other court, and both the parties hereto, hereby expressly agree to submit to the jurisdiction of courts under the jurisdiction of Honourable High Court of Madras (and its subordinate courts).

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SPECIAL CONDITIONS OF CONTRACT (Technical)

**1. SCOPE OF WORK: Preparation of design and drawings for Overhead Equipment (OHE) for TPJ–MDU section in Madurai Division.**

The scope of work covers:-

- i. Conducting field survey and preparation of OHE Layout Plans and bonding plans of major station yards in TPJ-DG-MDU section
  - ii. Preparation of OHE lay out plans of open route of TPJ-DG-MDU section
  - iii. Supply and erection of fabricated SWRD Board/Sectioning Diagram of various sizes as per requirement in ACP sheet.
  - iv. Digitization / scanning of drawings in tracing films, A3 & A4 size documents available in TRD office
2. This is a works contract. The special conditions of contract should be read in conjunction with 'Indian Railways Standard General Condition of Contract' which are referred to herein and shall be subject to modifications / addition or suppression by special condition of contract and / or special specifications if any, annexed to the tender forms.
3. The work should be carried out in the presence and under the guidance of the authorized representative of the Senior Divisional Electrical Engineer/TRD, Southern Railway, Madurai (Sr.DEE/TRD/MDU).
4. All the drawings are required to be prepared as per Railway standard/RDSO Guidelines and all designs, legends, notes on drawings and schedules of materials shall be in English and shall be prepared in the metric system.
5. The prepared drawings shall be submitted, duly verified by the concerned section in-charge for the approval of Railways.
6. CONTRACTOR'S SUPPLY ITEMS:
- a) All the materials required for execution of this work have to be arranged by contractor.
  - b) The contractor has to make his own arrangements for transporting men & materials to the site of work.
  - c) The contractor has to make his own arrangements for storing the materials proposed to be utilized by him. No responsibility will be taken by the Railways for the loss of contractor's materials.
  - d) The contractor should have the expertise and all kinds of special tools/ equipments (including Computer software) for execution of the work as per the schedule. The contractor has to make available all the tools and plants required for executing this work.

7. GUARANTEE/ MAINTENANCE PERIOD:

The contractor shall settle all the liabilities against this contract within a period of 03 (three) months from the date of completion of the work. This period is treated as the maintenance period in this contract.

8. ENGINEER-IN-CHARGE OF WORK

Sr. Section Engineer/TRD/HQ/MDU will be the Engineer-in-Charge of this work, who will Record of Measurements for the completed part of the work. However concerned Depot in charges will supervise and co-ordinate the work under their jurisdiction. All correspondence with Railways with regard to this work (including modifications in the drawings as per site conditions, if any shall be routed through the Engineer-in-charge.

9. CERTIFICATE OF COMPLETION OF WORKS:

- a) As soon as in the opinion of the Engineer, the work has been completed and has satisfactorily passed any final test or tests that may be prescribed, the Engineer shall issue a certificate of completion duly indicating the date of completion in respect of the work and the period of maintenance of the work shall commence from the date of completion mentioned in such certificate. The certificate, inter alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the Contractor and that there is no due from the Contractor to Railways against the contract concerned.

10. QUALITY ASSURANCE OF MATERIALS:

- a) All the equipments, materials, fittings and components will be subject to quality control program of the manufacturer, being part of the quality assurance program of the contractor. The materials may also be inspected by the Senior Divisional Electrical Engineer/TRD/S.Rly./Madurai (Sr.DEE/TRD/MDU) or his authorized representative at the manufacturers works or as desired by Sr.DEE/TRD/MDU. Sr.DEE/TRD/MDU or his authorized representative will have the right to be present during all the stages of manufacture and shall be accorded all reasonable facilities for inspection and testing as well as to examine the stage inspection report of the manufacturer in addition to the quality audit which the contractor may institute as a part of his program so as to satisfy himself that the materials are in accordance with specifications, approved drawings and designs and Railways prescribed quality assurance standards.
- b) The following ledgers are to be maintained at site in connection with this Works Contract:
  1. Site Order book -By Contractor.
  2. Hindrance Register -By Contractor
  3. Material Transaction Register - Both by Railways and the Contractor
  4. Cube-testing Register & -By Contractor
  5. Daily Progress & Labour Register. -By Contractor.

These registers are to be maintained at site and should be produced during inspection by officials. The formats for maintaining the above-mentioned registers are furnished at Annexure III-A to E.

## 11. SAFETY MEASURES:

- a) The work should be carried out in the presence and under the guidance of the authorized representative of the Senior Divisional Electrical Engineer/TRD, Southern Railway, Madurai. (Sr.DEE/TRD/MDU), who is the Engineer-in-charge of the work.
- b) The programme and method of work will be furnished by the contractor, well in time, and will be approved by the Engineer-in-charge.
- c) The contractor shall take all precautionary measures in order to ensure the protection of his own personnel moving about or working on the Railway premises, but shall then conform to the rules and regulations of the Railway, if and when, in the course of the works there is likely to be any danger to persons in the employment of the contractor due to running traffic while working in the Railway siding and premises. The contractor shall apply, in writing, to the Railway to provide flagmen or lock-out men for protection of such persons. The Railway will, however, decide as to whether it is necessary to post such flagmen for various types of work and also the number of such men required to protect the gang or gangs of contractor's staff working at site. The Railway shall remain indemnified by the contractor in the event of any accident occurring in the normal course of work arising out of the failure of contractor or his men to exercise reasonable precaution at all places of work whether or not the Railway decides to post flagmen at any particular site of work. The flagmen will be appointed by the Railway and no expense on this account will be charged from the contractor.
- d) The contractor shall ensure the unauthorized, careless or inadvertent operation of switchgear, which may result in accident to staff and/or damage to equipment, does not occur.
- e) The work is to be executed without causing damage to the existing arrangements of OHE/other railway properties at site. Defect/damages caused, if any, due to contractor's work at site, it should be rectified at the cost of the contractor.
- f) The execution of the work should in no way impede normal running of train services or shunting operation.
- g) While undertaking digging work in the vicinity of underground Signalling, Electrical and Telecommunication cables, special care shall be taken by the Contractor to ensure that no damage to these cables are caused due to their work. In case of any cable damage, the cost of the loss (either direct or indirect) caused by the damage shall be borne by the Contractor. The direct loss includes the cost of the cable damaged including the cost of restoration and indirect loss may include the resultant loss caused due to the dislocation in traffic and the cost of the other equipments damaged which have direct connection with the damaged cable etc.
- h) The contractor shall not permit their staff to work on the posts carrying overhead conductors or any other current carrying parts unless he had received in writing the permit to work from the authorized Railway representatives. He shall have to ensure that the supply lines are dead and earthed before commencing the work on the overhead conductors or any other current carrying parts.
- i) The Tenderer/Contractor must ensure the safety of the labourers engaged by him while executing the work and the Railway will not be responsible for any injury

- sustained by the labourers due to any accident or any other fatalities. The labourers should be fully aware of all the safe working practices on 25 kV AC Traction.
- j) The contractor shall obtain special permit from the Railway to enable his workers to work at, to bring to or to take materials from work spot.
  - k) The work should be carried out without any interference to the normal working of Railway track & structure. The contractor shall be responsible for any loss to Railway and public property and if it occurs during the course of execution, then the Railway reserves the right to have the damages made good by the contractor
  - l) The contractor shall be responsible for the safe custody of all equipment till provisional acceptance. Should the situation warrant posting of armed guards for protection from thefts, the same will be provided by the Railway, at his own cost and at his discretion. The contractor shall apply to the Railway explaining the circumstances under which posting of armed guards is considered necessary by him. At the same time, the details of the requirement and the number of personnel of armed guards, where and when required, shall also be furnished.
  - m) The contractor shall abide by all Railway regulations and Indian Electricity Rules, 1956 in force for the time being and ensure that the same are followed by his Representative, Agent or sub-Contractor or workmen.
  - n) The contractor has to make his own arrangements for storing and security of the materials proposed to be utilized by him as well as the railway materials loaded in the vehicle. The Railways will take no responsibility for the loss of contractor's materials.
  - o) In case of theft(s) or accident(s), railways shall not take up any responsibility or role in dealing case with police and insurance authorities. The contractor shall take responsibility in such cases.
  - p) On completion of the works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the Engineer.

#### 18. COMPETENT SUPERVISORS

- a) The contractor shall employ competent representatives to supervise and carrying out of the works at all stages. The said representatives shall be available during working hours and any written orders or instructions which the Railway's Engineers may given to the said representatives of the contractor shall be deemed to have been duly given or communicated to the contractor. .
- b) The contractor or his representatives will accompany the Railway's Engineers on inspection or proceed to their offices whenever called upon to do so.
- c) The contractor's representatives shall give necessary direction to his workmen and ensure that they execute their work in sound and proper manner. He shall employ only such supervisors, workmen and laborers for the execution of any of the works as are careful and skilled in their respective trades and callings, If and whenever required by the Railway's the contractor shall submit a correct return showing the names of all personnel employed by him for the contract. In the event of the Railway's Engineer being of the opinion that the contractor is not employing a

sufficient number of competent staff as is necessary for the proper execution of the works within the time prescribed the contractor shall forthwith on receiving intimation to this effect take on the additional number of staff as advised by the Railway's Engineer.

19. PENALTY CLAUSE:

In the case of bursting of power block, shortfall in work, skipping of work, non-performance/poor workmanship or non-adherence of terms & conditions, etc., the Senior Divisional Electrical Engineer, Traction Distribution or his representative shall decide the quantum of penalty commensurate with the nature and offence and inconvenience caused to the Railway.

20. PAYMENT CLAUSE:

- a) No advance payment shall be made to the contractor. Progress payments for completed portions of work as per the Work schedule will be made, as per provision contained in 'General Conditions of the Contract'.
- b) Railways shall not be liable for any other charges except the rate accepted as per Price schedule. Under no circumstances, the rates quoted by the contractor and accepted by the Railways shall be enhanced during the entire period of contract.
- c) Payment through Letter of Credit (LC):
  - i. Contractor shall have the option to take payment from Railways through a Letter of Credit (LC) arrangement.
  - ii. This option of taking payment through LC arrangements has to be exercised in IREPS (Indian Railway Electronic Procurement System the e-application on which tenders are called by Railways) by the tenderer at the time of bidding itself, and the tenderer shall affirm having read over and agreed to the terms and conditions of the LC option.
  - iii. The option so exercised, shall be an integral part of the bidder's offer.
  - iv. The above option of taking payment through LC arrangement, once exercised by tenderer at the time of bidding, shall be final and no change shall be permitted, thereafter, during execution of contract.
- d) Payment for additional supplies:

Normally the contractor has to supply the materials required for the erection of the work. However if any material listed in the schedule of items required for the Railway, the same may be supplied by the contractor only on receipt of letter for additional supply from Sr. Divisional Electrical Engineer, Traction Distribution, Madurai.

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**SCHEDULE OF WORK**

Name of the work: Preparation of design and drawings for Over head Equipments (OHE) for TPJ-MDU section over MDU Division.					
Sl. No.	Description of items of work	Qty	Unit	Unit Rate (in Rs.)	Total (in Rs.)
1	Preparation of both OHE Layout Plans and bonding plans of stations.	70	Per Track Km	9000.00	630000
2	Preparation of OHE Layout plans without bonding plan	375	Per Track Km	4320.00	1620000
3	Supply and erection of fabricated SWRD Board/Sectioning Diagram of various sizes in ACP sheet of 3mm thickness with iron framing and aluminum biting. Printing of SWRD drawing should be adhesive vinyl and elementary section should be printed on different colours.	225	Sq.ft	600.00	135000
4	Digitization of OHE Related drawings available in hard copy	350	Meter	118.00	41300
5	Digitization of A3 size documents	2200	Nos	17.70	38940
6.	Digitization of A4 size documents	7000	Nos	5.90	41300
					2506540

“This schedule shall be read in conjunction with the explanatory notes specified in Chapter - 4 for detailed description”.

## Chapter – 4

### Explanatory Notes for items described in the schedule of work (i.e, Chapter-3)

#### SECTION – I – GENERAL

1. Explanatory notes for various Items of work included in the 'Schedule of Work' are given below:
2. The rate quoted by the contractor shall be inclusive of GST (as per the extant rules), loading, unloading and transporting if any by the contractor only.
3. The basic quantities of components and materials required to make up a unit of work for selected Items are indicated for guidance only. There may be minor variations to suit erection but no adjustment in prices shall be made on that account. In estimating the prices for various Items or work provision for loss and wastage in transit and erection should be provided for, over and above the basic quantities of components and materials required to make up a unit of work, indicated herein except where otherwise specified for materials supplied by the Railways.
4. Railway will not be responsible for any injury / accidents to the workmen engaged during working hours and no compensation will be paid by the Railways on any account.
5. The work shall be completed by the successful bidder as per the purchase engineer's instruction or his authorized staff of Railways.
6. TDS for IT and GST will be deducted from the bills as per the extant rules.
7. Advance payment is not admissible.
8. In case of disputes over the scope of work covered under the explanatory notes of various Items, the decision of the Engineer-in-charge will be final and binding on the contractor. The Various guidelines/instructions issued by RDSO/Rly, Board from time to time in the design aspects of OHE including the Weight Schedule shall be taken into consideration while executing the work without any extra cost.
9. All documents, drawings and data prepared under this contract shall be the property of Railways and shall not be used or disclosed without prior written permission.



## SECTION – II : EXPLANATORY NOTES FOR EACH ITEMS

### **[ITEM No. 1] - Preparation of both OHE Layout Plans and bonding plans of stations.**

The price shall cover conducting foot by foot survey, verification with existing drawings/data and preparation of OHE lay out plans and bonding plans of major station yards in TPJ-DG-MDU section. The prepared drawings shall be submitted, duly verified by the concerned section in-charge for the approval of Railways. Any changes in the existing LOP and bonding plan are to be included in the new drawings. The Bonding plan shall indicate various bonds & Earth pits provided in stations (ie. Structure bonds, Cross bonds, Polarity bonds, L-bonds, Shelter bonds, earthing of FOB, Metal Fencings, G I Water pipe, Fuel lines etc.). The price shall also cover supply of 4 set copies of all the approved drawings including a Soft copy in editable (eg:CADD file) & non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

### **[ITEM No. 2] - Preparation of OHE Layout plans without bonding plan**

The price shall cover conducting foot by foot survey, verification with existing drawings/data and preparation of OHE lay out plans of open routes of TPJ-DG-MDU section. The prepared drawings shall be submitted, duly verified by the concerned section in-charge for the approval of Railways. Any changes in the existing LOP are to be included in the new LOP. The price shall also cover supply of 4 set copies of all the approved drawings including a Soft copy in editable (eg:CADD file) & non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

### **[ITEM No. 3] - Supply and erection of fabricated SWRD Board/Sectioning Diagram of various sizes in ACP sheet of 3mm thickness with iron framing and aluminum biting. Printing of SWRD drawing should be adhesive vinyl and elementary section should be printed on different colours.**

The price shall cover the supply and installation of fabricated SWRD Board/Sectioning Diagram of various sizes as per requirement and its erection as instructed by Engineer in-charge. Board should be made of ACP Sheet of 3mm thickness with Iron Framing, Aluminum channel beading and corner PVC beading and stainless steel hooks (of suitable length) should be provided on finished board for fixing the board on wall/Aluminum frame. Printing of SWRD drawing should be adhesive Vinyl and elementary section should be printed in different colors with line thickness and lettering size should be in such a way that it should have clear readability from a distance of 5m with normal vision. Printed vinyl sticker should be carefully affixed on the board exactly as in the layout of the drawing without overlap, misplacement or tearing.

Payment shall be calculated for finished board as per square-feet units. The price shall also cover the supply of drawings in editable (eg:CADD file) & non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

### **[ITEM No. 4] - Digitization of OHE Related drawings available in hard copy**

The price shall cover Scanning/Digitization of OHE Related drawings available in Tracing films in pdf format. The available drawings in Tracing film will be furnished by Railway for arranging scanned copy in pdf. The price shall also cover supply of Soft copy in non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

**[ITEM No. 5] - Digitization of A3 size documents**

The price shall cover Scanning/Digitization of A3 size documents supplied by Railways. The scanned copy shall be in pdf format. The price shall also cover supply of Soft copy in non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

**[ITEM No. 6] - Digitization of A4 size documents**

The price shall cover Scanning/Digitization of A4 size documents supplied by Railways. The scanned copy shall be in pdf format. The price shall also cover supply of Soft copy in non-editable (PDF) formats in a Pen Drive Compatible With Desktop Computer & Laptop.

**Note:**

1. After issue of LOA, Railways shall provide available existing drawings/data to the contractor for reference, comparison and verification purposes. The contractor has to conduct detailed site survey in consultation with the concerned section in-charge and submit the updated drawings duly verified Engineer in-charge for the approval of Railways.
2. In case any required drawings/data are not available or are found inadequate, the contractor shall carry out necessary field survey, collect requisite data and prepare/reproduce such drawings accordingly, without any additional cost to Railways.
3. The contractor shall carry out detailed site verification and collect all necessary field data, including track layouts, existing structures, utilities and other constraints prior to preparation of designs. No claim arising due to lack of site knowledge shall be entertained.
4. The Contractor shall prepare and submit the drawings by incorporating the required details as advised by Sr.DEE/TRD/MDU or his authorized representative
5. Drawings shall be prepared using standard licensed software such as AutoCAD or equivalent and shall be compatible with Railway systems.
6. The computerized drawings should be made with maintaining the similar symbols, shapes, dimensions, codes, description, location nos. & other all necessary details with indexing & object/hyper-linking capability. All the drawings have to be prepared through computer software (e.g. AUTOCAD). If any wastage of material occurs due to mistake in drawings, the cost of same shall be borne by the contractor.
7. Any modifications, corrections or revisions required by Railways during scrutiny or execution stage shall be carried out by the contractor without any additional cost.
8. The work shall be governed by the General Conditions of Contract, Special Conditions of Contract and instructions issued by Railways from time to time.

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Chapter – 5

ANNEXURES

ANNEXURE – I

LIST OF RAILWAY SUPPLIED MATERIAL

Sl.No.	Item No. in the “Schedule of Work”	Description of item to be supplied by the Railway
1	1	The No materials will be supplied by Railway to the contractor against schedule items other than the available drawings and necessary details pertains to the section for for reference, comparison and verification purposes

LIST OF STANDARD DRAWINGS AND SPECIFICATIONS

This annexure contains reference to RDSO drawing nos., charts, schedules, specifications and other data referred to in various paragraphs of this tender paper. All reference to drawings, charts, schedules or specifications given in this annexure shall be taken to be the latest versions of such drawings, charts, schedules or specifications as issued by the purchaser on the dates of tender invitation.

(A) LIST OF STANDARD DRAWINGS

Sl No.	Brief description	Drawing		Mod No.
		Series	Number	
1	2	3	4	5
1.	Extra allowance for setting of structures on curves. (1676 mm. Broad Gauge)	ETI/OHE/G	00111 Sh - 1	B
2.	Standard setting of structures in the vicinity of signals. (Broad gauge)	ETI/OHE/G	00112	C
3.	Typical design of side bearing foundation.	ETI/OHE/G	00131	-
4.	Typical design of new pure gravity foundation.	ETI/SK/C	131	-
5.	Typical design of side gravity foundation (Soil pressure 8000 Kgf/m.)	ETI/SK/C	142	-
6.	Typical design of cantilever mast.	RE/33/G	00141 Sh - 3	-
7.	Standard drilling Schedule of OHE mast 9.5m long RSJ & BFB respectively.	ETI/OHE/G	00144 Sh - 3	C
8.	Span & stagger chart for conventional OHE, (Cad. Cu. Catenary & Cu. Contact wire) wind pressure 75, 112.5 & 150 Kgf/Sq.m.	ETI/OHE/G	00202	-
9.	Employment schedule for cantilever mast, Regulated OHE Cat.65/Cu. And contact 107/Cu., WP 112.5 Kgf/Sq.m. without EW & without RC.	ETI/OHE/G	00153 Sh - 1	E
10.	Employment schedule for cantilever mast, Regulated OHE Cat.65/Cu. And contact 107/Cu., WP 112.5 Kgf/Sq.m. with EW & without RC.	ETI/OHE/G	00153 Sh - 2	E
11.	Employment schedule for cantilever mast, Regulated OHE Cat.65/Cu. And contact 107/Cu., WP 112.5 Kgf/Sq.m. without EW & with RC.	ETI/OHE/G	00153 Sh - 3	E
12.	Employment schedule for cantilever mast, Regulated OHE Cat.65/Cu. And contact 107/Cu., WP 112.5 Kgf/Sq.m. with EW & RC.	ETI/OHE/G	00153 Sh - 4	D
13.	Employment schedule for cantilever mast, Unregulated OHE Cat.65/Cu. And contact 107/Cu., WP 112.5 Kgf/Sq.m. at 35 ° C & with 28 Kgf/Sq.m. at 40 °C without EW & RC.	ETI/OHE/G	00154	D
14.	Employment schedule for 8"X8"X35 lbs BFB (9.5 m long) (WP 112.5 Kgf/Sq.m. Cat.65/Cu. & Cont. 107/Cu.	ETI/C	0708	A

15.	Employment Schedule for OHE mast over lap center location with 3.0m implantation, Cat. 65/Cu. & cont. 107/Cu., WP 112.5 Kgf/Sq.m.	ETI/C	0710	A
16.	Employment Schedule for OHE mast over lap inter location with 3.0m implantation, Cat. 65/Cu. & cont. 107/Cu., WP 112.5 Kgf/Sq.m.	ETI/C	0712	A
17.	Employment schedule for 9.5 m long 200x200x 49.9 Kg mast Cat.65/Cu. And cont.107/Cu. WP 112.5 Kgf/sq.mm.	ETI/C	0714	A
18.	Employment schedule for pre stressed spun concrete mast (PC 42) 9.5 m long for conventional OHE, Normal location (WP 150, 112.5 and 75 Kgf/sq.mm.)	ETI/C	0725	A
19.	Termination arrangement of Tramway type OHE with 3 pulley type regulating equipment (3:1 ratio)	ETI/OHE/G	04212	B
20..	General distribution of droppers.	ETI/OHE/G	00161	-
21.	Out line of Pantograph (Broad gauge and metre gauge)	RE/33/G	00181	A
22.	Earthing and bonding of PSI mast.	ETI/OHE/SK	537 Sh – 1	D
23.	Typical earthing arrangement in SPUN PSC mast with 18 mm. Dia rod.	ETI/OHE/SK	537 Sh – 2	B
24.	General formation of single track embankments and cutting (Broad gauge)	RE/33/G	01101 Sh – 1	A
25.	General formation of double track embankments and cutting (Broad gauge)	RE/33/G	01102 Sh- 1	A
26.	General formation of multiple tracks (1675 mm.gauge)	RE/33/G	01103 Sh. 1	A
27.	Standard anchor arrangement.	RE/33/G	01401	E
28.	Anchor arrangement with dwarf mast.	ETI/OHE/G	01402	B
29.	Schedule of anchor block for B.G. track.	ETI/OHE/G	01403 Sh. 1	D
30.	Double guy rod arrangement with anchor block for B.G. track.	ETI/OHE/G	01403 Sh.2	C
31.	Schedule of anchor block for B.G.(black cotton soil)	ETI/OHE/G	01403 Sh. 3	B
32.	Rock anchor for B.G. track.	ETI/SK/C	208	-
33.	Standard guide tube arrangement on a mast and structures.	ETI/OHE/G	01505	-
34.	Standard guide tube assembly.	ETI/OHE/P	5060-2	C
35.	Trapezoidal counter weight arrangement on OHE structures.	ETI/OHE/G	01502	-
36.	Arrangement of 3 Kv & 25 kv Pedestal insulator supports on OHE masts and portals.	ETI/OHE/G	01601	-
37.	Standard arrangements for mounting of number plate on OHE structures.	ETI/OHE/G	01701	A
38.	Schematic arrangement of regulated overhead equipment.	ETI/OHE/G	02101	A
39.	Typical arrangements of OHE on cantilever masts for double track section.	ETI/OHE/G	2102	-
40.	Typical arrangement for fixing of bracket assembly on 9.5m mast and structure to suit raising of tracks(in future)	ETI/OHE/G	02102 Sh.3	-

41.	MS Bracket fitting for PSC masts – General arrangement and SPS details	ETI/SK/C	214 Sh.1	E
42.	Mast on platforms(1676 mm gauge)	ETI/OHE/G	02104 Sh. 2	A
43.	Details of bracket arrangement on tangent and curved tracks.	ETI/OHE/G	02106 Sh. 1	A
44.	Details of bracket arrangement for OHE (high speed)	ETI/OHE/G	02106 Sh. 3	C
45.	Single bracket assembly on structures and dropped arms.	RE/33/G	02107	D
46.	Box type cantilever arrangement.	ETI/OHE/G	02108	A
47.	Arrangement at anti creep.	ETI/OHE/G	02111	A
48.	Standard cantilever arrangement for boom anchor anti creep location.	ETI/OHE/G	02113	-
49.	Schematic arrangement of un-insulated over lap (type –I) 3 & 4 span overlaps.	RE/33/G	02121 Sh. 1	F
50.	Schematic arrangement of insulated overlap.	ETI/OHE/G	02131 Sh.1	-
51.	General arrangement of regulated OHE at turn-outs (overlap & crossed type)	ETI/OHE/G	02141	C
52.	General arrangement of regulated OHE at cross over (overlap & crossed type)	ETI/OHE/G	02151	-
53.	Arrangement of neutral section.	ETI/OHE/G	02161 Sh.1	C
54.	Arrangement of neutral section assembly (PTFE type) at SWS.	ETI/OHE/G	02162	-
55.	Arrangement of short neutral section.	ETI/OHE/G	02161 Sh.2	-
56.	Schematic arrangement of un-regulated overhead equipment.	ETI/OHE/G	03101	-
57.	Standard termination of OHE (Regulated & un-regulated)	ETI/OHE/G	03121	E
58.	General arrangement of unregulated OHE at turnouts (Crossed & overlap type)	ETI/OHE/G	03151	-
59.	General arrangement of unregulated OHE at cross overs and diamond crossings (overlap and crossed type)	ETI/OHE/G	03152 Sh.1	-
60.	General arrangement of unregulated OHE at diamond crossing.	ETI/OHE/G	03152 Sh.2	-
61.	General arrangement of head span.	ETI/OHE/G	03201	-
62.	General arrangement of pull off.	ETI/OHE/G	03301	A
63.	In span jumper connection between catenary & contact wire.	ETI/OHE/G	05101	-
64.	Continuity jumper connection at un-insulated overlap.	ETI/OHE/G	05102	C
65.	Arrangement of anti-theft jumper.	ETI/OHE/G	05107	A
66.	Connection at turnouts.	ETI/OHE/G	05103	B
67.	Potential equaliser connection at insulated overlap and neutral section.	ETI/OHE/G	05104	-
68.	Connections at diamond crossing.	ETI/OHE/G	05106	A
69.	General arrangement of connections to OHE by copper cross feeder (150)	ETI/OHE/G	05121 Sh.1	C
70.	General arrangement of connections at switching station on double track section by copper cross feeder (150)	ETI/OHE/G	05122 Sh.1	C

71.	General arrangement of connections at switching station on multiple track section by copper cross feeder(150)	ETI/OHE/G	05123 Sh.1	C
72.	Termination of feeder, return conductor & return feeder (copper & aluminium)	RE/33/G	05145-1	-
73.	Arrangement of suspension of double spider 25Kv feeder and return feeder between sub-station and feeding station.	RE/33/G	05152	C
74.	Assembly of section insulators.	RE/33/G	05181	C
75.	General arrangement of earth wire on OHE mast.	ETI/OHE/G	05201	A
76.	SPS details for Earth wire clamp on PSC mast.	ETI/SK/C	214 Sh.2	A
77.	Arrangement of transverse bond.	ETI/OHE/G	05251	A
78.	Connection of return conductor to track.	ETI/OHE/G	05306	F
79.	Suspension arrangement of aluminium return conductor (spider) on traction structures.	ETI/OHE/G	05307	B
80.	Suspension of return conductor (spider) from boom of structures (with clevis type disc insulators)	ETI/OHE/G	05312	A
81.	Connections between OHE and aluminium return conductor at booster stations.	ETI/OHE/G	05413	B
82.	Mounting of 25 Kv Isolators on OHE structures (general arrangement)	ETI/OHE/G	05513 Sh.1	A
83.	Details of small part steel work for supporting 25 Kv Isolator on new TCC boom.	ETI/OHE/G	05513 Sh.2	A
84.	Characteristics of conductors/ busbar for 25 Kv AC traction.	ETI/OHE/G	05600	A
85.	Catenary dropper assembly.	ETI/OHE/P	1190	B
86.	Standard antiwind clamp.	ETI/OHE/P	2550-1/2	L
87.	Multiple cantilever cross arm assembly.	RE/33/P	3120	H
88.	Anchor fitting assembly on rolled sections.	ETI/OHE/P	3230	C
89.	Anchor fitting assembly on 'K' series, TTC masts and 'P' type portal upright.	ETI/OHE/P	3240	D
90.	Anchor assembly on 'N' and 'O' type portal upright.	ETI/OHE/P	3250	D
91.	Structure bonds.	ETI/OHE/P	7000	F
92.	Earthing station.	ETI/OHE/P	7020	B
93.	Longitudinal rail bond.	ETI/OHE/P	7030	F
94.	Short super mast assembly.	ETI/C/P	8010	G
95.	Long super mast assembly.	ETI/C/P	8020	C
96.	Bracket attachment assembly on portal upright (N, O, R, P, G & BFB type)	ETI/C/P	8030	B
97.	Super mast assembly on portals.	ETI/C/P	8050	C
98.	Medium super mast assembly	ETI/OHE/P	8060	C
99.	Standard portal (N, O, P, R, G, & Double BFB type)	ETI/C	0064	-
100.	Volume chart and equivalent chart of foundation.	ETI/C	0058 Sh.1	E
101.	Volume chart and equivalent chart of foundation new pure gravity.	ETI/C	0058 Sh.2A	D
102.	Volume chart and equivalent chart of Dry black cotton soil foundation (NBC type) for 16500 & 11000 Kgf/m <sup>2</sup> , 3.0 m depth.	ETI/C	0058 Sh.3A	B
103.	Volume chart and equivalent chart of New pure gravity foundation (500 m exposed)	ETI/C	0058 Sh.4	B

104.	Volume chart and equivalent chart of Dry black cotton soil foundation (NBC type) 2.5 depth only for 8000 Kgf/m <sup>2</sup>	ETI/C	0058 Sh.5	-
105.	Dwarf mast foundation on wet & dry black cotton soil.	RE/ALD/OHE/ S K/C	02	-
106.	Special BFB portal for 5 tracks (General arrangement)	ETI/C	0026 Sh.1	C
107.	Protective screen at foot over bridge and road over bridge.	ETI/C	0068	F
108.	Chart for portal foundation.	ETI/C	0005/68	-
109.	Muff for OHE structures.	ETI/C	0007/68	D
110.	Structures muff for sand core foundations.	ETI/C	0012/69	D
111.	9.5 m Standard traction mast (fabricated 'K' series)	ETI/C	0018-2	D
112.	Details of Remote Control Cubicles (foundation, RCC slab, building plan & steel door)	ETI/C	0067	B
113.	9.5 m standard traction mast (fabricated with bottom plates 'B' series)	ETI/C	0071	E
114.	Details of OHE foundation in soft rock (bearing capacity 45,000 Kgf/m <sup>2</sup> )	ETI/C	0059	B
115.	Details of foundation for fencing upright.	ETI/C	0032	B
116.	Typical location & schematic connection diagram for a three interrupter switching station.	ETI/PSI	003	C
117.	Typical general arrangement of a three interrupter switching station.	ETI/PSI	004	E
118.	Typical location plan & general arrangement for sectioning & paralleling station.	ETI/PSI	005	E
119.	Typical location plan and general arrangement for a feeding station.	ETI/PSI	006	E
120.	Typical general arrangement at a Booster transformer Station (with 4 cross feeder) Type III.	ETI/PSI	013	B
121.	Typical general arrangement of 280 KVA Booster transformer station (with 4 cross feeder) type-III.	ETI/PSI	018	A
122.	Typical general arrangement at a booster transformer station (without cross feeder) type – I.	ETI/PSI	011	C
123.	Arrangement of mounting 25Kv/240, 10 KVA LT supply transformer.	ETI/OHE/G	05522	-
124.	Typical number plate for auxiliary transformer.	ETI/PSI/P	7525	-
125.	Employment schedule for switching and booster station main masts.	ETI/C	0185	B
126.	Drilling schedule for S-1mast.	ETI/C	0030	F
127.	Drilling schedule for S-2 mast	ETI/C	0031	D
128.	Drilling schedule for S-3 mast(length 11.4 m)	ETI/C	0180	C
129.	Drilling schedule for 8"x6"x35 lbs. RSJ mast 8.0 m long for booster transformer station Type S-4.	ETI/C	0036	E
130.	Drilling schedule for S-5 mast (11.4 m long)	ETI/C	0042	E
131.	Drilling schedule for S-6 mast (length 12.4 m)	ETI/C	0181	C
132.	Drilling schedule for S-7 mast (length 12.4 m)	ETI/C	0182	C
133.	Drilling schedule for S-8 mast (length 12.4 m)	ETI/C	0183	C
134.	Drilling schedule for S-9 mast (length 9.4 m)	ETI/C	0184	C



135.	General arrangement & details of fencing pannels & gate for switching station.	ETI/C	0186 Sh.1	E
136.	Details of fencing upright and anti-climbing device for switching station.	ETI/C	0186 Sh.2	E
137.	S-100 fabricated mast for mounting LT supply transformer and drop out fuse switch at switching station.	ETI/C	0043	B
138.	S-101 details of mast for supporting isolator inside switching station.	ETI/C	0044	A
139.	Details of anchor beam for SP, SSP & FP	ETI/C	0033	D
140.	Details of small part steel for switching station.	ETI/C	0034 Sh.1	K
141.	Typical fencing and anticlimbing arrangement at switching station.	ETI/PSI	104	E
142.	Typical earthing layout of sub-sectioning and paralleling station.	ETI/PSI	201	+B
143.	Typical earthing layout of a sectioning and paralleling station.	ETI/PSI	202	B
144.	Typical earthing layout of a feeding station.	ETI/PSI	203	B
145.	Earthing details for interruptor LT supply transformer 25 Kv lightning arrestors P.T. Type-I (S-100 masts, S-101 mast, fencing upright and main mast)	ETI/PSI	204	C
146.	Typical earthing layout at a booster transformer stations.	ETI/PSI	211-1	A
147.	Typical cable run layout of a sub-sectioning & paralleling station.	ETI/PSI	301	C
148.	Typical cable run layout of a sectioning and paralleling station.	ETI/PSI	302	C
149.	Typical cable run layout of a feeding station.	ETI/PSI	303	B
150.	Typical earthing layout at a booster transformer station (with 4 cross feeder for Type III, IV and V)	ETI/PSI	212	B
151.	Typical drawing for a terminal board.	ETI/PSI	501	C
152.	36 mm aluminium Bus terminal.	ETI/PSI/P	6480	C
153.	36 mm Aluminium splices	ETI/PSI/P	6490	B
154.	36 mm aluminium Tee connector.	ETI/PSI/P	6500	C
155.	36 mm aluminium tee terminal	ETI/PSI/P	6510	D
156.	36/15 Tap connector	ETI/PSI/P	6520	C
157.	36 mm aluminium flexible bus splice.	ETI/PSI/P	6550	B
158.	36 mm aluminium bus splice cum tee connector.	ETI/PSI/P	6560	B
159.	Typical number plate for interruptor and double pole isolator.	ETI/PSI/P	7520	B
160.	Typical number plate for potential transformer Type-I	ETI/PSI/P	7521	B
161.	Typical number plate for booster transformer .	ETI/PSI/P	7522	B
162.	Details of bracingfor switching & B.T. masts.	ETI/C	0034 Sh.2	B
163.	Details of small parts steel of out rigger for switching stations and booster transformer stations.	ETI/C	0037	C
164.	Details of small parts steel for booster transformer stations.	ETI/C	0040	E
165.	Details of pre-cast cable trench for switching station.	ETI/C	0038	E

166.	Standard 'R' type portal rod laced general arrangement.	ETI/C	0011/69 Sh.1	C
167.	Standard 'G' type portal special upright and end piece.	ETI/C	0056	C
168.	Short bored pile foundation for traction mast (permissible BM & volume)	ETI/C	0062	B
169.	Chart for portal foundations in dry black cotton soil safe bearing capacity 16500 Kg/m <sup>2</sup>	ETI/C	0063	B
170.	Special arrangement of OHE under overline structure.	ETI/OHE/SK	529	-
171.	Suspension of 25 Kv feeder (spider) on OHE masts.	ETI/OHE/G	05143	B
172.	Parallel clamp (20/20)	ETI/OHE/P	1550	E
173.	Compensating plate.	ETI/OHE/P	5191-1/2	D
174.	Suspension clamp.	RE/33/P	1160	J
175.	Double suspension clamp.	RE/33/P	1170	K
176.	Double suspension lock plate.	RE/33/P	1172	C
177.	Catenary splice (65)	ETI/OHE/P	1090	-
178.	Arrangement of anti-theft jumper at overlap.	ETI/OHE/G	05107	A

**(B) LIST OF STANDARD SPECIFICATIONS**

Sl. No.	Title of Specification	Specification No.
1.	Annealed stranded copper conductor for jumper wire.	ETI/OHE/3 (2/94) With A&C slip No.1 of 4/95.
2.	Copper busbar.	RE/30/OHE/5 (11/60) IS:613-1984.
3.	Structural steel tubes.	ETI/OHE/11 (5/89)
4.	Hot dip zinc galvanisation of steel mast (Rolled and Fabricated) tube and fittings used on 25 Kv AC OHE.	ETI/OHE/13 (4/84) With A&C slip No.1 of 5/86, 2 of 4/90 and 3 of 4/90. QAS-5/86.
5.	Stainless steel wire ropes.	ETI/OHE/14 (9/94) With A&C slip No.1 to 3 of 9/95.
6.	25 Kv single and double pole isolators.	ETI/OHE/16 (1/94)
7.	Steel and SS Bolts, nuts and washers.	ETI/OHE/18 (4/84) With A&C slip No.4 of 10/02 QAS-8/84.
8.	Aluminium alloy section and tubes.	ETI/OHE/21 (9/74)
9.	Section insulator assembly without Section Insulator.	ETI/OHE/27 (8/84) With A&C slip No.1 of 10/92.
10.	Enamelled steel plates.	ETI/OHE/33 (8/85)
11.	Galvanized steel wire.	ETI/OHE/36 (12/73) A&C slip No. 1 of 5/98.
12.	Fitting for 25 Kv 50 Hz AC overhead traction equipment (MCI)	ETI/OHE/49 (9/95) A&C slip No.1 of 3/97. QAS-3/1983.
13.	Cadmium Copper conductor for overhead Rly.Traction/Bridle wire/large span wire.	ETI/OHE/50 (6/97) With A&C slip No.1 of 6/97.
14.	25 Kv dropout fuse switch & operating pole for use with 10 KVA, 25 KVA & 50 KVA, LT supply transformer.	ETI/PSI/14 (1/86) With A&C slip No.1 of 4/87.
15.	25 Kv/240 V, 10 KVA LT supply transformer.	ETI/PSI/15 (08/2003)
16.	Aluminium alloy stranded catenary wire 19/2.79 mm.	ETI/OHE/54 (2/85) With A&C slip No.2 of 10/92.
17.	Regulating equipment (a) Winch type (5:1)  (b) 3 pulley type (3:1)	ETI/OHE/48 (7/84) With A&C slip No.2 of 3/2003. -do-/48 A(9/85) with A&C slip No.3 of 3/2003.
18.	Battery charger for 110 V battery 40 AH	ETI/PSI/1 (6/81)
19.	7.5 Kv Lightning arrestors.	ETI/PSI/3 (8/75) With A&C slip No.1 of 2/91.
20.	25 Kv potential transformers.	ETI/PSI/8 (10/92) With A&C slip No.1 to 6.
21.	150 KVA Booster Transformers - oil filled.  - Dry type.	ETI/PSI/98 (8/92) With A&C slip Nos. 3 of 6/94. ETI/PSI/97 (6/87) With A&C slip No.1&2 of 9/88.
22.	110V, 40 AH Lead Acid batteries.	ETI/PSI/21 (6/81) With A&C slip No.1 of 7/81.

Note: All the Above drawings/Specifications can be purchased from the office of RDSO, Lucknow or CORE, Allahabad on payment.

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SOUTHERN RAILWAYSITE ORDER BOOK

Name of Work: .....

AGT. No. / Date: .....

Name of the contractor: .....

Starting date of construction: .....

Sl. No.	Site Order by Inspecting officials	Signature of the official	Noting Signature		Compliance details	Remarks	Compliance Signature	
			Contractor	SSE			Contractor	SSE

Notes:

1. For every work, separate site order book should be maintained.
2. Site order should be recorded specifically and chronologically.
3. Wherever required site orders may be supported by sketches.

Special Note: Any objection of the contractor to the site order should be brought to the notice to the Executive Engineers or higher officials immediately by the contractor separately.

SOUTHERN RAILWAYHINDRANCE REGISTER

Name of Work: .....

AGT. No. / Date: .....

Name of the contractor: .....

Starting date of construction: .....

Sl. No.	Nature of hindrance	Date of Occurrence	Date of removal	Period of hindrance	Over lapping period	Total period of hindrance	Extension recommended	Extension approved	Clause under GCC	Signature	
										Contractor	SSE

Notes: Separate register to be maintained for each work.

SOUTHERN RAILWAYMATERIAL TRANSACTION REGISTER

Name of Work: .....

AGT. No. / Date: .....

Name of the contractor: .....

Starting date of construction : .....

Location of Stores : .....

Date of Receipt	Name /Nature of work	Opening Balance	Item Description	Details of Receipt				Total received (with unit)	Total certificate	Signature		Details of issues			Closing Balance	Remarks reg. performance	Signature	
				Voucher No.	Brand	Quantity	Expiry date			Contract or	SSE	Date	Quantity	Total issued			Contract or	SSE

Notes: Separate register to be maintained for each work

SOUTHERN RAILWAYCUBE TESTING REGISTER

(Applicable for concreting work)

Name of Work: .....

AGT. No. / Date: .....

Starting date of construction : .....

Name of the contractor: .....

Sl. No.	Date of concreting	Name of component	Grade of concrete	Compressive Strength in N/mm					Signature		Compressive Strength in N/mm2					Remarks	Signature	
				Date of testing	After 7 days curing						Date of testing	After 28 days curing					Contract or	SSE
					I	II	III	Avg.	Contractor	SSE		I	II	III	Avg.			

Note: Separate register to be maintained for each work.

SOUTHERN RAILWAYDAILY PROGRESS & LABOUR REGISTER

Name of Work: .....

AGT. No. / Date: .....

Starting date of construction : .....

Name of the contractor: .....

Date	Status of work (in the beginning)	Progress (on date)	Contractor labour (available at site)	Remarks	Signature	
					Contractor	Rly Representative

Note: Separate register to be maintained for each work



FORMAT FOR DECLARATION TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER  
DOCUMENTS IF NO RETIRED RAILWAY EMPLOYEE IS/ARE ASSOCIATED WITH THE FIRM

I/We,\_\_\_\_\_ hereby declare that, as per instructions contained in Clause No. 16 of Annexure I of Part I and Clause No. 59(9) of Part II of Indian Railways Standard General Conditions of Contract, no retired Railway employees are associated with my/our firm.

Place:

Date:

Signature of the Authorized person of the Firm  
with stamp and date

**In addition to Annexure-V, in case of other than Company/Proprietary firm, ANNEXURE -V(A) shall also be submitted**

*(This certificate is to be given by attorney/authorized signatory/each member of Partnership firm/Joint venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc.)*

I/We.....(Name), attorney/ authorized signatory of the (constituent firm/constituent partner) and member/partner of the .....(tendering firm) hereby solemnly affirm and state as under:

1. I/we certify that..... (constituent firm/constituent partner) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
2. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/we are not from such a country or, if from such a country, have been registered with the competent Authority. I/we hereby certify that I/we fulfill all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed),

SEAL AND SIGNATURE  
OF THE CONSTITUENT FIRM/CONSTITUENT PARTNER

Place:

Dated:

MANDATE TO BE SUBMITTED BY CONTRACTOR FOR UPLOADING OF INFORMATION  
REGARDING BILLS AND FOR PAYMENT THROUGH EFT/RTGS

ELECTRONIC FUND TRANSFER MANDATE FORM

1. CUSTOMER DETAILS:

- a. Customer Name:
- b. Customer Address:
- c. Email ID:
- d. Telephone Number:

2. ACCOUNT DETAILS:

- a. Account Number:
- b. Type of Account:
- c. Name of the Bank:
- d. Name of the Branch Address:
- e. Bank Telephone number:
- f. IFSC Code of the Branch:
- g. MICR Code of the Branch:

I hereby declare that the particulars given are correct and complete.

Date:

Seal

Customer signature

---

Certificate that the particulars furnished above are correct as per our records.

Date

Seal:

Signature of the Authorised official of the Bank

CONSERVANCY CESS CHARGES

Item No.	Item Description	Avg. No. of Labourers / workman employed per day	Conservancy Cess charges to be recovered (per month) in Rs.
I	Railway Contractors:		
	(a) Engg.Works Contractors (Engg., Elect., Mech., Signal etc.)	1 to 5 6 to 10 11 to 25	159/- 312/- 785/-
	(b) Genl. Goods handling Contractors including Contracts awarded by Stores dept.	26 to 50 51 to 100 101 to 200	1143/- 1534/- 1926/-
	(c) Coal handling ash pit cleaning contractors	201 to 300	2318/-
	(d) Railway siding use by the contractors	301 to 750 751 to 1500	2676/- 5382/-
	(e) Contractor supplying water to engines.	1501 to 3000 3001 & over	10768/- 21508/-

**(Bid Security)**

*Bank Guarantee Bond from any scheduled commercial bank of India  
(On non-judicial stamp paper, which should be in the name of the Executing Bank).*

**Name of the Bank: -----**

President of India Acting through  
**The senior Divisional Electrical Engineer (Traction Distribution),  
Southern Railway, Madurai Division.**

Beneficiary: **The Senior Divisional Finance Manager,  
Southern Railway, Madurai Division,**

Date:.....

**Bank Guarantee Bond No.:**

**Date:-----**

In consideration of the President of India acting through **The senior Divisional Electrical Engineer (Traction Distribution), Southern Railway, Madurai Division, Madurai – 625 016,** (hereinafter called “The Railway”) having invited the bid for \_\_\_\_\_

\_\_\_\_\_ through Notice inviting tender (NIT) No. \_\_\_\_\_, We have been informed that . . . . . *[Insert name of the Bidder]*..... (hereinafter called "the Bidder") intends to submit its bid (hereinafter called "the Bid") .

WHEREAS, the Bidder is required to furnish Bid Security for the sum of \_\_\_\_\_ *[Insert required Value of Bid Security]*, in the form of Bank Guarantee, according to conditions of Bid.

**AND**

WHEREAS,.....*[Insert Name of the Bank]*, with its Branch .....*[Insert Address]* having its Headquarters office at.....*[Insert Address]*, hereinafter called the **Bank**, acting through .....*[Insert Name and Designation of the authorised persons of the Bank]*, have, at the request of the Bidder, agreed to give guarantee for Bid Security as hereinafter contained, in favour of the Railway:

1. KNOW ALL MEN that by these present that I/We the undersigned *[Insert name(s) of authorized representatives of the Bank]*, being fully authorized to sign and incur

obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Railway full amount in the sum of **[Insert required Value of Bid Security]** as above stated.

2. The Bank undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
3. The Bank shall pay the amount as demanded immediately on presentation of the demand by Railway without any reference to the Bidder and without the Railway being required to show grounds or give reasons for its demand of the amount so demanded.
4. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
5. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the Railway and the Bidder, will in any way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by Railway at any time.
6. This guarantee will remain valid and effective from.....***[insert date of issue]*** till .....***[insert date, which should be minimum 90 days beyond the expiry of validity of Bid]***. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
7. The Bank Guarantee is unconditional and irrevocable.
8. The expressions Bank and Railway herein before used shall include their respective successors and assigns.
9. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the Railway. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.758.
10. The Bank hereby confirms that it is on the SFMS (Structured Financial Messaging System) and shall invariably send the advice of this Bank Guarantee to the following bank details –

IFSC CODE	SBIN000RAIL
IFSC TYPE	BRANCH

BANK NAME	STATE BANK OF INDIA
BRANCH NAME	RAIL
CITY NAME	NAVI MUMBAI
ADDRESS	SECTOR-11, CBD BELAPUR, NAVI MUMBAI
DISTRICT	NAVI MUMBAI
STATE	MAHARASHTRA
BG ENABLED	YES

11. The Guarantee shall be valid in addition to and without prejudice to any other security Guarantee(s) of Bidder in favour of the Railway. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Railway.

Date .....

Place.....

.....

Bank's Seal and authorized signature(s)

*[Name in Block letters]* .....

*[Designation with Code No.]* .....

*[P/Attorney]* No.

Witness:

1 Signature, Name & Address & Seal

2 Signature, Name & address & Seal

Bank's Seal

*[P/Attorney]*No.

**Note: All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.**

- - - - - End of Document - - - - -