



**SOUTH CENTRAL RAILWAY**

**ELECTRICAL DEPARTMENT**

**CARRIAGE WORK SHOP/ LALLGUDA  
SECUNDERABAD**

**Tender Notice No. LGD/L/07/2026-27/OT**

**NAME OF THE WORK**

**Replacement of overaged Electrical assets & Rewiring works at S&T  
Workshop, Mettuguda**

## NOTE TO TENDERERS

1) **Payment of Bid Security and TDC:**

- a) Payment of Bid security in respect of e-tendering, shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India. The Bank Guarantee bond shall be as per Annexure-VIA and shall be valid for a period of 90 days beyond the bid validity period.
  - b) Tender document may download from [www.ireps.gov.in](http://www.ireps.gov.in) by tenderers at free of cost.
- 2) The administration will not own any responsibility, if website is not opened for downloading / uploading the tender documents due to any technical snag.
- 3) Corrigendum Notice on IREPS: for the purpose of corrigendum in the tender, NIT period is splitted as under:
- (a) **Advertisement period:** Time during which all information pertaining to tender shall be available but offers cannot be submitted.
  - (b) **Offer submission period:** Fifteen days prior to opening/closing of tender, during which tenderers can submit their offers.
- 4) The prospective tenderers are advised to visit website “<http://www.ireps.gov.in>” before the date of tender closing to note any changes/corrigenda for any tender.
- 5) The Railway reserves the right to cancel the tender without assigning any reason thereto.
- 6) The tenderers are required to submit their offer online ONLY before tender closing time and date as mentioned in the tender notice.
- 7) The tenders will be opened after closing date and time mentioned in the tender notice.
- 8) ***If the date of opening happens to be a holiday, the tenders will be opened on the next working day.***
- 9) The Value of work is approximately **Rs.2,68,62,032/-** (Rupees Two Crore Sixty-Eight Lakh Sixty-Two Thousand Thirty-Two Only) including GST @18%.
- 10) **All necessary Documents containing this tender shall be scanned with PDF format in A4 size should be uploaded by the tenderer.**

<b>Visit our site at “<a href="http://www.ireps.gov.in">http://www.ireps.gov.in</a>”</b>
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**CHECK LIST OF DOCUMENTS (SCANNED PDF COPIES) TO BE SUBMITTED ALONG WITH TENDERS.**

1	Tenderers Information in Annexure-III	
2	NEFT MANDATE FORM in Annexure-VII	
3	Engineering Organization in Annexure – ‘IX’	
4	List of Plants & Machinery in Annexure - ‘X’	
5	List of works completed during the last three Financial Years in Annexure - ‘XI’	
6	List of works on hand in Annexure - ‘XII’	
7	Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment Only) in Annexure - ‘VIB’	
8	Format for Certificate to be submitted / uploaded by Tenderer along with the tender documents (In case of other than company/proprietary firm) in Annexure- V(A)	
9	Bid security in Annexure- ‘VIA’ (optional)	
10	Insurance Surety Bond for Performance Security in Annexure- ‘XVII’ (optional)	
11	Amount towards Bid security paid	
12	Experience Certificate (as applicable)	
13	Registration number of CGST/IGST/UTGST/SGST	
14	<b>Any other information / certificates required as per Tender document.</b>	

Address :

Phone No :

**Note:**     *The tenderer shall fill up proforma and sign and submit scanned (PDF) copy along with the offer*

**TENDERER'S INFORMATION**

The tenderer shall furnish the following information:

1. Name of the contractor & Full Address :  
(with proof of address)  
(copy of the scanned (PDF) Voter's card  
or House Hold Card should be attached)
2. For contact purpose:
  - (i) Mobile No. :
  - (ii) Land Phone :
  - (a) Office :
  - (b) Residence :
  - (iii) Fax No :
  - (iv) E-mail address :
3. Bank Account Nos.
  - (i) Name of the bank with address :
  - (ii) Code of the Bank :

(To arrange contractual payments through  
Electronic Fund Transfer System)
4. PAN No. :
5. Partnership deed should be scanned (PDF) copy attached:  
If it is not a proprietary firm.
6. License No. under contract Labour :  
(Regulation and abolition Act 1970 or Building  
and Other Construction Works Act (BOCW)  
from Ministry of Labour, if applicable. Specify  
the reasons if not applicable. (scanned (PDF)  
copy should be attached)
7. EPF Code No. :  
(scanned (PDF) copy of Registration to be attached)

Station:

Date:

NEFT / RTGS  
MANDATE FORM

1.	Name of City	
2.	Bank Code No.	
3.	Bank's Name	
4.	Branch Address	
5.	Branch Telephone/ Fax No.	
6.	Contractor's Account No.	
7.	Type of Account	
8.	IFSC Code for NEFT	
9.	IFSC Code of RTGS	
10.	Contractor's Name as per Account.	
11.	Telephone No. of Contractor	
12.	Contractor's E-mail ID, if any.	

**SOUTH CENTRAL RAILWAY  
ELECTRICAL DEPARTMENT  
CARRIAGE WORK SHOP/LALLAGUDA**

Deputy Chief Electrical Engineer – Carriage Work Shop/Lallaguda acting for and on behalf of the President of India invites E-Tenders against Tender No. LGD/L/07/2026-27/OT. Bidders will be able to submit their original/revised bids up to closing date and time only. Manual offers are not allowed against this tender, and any such manual offer received shall be ignored.

Contractors are allowed to make payments against this tender towards Bid security in respect of e-tendering, shall be deposited either in cash through e-payment gateway modes available ON IREPS portal LIKE net banking, debit card, credit card etc. or submitted as Bank Guarantee bond from a scheduled commercial bank of India. The Bank Guarantee bond shall be as per Annexure-VIA and shall be valid for a period of 90days beyond the bid validity period. Manual payments through Demand draft, Banker cheque, Deposit receipts, FDR etc. are not allowed.

**1) NIT HEADER**

Contract Type	Works		
Name of Work	Replacement of over aged Electrical assets & Rewiring works at S&T Workshop, Mettuguda		
Tender Type	Open e-tender	Bidding System	Single Packet System
Tender Closing Date & Time	As given in IREPS website	Date & Time of Uploading Tender	As given in IREPS website
Pre-Bid Required	NO	Pre-Bid Query Date Time	Not applicable
Advertised Value	Rs.2,68,62,032/-	Tendering Section	Drawing
Bidding Style	Single Rate for tender	Bidding Unit	Above/Below/Par
Bid security (Rs.)	As given in IREPS website	Validity of Offer (Days)	60
Tender Doc. Cost (Rs.)	0	Period of Completion	12 months
Bidding Start Date	As given in IREPS website	Are Joint Venture (JV) firms allowed to bid	No

**2) SCHEDULE**

S.N	ItemCode	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule Items								Above/ Below/At Par
01	Please see Item Breakup for details.							

**3) COMPLIANCE**

**Undertakings**

S.N	Description	Confirm -ation	Remarks Allowed	Documents Uploading
1	I/ We have visited the works site and I /We am /are aware of the site conditions.	No	No	Not Allowed
2	I/We also hereby agree to abide by the Indian Railways Standard General Conditions Of Contract, with all correction slips up-to- date and to carry-out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Schedule of Rates with all correction slips up-to date for the present contract.	No	No	Not Allowed
3	I/We have read the various conditions to tender attached/referred to in this tender and agree to abide by the said conditions.	No	No	Not Allowed
4	I/We also agree to keep this tender open for acceptance for a period of 60 days from the date fixed for opening the same and in default thereof, I/We will be liable for forfeiture of my/our Earnest Money.	No	No	Not Allowed

5	I/We offer to do the work for South Central Railway, at the rates quoted in the attached schedule and hereby bind myself/ourselves to complete the work in all respects within the period of completion stipulated in the tender document, from the date of issue of letter of acceptance of the tender.	No	No	Not Allowed
6	I/We hereby confirm that the rates, rebates and/or other financial terms, if any, quoted by us in the relevant fields of the Financial Bid page will only be the ruling terms for deciding the inter-se ranking, and any such condition having financial repercussions, if quoted by us anywhere else including attached documents shall not be considered for deciding inter-se ranking. However, Railways shall have the right to incorporate any such condition quoted by us, in the contract, at their discretion, if contract is placed on us.	No	No	Not Allowed
7	Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.	No	No	Not Allowed
8	All the bidders / tenders should ensure that they are GST compliant and their quoted tax structure / rates are as per GST Law	No	No	Not Allowed

#### Custom

S.N	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Engineering Organization in Annexure -IX	No	No	Allowed (Mandatory)
2	List of plants and machinery in Annexure - X	No	No	Allowed (Mandatory)
3	List of works completed during the last 3 Financial Years Annexure - XI	No	No	Allowed (Mandatory)
4	List of works on hand with tenderer in Annexure -XII	No	No	Allowed (Mandatory)
5	Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment Only) in Annexure - VIB.	No	No	Allowed (Mandatory)
6	Format for Certificate to be submitted / uploaded by Tenderer along with the tender documents (In case of other than company/proprietary firm) in Annexure-V(A)	No	No	Allowed (Optional)
7	Bid Security in Annexure – VIA	No	No	Allowed (Optional)
8	NEFT Mandate Form in Annexure-VII	No	No	Allowed (Mandatory)
9	Experience Certificate (as applicable)	No	No	Allowed (Mandatory)
10	Check List of Documents to be Submitted along with Tender	No	No	Allowed (Mandatory)
11	Insurance Surety Bond for Performance Security in Annexure- 'XVII' (optional)	No	No	Allowed (Optional)
12	The tenderer shall fill up proforma (Annexure-I) and sign and submit scanned (PDF) copy along with the offer.	No	No	Allowed (Mandatory)

#### 4) Documents attached with tender:

S. No.	Document Name	Document Description
1	Tender Document	Master tender document comprising Particulars of Bid Security, PG&SD, Penalty clauses, Guarantee clause etc. all above including specifications etc.

**TENDERER'S UNDERTAKING**

To

The President of India  
Acting through the Deputy Chief Electrical Engineer,  
Carriage Work Shop,  
South Central Railway, Lallaguda.

1. I/We\_\_\_\_\_have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of **60 days** from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my / our "Bid Security". I/ We offer to do the work for South Central Railway, at the rates quoted in the attached bill(s) of quantities and hereby bind myself /ourselves to complete the work in all respects within 12 months from the date of issue of letter of acceptance of the tender.
2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR) with all correction slips up-to-date for the present contract.
3. A Bid security of \_\_\_\_\_/- has already been deposited online/submitted as Bank Guarantee bond. Full value of the Bid security shall stand forfeited without prejudice to any other rights or remedies in casemy/our Tender is accepted and if:
  - a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
  - b) I/ we do not execute the contract documents within Seven days after receipt of notice issued by the Railway that such documents are ready; and
  - c) I /We do not commence the work within fifteen days after receipt of orders to that effect.
4. (a) I/We am/are a Startup firm registered by ..... Department of Industrial Policy and Promotion (DIPP) and my registration number is .....valid up to (Copy enclosed) and hence exempted from submission of Bid Security.
5. We are a Labour Cooperative Society and our Registration No. is .....with .....and hence required to deposit only 50% of Bid Security.
6. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

\_\_\_\_\_  
Signature of tenderer(s)

Date:.....

Address of the Tenderer (s)

.....  
.....  
.....



**ACCEPTANCE OF TENDER**

I accept the tender and agree to pay the rates as per Standard Schedule of Rates\_\_\_\_\_as corrected by and up to correction slip No\_\_\_\_\_of \_ enhanced / diminished by\_\_\_\_\_percent / at par in respect of Bill(s) of quantities in Schedule-A.

For **DEPUTY CHIEF ELECTRICAL ENGINEER**  
Carriage Work shop/Lallaguda

**SOUTH CENTRAL RAILWAY**  
For and on behalf of the President of India.

## **TERMS AND CONDITIONS**

### **1.0 GENERAL:**

The contract is for “**Replacement of over aged Electrical assets & Rewiring works at S&T Workshop, Mettuguda**”

- i. The Tenderer is hereby advised to thoroughly go through the requirements of Railways as mentioned in the Tender document before submission online of his offer.
- ii. The submission online of the tender will be deemed to imply that this memorandum and all documents enclosed have been studied and understood and that the Tenderer is aware of the full scope of the work to be done.
- iii. If the tender Opening date happens to be holiday, the Tender will be opened on the next working day.
- iv. The work proposed under this bid as mentioned in detailed scope of work to prefer quality services from the approved agency who can execute the work without any compromising on safety standards, rules and regulations and other provisions made for the smooth execution of contract.
  - a. Any doubts on the purview of scope of work shall be get clarified personally from Deputy Chief Electrical Engineer/ Carriage Workshop/S.C. Railway/Lallaguda to get better understanding on scope/essence of the contract.
  - b. The total cost of the work has been worked out by considering the quantum of work/nature of work / staff requirement / wages etc. duly taking into account the prevailing operations by Railways.
  - c. The bidders are advised that they may thoroughly study the scope of work involved in the bid.
  - d. Bidder may have to take the medical insurance certificate of his labour employed for the purpose or a comprehensive life/General insurance Policy can be obtained for covering the totalRisk of the employees. Bidder please note, while quoting of bid any other conditions as per GCC.
- v. It is also stipulated that the agency participating in the tender shall be registered under GST Act and furnish valid GSTIN.
- vi. The rates quoted by the firm shall not be revised or altered during the currency of the contract period.
- vii. The entire work is for **12 months**. However, the period of contract can be reduced without assigning any reasons if necessitated by the Railway administration.
- viii. In case of any contradiction between General Conditions of Contract and Special conditions of contract, the later shall prevail.
- ix. Railway is not bound to accept the lowest or any other tender or to assign any reason for non-acceptance or rejection of a tender. The railway reserves the right without assigning any reason whatsoever to.
  - a. Accept or to cancel any tender in respect of the whole or any portion of work specified in the tender papers.
  - b. To subdivide the quantum of tendered work among different tenders.
  - c. To reduce/alter the quantum of work.
- x. The Railway shall reserve the right to draft any of the vehicles and/or equipments mobilized by the contract at the site of work along with its operator employed by the contractor to assist in rescue and restoration operation in case of any accidents/natural calamities involving human lives. The contractor shall be responsible to arrange mobilization of his operator/equipment/vehicle so drafted with shortest possible delay.
- xi. The Railway reserves the right to terminate the contract at any stage without assigning any reason by giving seven days advance notice to the firm and in that event no claim whatsoever shall be entertained by the Railways.

- xii. Commencement of Works: The Contractor shall commence the works within 15 days after the receipt by him of an order in writing to this effect from the Engineer and shall proceed with the same with due expedition and without delay as per clause No. 19(2) of latest GCC 2022 conditions.
- xiii. Accepted Programme of Work (as per clause No. 19(3) of latest GCC 2022 conditions): The Contractor who has been awarded the work shall as soon as possible but not later than 30 days after the date of receipt of the acceptance letter in respect of contracts with initial completion period of two years or less or not later than 90 days for other contracts have to submit the detailed programme of work indicating the time schedule of various items of works in the form of Bar Chart/PERT/CPM. He shall also submit the details of organization (in terms of labour and supervisors), plant and machinery that he intends to utilize (from time to time) for execution of the work within stipulated date of completion. The programme of work amended as necessary by discussions with the Engineer, shall be treated as the agreed programme of the work for the purpose of this contract and the Contractor shall endeavor to fulfill this programme of work. The progress of work will be watched accordingly and the liquidated damages will be with reference to the overall completion date. Nothing stated herein shall preclude the Contractor in achieving earlier completion of item or whole of the works than indicated in the programme.

## **2.0 ELIGIBILITY CRITERIA:**

- 2.1 The tenderer shall possess a valid Electrical Contractor License, issued by any State Government or Union Territory Administration, authorizing execution of electrical works up to 11 kV. The contractor shall have in his employment or shall engage a person holding a valid certificate of competency issued by any State Government or Union Territory Administration for supervision of electrical works up to 11 kV.**

**Offers not accompanied by a valid Electrical Contractor License and requisite Supervisor competency for works up to 11 kV shall be summarily rejected.**

**(Authority: PCEE/SC letter No. E.29/P/Similar nature of works, dated 07.05.2026)**

**AND**

## **2.2 SIMILAR NATURE OF WORK:**

**Works of wiring/cabling or installation and commissioning of electrical items (other than on coaches) such as lights, fans, pumps, charging arrangements, earthing etc. (with or without supply of items/equipments) for 230V, 1phase or 415V, 3phase system or higher voltages.**

**(Authority: CEE/SC letter No. E.29/P/Similar nature of works, dated 30.12.2014)**

**A copy of similar nature of work should be uploaded through IREPS with their offer, failing which the tender will be rejected.**

**AND**

## **2.3 TECHNICAL ELIGIBILITY CRITERIA:**

**The tenderer must have successfully completed or substantially completed any of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:**

- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of the tender,**
- or**
- (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of the tender,**
- or**
- (iii) One similar work costing not less than the amount equal to 60% of advertised value of the tender.**

**Note for Technical Eligibility criteria:** Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of closing of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

**AND**

**Financial Eligibility Criteria:**

The tenderer must have minimum average annual contractual turnover of V/N or 'V' whichever is less; where

V= Advertised value of the tender in crores of Rupees

N= Number of years prescribed for completion of work for which bids have been invited.

The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.

The tenderers shall submit requisite information as per Annexure-VIB, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

### **3.0 TENDER DOCUMENTS:**

Tender Document Cost (TDC): Tender Document may be downloaded from [www.ireps.gov.in](http://www.ireps.gov.in) by tenderers at free of cost. (as per PFA/SCR/SC Lr.No. A/GST/Clarifications/2019 dated: 06.04.2020).

The administration will not own any responsibility, if website is not opened for downloading / uploading the tender documents due to any technical snag.

All the prospective tenderers are requested to remit the tenderer is expected to examine carefully all the contents of all the tender document including instructions, conditions, terms, specifications and take them fully into account before uploading his offer. Failure to comply with the requirements as detailed in these documents shall be at the tenderer's own risk.

The tenderer shall not make or cause to be made any alternation, eraser or obliteration to the text of the tender documents.

The Tenderer should visit, examine and assess the Site including working conditions and will be deemed to have satisfied himself of the risks and obligations under the Contract.

### **4.0 BID SECURITY:**

- (1) (a) The tenderer shall be required to submit the 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:

<i>Value of the Work</i>	<i>Bid Security</i>
<i>For all works</i>	<i>2% of the estimated cost of the work</i>

Note:

- (i) The Bid Security shall be rounded off to the nearest ₹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 'Startups' shall be exempted from payment of Bid Security detailed above.
- (iii) Labour Cooperative Societies shall submit 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 para (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-VIA and shall be valid for a period of 90days 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.

## **5.0 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. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to 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. Provided also that in case of defaulting Contractor, the Railway may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract.

The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.

Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the

contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

**5.1 Refund of Security Deposit:** Security Deposit mentioned in sub clause (1) above shall be returned to the Contractor along with or after, the following:

- (a) Final Payment of the Contract as per clause 51(1) in GCC **and**
- (b) Execution of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor **and**
- (c) Maintenance Certificate issued, on expiry of the maintenance period as per clause 50.(1)in GCC, in case applicable.

**5.2 Forfeiture of Security Deposit:** Whenever the contract is rescinded as a whole under clause 62 (1) in GCC of these conditions, the Security Deposit already with railways under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) in GCC of these conditions, the Security Deposit shall not be forfeited.

**5.3** No interest shall be payable upon the Bid Security and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16.(4)(b) in GCC of this clause will be payable with interest accrued thereon.

## **6.0 PERFORMANCE GUARANTEE:**

The procedure for obtaining Performance Guarantee is outlined below:

- a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty-one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty-one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21(Twenty-one) days, i.e. from 22<sup>nd</sup> day after the date of issue of LOA. Further, if the 60<sup>th</sup> day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day.

In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit Bid Security and other dues payable to the contractor against that particular contract, subject to maximum of PG amount. In case a tenderer has not submitted Bid Security on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

The failed contractor shall be debarred from participating in re-tender for that work.

- b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the original contract value:-

- i. A deposit of Cash
- ii. Irrevocable Bank Guarantee.
- iii. Insurance surety Bond as per Annexure-XVII

Note:

- 1. The provision of Insurance surety Bond shall be for all contracts having DOC within 36 months only.
- 2. In case DOC extends beyond 36 months, fresh Insurance Surety Bond or any other form of Performance guarantee prescribed in GCC for the balance amount shall be submitted by agency, otherwise necessary action will be taken as per terms of Agreement.
- iv. Government Securities including State Loan Bonds at 5% below the market value.
- v. Pay Orders and Demand Drafts tendered by any Scheduled Commercial Bank of India
- vi. Guarantee Bonds executed or Deposits Receipts tendered by any Scheduled Commercial Bank of India
- vii. Deposit in the Post Office Saving Bank;
- viii. Deposit in the National Savings Certificates;
- ix. Twelve years National Defence Certificates;
- x. Ten years Defence Deposits;
- xi. National Defence Bonds and.
- xii. Unit Trust Certificates at 5% below market value or at the face value whichever is less. Also, FDR in favor of FA&CAO (free from any encumbrance) may be accepted.

- (c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value.
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.
- (g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
  - (i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
  - (ii) Failure by the Contractor to pay President of India any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.
- (iv) The Contract being determined or rescinded under clause 62 of these conditions

<b>16 (4) (h) of Part-II of GCC'22</b>	<b><i>(h) If a tender is accepted on the quoted rates of bidder which is below the advertised tender value, an additional performance security shall be submitted by the bidder as below:</i></b>	
	<b><i>Bid quoted in % of advertised cost</i></b>	<b><i>Additional Performance Guarantee (%)</i></b>
	<b><i>Below 0- 5% (Inclusive)</i></b>	<b><i>'NIL'</i></b>
	<b><i>Below 5%</i></b>	<b><i>5%</i></b>

## 7.0 AGREEMENT:

The Tenderer whose tender is accepted shall be required to appear in person at the office of General Manager/General Manager (Construction), Chief Administrative Officer (Construction), Divisional Railway Manager or concerned Engineer, as the case may be, or if tenderer is a firm or corporation, a duly authorized representative shall appear (there would be no need for appear in person if agreement is signed digitally) and execute the contract agreement within seven days of notice from Railways that the Contract Agreement is ready.

Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. The Contract Agreement shall be entered into by Railway only after submission of valid Performance Guarantee by the Contractor. In such cases the Railway may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the Railway shall be entitled to forfeit the full amount of the Bid Security and other dues payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.

**Form of Contract Document:** Every contract shall be complete in respect of the document it shall so constitute. Not less than 2 copies of the contract document shall be signed by the competent authority and the Contractor and one copy given to the Contractor (there would be no need of signing two copies if agreement is signed digitally).

## 8.0 VALIDITY:

The offer of the Tender shall be valid for a minimum period of **60 days** from the date of tender opening.

## 9.0 FAILURE TO PERFORM:

If the Contractor fails in the performance of the contract, South Central Railway may without prejudice to his other rights, cancel the contract or a portion thereof and if the Railway so desires, to enter into another contract for fulfillment of the obligation for the remaining period, at the risk and cost of the Contractor.

## 10.0 TENDER ON WEB SITE:

Visit our site at “<http://www.ireps.gov.in>”.

**11.0 Warning:** It is hereby brought to the notice of all prospective tenderers that if any change/additions/deletions/ alterations are found to be made by them and the same is subsequently detected / noticed at any stage even after award of the contract, all necessary action including banning of business would be taken. In addition, the tenderers are liable to be prosecuted under law.

**12.0 Tenderer Credentials:**

Documents testifying tenderer previous experience and financial status should be produced along with the tender.

Tenderer(s) who is / are not borne on the approved list of the Contractors of \_\_\_\_\_ Railway shall submit along with his / their tender:

- i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.
- ii) Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past.
- iii) The list of personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- iv) In case of other than company/proprietary firm, **Annexure-V(A)** shall also 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 certificate(s) by the bidder shall result in **summarily** rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested/ digitally signed by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document.
- v) The Railway reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Railway, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the Railway shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the Railway there under.
- vi) (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of up to **two** years.  
  
(b) In case of any information submitted by tenderer is found to be false, forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the railway shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of up to **two** years.

**13.0 CARE IN SUBMISSION OF TENDERS:**

- (a) (i) Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works, are taken into account and that the percentage/rates he enters in the tender forms is/are adequate and all-inclusive to accord with the provisions in Clause 37 of the standard General conditions of contract for the completion of works to the entire satisfaction of the Engineer.
- (a) (ii) Tenderers will examine the various provisions of The Central Goods and Services Tax Act, 2017(CGST)/ Integrated Goods and Services Tax Act, 2017(IGST)/ Union Territory Goods and Services Tax Act, 2017(UTGST)/ respective state's State Goods and Services Tax Act (SGST) also, as notified by Central/State Govt & as amended from time to time and applicable taxes before bidding. Tenderers will ensure that full benefit of Input Tax Credit (ITC) likely to be availed by them is duly considered while quoting percentage/rates.
- (a) (iii) The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to railway immediately after the award of contract, without which no payment shall be released to the contractor. The contractor shall be responsible for deposition of applicable GST to the concerned authority.



- (a) (iv) In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/ SGST Act, the railway shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned authority.
- (a) (v) Contractor shall be liable to pay/refund the amount collected as GST to the Indian Railways along with interest and penalties, if any imposed by the authorities, in case GST input tax credit of Indian Railways is denied/rejected by the tax authorities due to reasons mentioned below but not limited to:

Wrong/incorrect invoices issued by Contractor;  
 No-filling of GST returns;  
 Non-payment of GST collected from Indian Railways to the authorities;  
 Any other non-compliance done by contractor;

**General Indemnity:** Contractor hereby agrees to indemnify and hold harmless the Indian Railways from and against any and all losses, including loss on account of input Tax Credit and all losses incurred by the Indian Railways relating to or arising out of or in connection with any actual or threatened arising out, directly or indirectly, of failure by the contractor to comply with the provisions of GST and related laws, or based upon or arising from any failure by the contractor.

**Retention Money:** Any payment liable to be paid by Indian Railways to contractor against the goods or services or both supplied by such contractor to Indian Railways shall be kept on hold in case supplier makes any non-compliance of any of the GST law provisions including non-reporting of invoices in GST returns. Such payment shall be released after proper verification of records and availability of ITC to Indian Railways as per provisions of GST Law.

- (b) When work is tendered for by a firm or company of contractors, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.
  - (c) The Railways will not be bound by any power of attorney granted By the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor.
- 14.0 In case of other than company/proprietary firm, **Annexure-V(A)** shall also be submitted by 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 above certificate(s) by the bidder shall result in **summarily** rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, ~~at~~ and submit the supporting documents duly self-attested/ digitally signed by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document.
- 15.0 Further, if rates of existing GST or cess on GST for Works Contract is decreased or any tax/cess on Works Contract is decreased / removed by Statute after the date of opening of tender, the reduction in tax amount shall be recovered from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.
- 16.0 If rates of existing GST or cess on GST for Works Contract is increased or any new tax /cess on Works Contract is imposed by Statute after the date of opening of tender but within the original date of completion/date of completion extended under clause 17 & 17A in GCC and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid.
- 17.0 In all matters of dispute, the decision of the Deputy Chief Electrical Engineer/Carriage Work Shop/ South Central Railway / Lallaguda shall be firm and binding.
- 18.0 Tender should be submitted for entire works.
- 19.0 No free pass will be issued by the administration to the contractor and to their staff.

20.0 **IF TENDER OPENING DAY HAPPENS TO BE HOLIDAY:**

If tender opening day happens to be holiday, the tender will be opened on the next working day.

21.0 The authority for the acceptance of the tender will rest with the Railways. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/their tender nor the Railway to assign reasons for declining to consider or reject any particular tender or tenders.

22.0 If any partner(s) of a partnership firm expires after the submission of its tender or after the acceptance of its tender, the Railway shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the firm retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the Railway shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.

23.0 The authority for acceptance of the Tender will rest with the Deputy Chief Electrical Engineer, South Central Railway, Lallaguda who does not bind himself to accept the lowest or any other tender nor does he undertake to assign reasons for declining to consider any particulars tenders or tenders. **Railway has the right to summarily reject the offers, which do not fulfill the Eligibility criteriaas per para A 2.0 of terms and conditions.**

24.0 The authority for acceptance of the Tender will rest with the Deputy Chief Electrical Engineer, South Central Railway, Lallaguda who does not bind himself to accept the lowest or any other tender nor does he undertake to assign reasons for declining to consider any particulars tenders or tenders.

25.0 Should the Railway decide to negotiate with a view to bring down the rates, the tenderer called for negotiations should furnish the following form of declaration before commencement of negotiations.

26.0 I \_\_\_\_\_ do declare that in the event of failure or the contemplated negotiations relating to Tender No. \_\_\_\_\_ opens on \_\_\_\_\_ my original tender shall remain open for acceptance on its original terms and conditions.

27.0 **VARIATION CLAUSE:-**

- i) Individual items in contracts shall be operated with variation of plus or minus 25% and payment would be made as per the agreement rate for this no finance concurrence would be required.
- ii) In case an increase quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions.
  - a) Operation of an item by more than 125% of the agreement quantity needs the approval of an officer mentioned in MSOP.
    1. Quantities operated in excess of 125% but upto 140% of the agreement quantity of the concerned item shall be paid at 98% of the rate awarded for that item in the tender.
    2. Quantities operated in excess of 140% but upto 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item on the tender tender.
    3. Variation quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with concurrence of associate finance and shall be paid at 96% of the rate awarded for that item in the tender.
  - b) The variation in quantities as per the above formula will apply only to the individual items of the contract and not on the overall contract value.
  - c) Execution of quantities beyond 150% of the overall agreement value should not be permitted and if found necessary should be only through fresh tenders or by negotiation with existing contractor with prior personal concurrence of FA&CAO/FA&CAO© and approval of General Manager.
- iii) In case where decrease is involved during execution of contract:
  - a) The contract signing authority can decrease the items upto 25% of individual item without finance concurrence.
  - b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer mentioned in MSOP may be taken after obtaining 'No claims certificate' from the contractor and with finance concurrence, giving detailed reasons for each decrease in the quantities.

- c) It should be certified that the work proposed to be reduced will not be required in the same work.
- iv) The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for is purpose is defined as an item whose original agreement value is less than 1% of the total agreement value.
- v) No such quantity variation limit shall apply for foundation items.
- vi) As far as Standard Schedule of Rates (SSOR) items are concerned, the variation limit of 25% would be apply to the Value of SOR schedule as a whole and not an individual SSOR items. However, in case of Non-Standard Schedule of Rates (SSOR) items, the limit of 25% would apply on the Individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate.
- vii) For the tenders accepted at Zonal Railways level, variations in the quantities will be approved by the authority in whose powers revised value of the agreement lies.
- viii) For tenders accepted by General Manager, variations up to 125% of the original agreement value may be accepted by General Manager.
- ix) For tenders accepted by Board Members and Railway Ministers, variations up to 110% of the original agreement value may be accepted by General Manager.
- x) The aspect of variation of tender with respect to variation in quantities should be checked and avoided. In case of vitiation of the tender (both for increase as well as decrease of value of contract agreement, sanction of the competent authority as per single tender should be obtained.

## **28.0 PRICE VARIATION CLAUSE (PVC): Not applicable to this contract.**

**Applicability:** Price Variation Clause (PVC) shall be applicable only in tender having advertised value above Rs. 2 Crores. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments (i.e. shall be excluded from the gross value of the work for the purpose of price variation) :

- a) Materials supplied by Railway to the Contractors, either free or at fixed rate;
- b) Any extra item(s) included in subsequent variation falling outside the purview of the Bill(s) of Quantities of tender, under clause 39. (1)(b) of these Standard General Conditions, unless applicability of PVC and 'Base Month' has been specially agreed, while fixing the rates of such extra item(s).

## **29.0 EMPLOYMENT OF ENGINEERING GRADUATES/ DIPLOMA- HOLDERS.**

The contractor shall employ the following technical staff during the execution of this work.

- i. The contractor shall place and keep on the work at all time efficient and competent staff to give necessary directions to his workmen and to see that they execute their work in sound & proper manner and shall employ only such supervisors, workmen & labour in or about the execution of any of these works as are careful and skill in the various.
- ii. The contractor shall at once remove from the works any agents, permitted sub-contractor, supervisor, workman or labour who shall be objected to by the engineer and if whenever required by the engineer, shall submit a correct return showing the names of all staff and workmen employed by him.
- iii. In the event of the engineer being of the opinion that the contractor is not employing on the works a sufficient number of staff and workmen as is necessary for completion of the work within the time prescribed, the contractor shall forthwith on receiving intimation to this effect deploy the additional number of staff and labour as specified by the engineer within seven days of being so required and failure on the part of the contractor to comply with such instructions will entitle the Railway to rescind the contract under clause 62 of these conditions.
- iv. The contractor shall also employ qualified Graduate engineer or qualified Diploma holder engineer, based on the value of the contract, as may be prescribed by the Ministry of Railways through separate instruction from time to time.
- v. In case the contractor fails to employ the engineer, as aforesaid in the para (vi), he shall be liable to pay penalty at the rates, as may be prescribed by the Ministry of Railways through separate instructions from time to time for the default period for the provisions, as contained in the para.

- vi. No. of qualified engineers required to be deployed by the contractor for various activities contained in the works contract shall be specified in the tender documents as 'special condition of contract' by the tender inviting authority. "Contractor shall employ following qualified engineers during execution of the allotted work:
  - a. One qualified graduate engineer when cost of the work to be executed is Rs. 200 lakh and above.
  - b. One qualified diploma holder engineer when the cost of the work to be executed is more than Rs. 25 lakh, but less the Rs. 200 lakh.
- vii. Further, in case the contractor fails to employ the qualified engineers, as aforesaid in Para above, he, in terms of Para (v) and of provision of clause 26 A.2 to the general conditions of contract, shall be liable to pay an amount of Rs. 40,000 and Rs.25,000 for each month or part thereof for the default period for the provision, as contained in para (vi a & b) above respectively.
- viii. The Railway reserves the right to terminate the contract at any stage without assigning any reason by giving seven days advance notice to the firm and in that event no claim whatsoever shall be entertained by the Railways.

### 30.0

#### **ACCIDENTS:**

The tenderer shall **indemnify** and keep the Purchaser/Consignee indemnified and harmless against all actions, suits, claims, demands, costs, charges or expenses arising in connection with any death or injury sustained by any person or persons within the Railway premises and any loss or damage to Railway property sustained due to the acts or omission of the tenderer's his agents or his staff during the execution of this contract irrespective of whether such liability arises under the Workman's Compensation act, or Fatal Accident Act or Factory Act or Payment of Wages Act or any other statute in statutory for the time being.

### 31.0

#### **SAFETY MEASURES:**

The tenderer shall take all precautionary measures in order to ensure the protection of his own personnel moving or working on the Railway premises, but shall then confirm to the rules and regulations of the Railway.

The tenderer should abide by all Railway regulations in force from time to time and ensure that the same are followed by his representatives, agents or subcontractor or workmen

The tenderer should ensure that unauthorized, careless or inadvertent operation of installed equipment which may result in accident to staff and / or damage to equipment does not occur

If at any time the works to be carried out directly concern the safety of trains, the tenderer's staff must comply fully with Railway regulations given to him by the authorized Railway staff. The tenderer's employees and workers may for no reason operate an installation concerning train safety or train movement. They shall notify the authorized representative of the purchaser/ consignee who will take all necessary steps in this regard.

The staff engaged by the contractor should be provided with Personal Protective Equipments (Helmet, Gloves, shoes), ID cards, Uniform at his own cost. Necessary photo Identity cards shall be issued to the staff by the contractor which shall be signed jointly by contractor & railway officer. However this Identity card is not a travel authority.

### 32.0

#### **ARBITRATION :**

Arbitration clause will be as per the general conditions of contract (GCC) of the Railways

**GCC Clause No. 64.(1) : Demand for Arbitration:**

64.(1)(i): In the event of any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question, dispute or difference on any account or as to the withholding by the Railway of any certificate to which the Contractor may claim to be entitled to, or if the Railway fails to make a decision within 120 days, then and in any such case, but except in any of the "excepted matters" referred to in Clause 63.1 of these Conditions, the Contractor, after 120 days but within 180 days of his presenting his final claim on disputed matters shall demand in writing that the dispute or difference be referred to arbitration.

64.(1)(i)(a): In the event of any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in

question, dispute or difference on any account or as to the withholding by the Railway of any certificate to which the Contractor may claim to be entitled to, or if the Railway fails to make a decision within 120 days, then and in any such case, but except in any of the "excepted matters" referred to in Clause 63.1 of these Conditions, the Contractor, after 120 days but within 180 days of his presenting his final claim on disputed matters shall demand in writing that the dispute or difference be referred to arbitration.

64.(1)(i)(b): Arbitration as a method of dispute resolution should not be routinely or automatically included in procurement contacts/tenders, especially in large contracts.

64.(1)(i)(c): As a norm, arbitration as a method of dispute resolution may be restricted to disputes with a value less than Rs. 10 crore. This figure is with reference to the value of the dispute (not the value of the contract, which may be much higher).

64.(1)(i)(d): inclusion of arbitration clauses covering disputes with a value exceeding Rs. 10crore, should be based on careful application of mind and recording of reasons and with the approval of an officer not below the rank of Senior Administrative Grade (SAG) or the Accepting Authority of the tender whichever is higher.

64.(1)(ii)(a): The demand for arbitration shall specify the matters which are in question, or subject to of the dispute or difference as also the amount of claim item-wise. Only such dispute or difference, in respect of which the demand has been made, together with counter claims or set off, given by the Railway, shall be referred to arbitration and other matters shall not be included in the reference.

64.(1)(ii)(b): The parties may waive off the applicability of Sub-Section 12(5) of Arbitration and Conciliation (Amendment) Act 2015, if they agree for such waiver in writing, after dispute having arisen between them, in the format given under Annexure XV of these conditions.

64.(1)(iii)(a): The Arbitration proceedings shall be assumed to have commenced from the day, a written and valid demand for arbitration is received by the Railway.

64.(1)(iii)(b): The claimant shall submit his claims stating the facts supporting the claims along with all the relevant documents and the relief or remedy sought against each claim within a period of 30 days from the date of appointment of the Arbitral Tribunal.

64.(1)(iii)(c): The Railway shall submit its defense statement and counter claim(s), if any, within a period of 60 days of receipt of copy of claims from Tribunal, unless otherwise extension has been granted by Tribunal.

64.(1)(iii)(d): Place of Arbitration: The place of arbitration would be within the geographical limits of the Division of the Railway where the cause of action arose or the Headquarters of the concerned Railway or any other place with the written consent of both the parties. 64.(1)(iv): No new claim shall be added during proceedings by either party. However, a party may amend or supplement the original claim or defense thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

64.(1)(v): If the Contractor(s) does/do not prefer his/their specific and final claims in writing, within a period of 90 days of receiving the intimation from the Railways that the final bill is ready for payment, he/they will be deemed to have waived his/their claim(s) and the Railway shall be discharged and released of all liabilities under the contract in respect of these claims.

GCC Clause No. 64.(2): Obligation During Pendency of Arbitration: Work under the contract shall, unless otherwise directed by the Engineer, continue during the arbitration proceedings, and no payment due or payable by the Railway shall be withheld on account of such proceedings, provided, however, it shall be open for Arbitral Tribunal to consider and decide whether or not such work should continue during arbitration proceedings.

**GCC Clause No. 64.(3) : Appointment of Arbitrator:**

64.(3)(a): The Arbitral Tribunal shall consist of a panel of three arbitrators. General Manager/Additional General Manager will appoint two arbitrators, one railway nominee and other from among the contractor's nominee. Contractor can recommend his nominee either from approved panel of Railways or from approved panel of Indian Council of Arbitration (ICA) within 30 days from the date of dispatch of approval of written and valid acceptance of demand for arbitration by the General Manager/Additional General Manager.

64.(3)(a)(i): If contractor wants to choose his nominee from Railway panel, the Railway will send a panel of at least four (4) names of retired Railway Officers empaneled to work as Arbitrator within 30 days from

the day when a written and valid demand for arbitration is received by the General Manager/Additional General Manager. Contractor will be asked to suggest to General Manager/Additional General Manager at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by Railway. The General Manager/Additional General Manager shall appoint at least one out of them as the Contractor's nominee within 30 days from the receipt of the names of Contractor's nominees. The railway panel shall be provided free of cost to the contractor.

64.(3)(a)(ii): If contractor wants to choose his nominee from Indian Council of Arbitration panel, Contractor will send at least 2 names of Arbitrators from the ICA panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by Railway. The General Manager/Additional General Manager shall appoint at least one out of them as the Contractor's nominee within 30 days from the receipt of the names of Contractor's nominees.

Nomination and appointment of arbitrators from ICA panel shall be as per the ICA Rules for Domestic Commercial Arbitration and amended from time to time. Some general guidelines of ICA Rules for Domestic Commercial Arbitration are as under:-

- i. Contractor may access the ICA's panel of arbitration through ICA's official webpage: <https://icaindia.co.in>.
- ii. A formal request for nomination shall be submitted to ICA, accompanied by: - a. A brief Statement of Claim outlining the nature and quantum of the disputes.  
b. A copy of the relevant contract and any supporting documents.  
c. A copy of the notice intimating the other party of the initiation of arbitration proceedings, with proof of delivery (if any).
- iii. Ad-hoc appointment fees for the nomination and appointment of arbitrators shall be as per the ICA Rules for Domestic Commercial Arbitration and revised from time to time and shall be submitted along with the request.

64.3.(a). iii: The serving railway officer working in arbitral tribunal in the ongoing arbitration cases as per clause 64. (3)(a)(i) and clause 64. (3)(a)(ii) above, can continue as arbitrator in the tribunal even after his retirement.

6a.(3)(b): Two selected arbitrators are free to select presiding arbitrator (3d arbitrator) within thirty (30) days from the date of their appointment. The presiding arbitrator may be selected from approved panel of Railways or approved panel of Indian Council of Arbitration (as per mutual agreement), which will be approved by General Manager/Additional General Manager. General Manager/Addition at General Manager shall complete this exercise of appointing the Arbitral

(i) Tribunal within 30 days from the receipt of the names of all the three arbitrators. In cases where the total value of all claims in question added together does not exceed ₹ 50,00,000/- (Rupees Fifty Lakh), the Arbitral Tribunal shall consist of a Retired Railway Officer, retired not below the rank of Senior Administrative Grade Officer, as the arbitrator. For this purpose, the Railway will send a panel of at least four (4) names of retired Railway Officer(s) empaneled to work as Railway Arbitrator duly indicating their retirement dates to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the General Manager.

Contractor will be asked to suggest to General Manager at least 2 names out of the panel for appointment as arbitrator within 30 days from the date of dispatch of the request by Railway. The General Manager shall appoint at least one out of them as the arbitrator within 30 days from the receipt of the names of Contractor's nominees.

(ii) In cases where the total value of all claims in question added together exceed ₹ 50,00,000/- (Rupees Fifty Lakh), the Arbitral Tribunal shall consist of a Panel of three (3) retired Railway Officer, retired not below the rank of Senior Administrative Grade Officer, as the arbitrators. For this purpose, the Railway will send a panel of at least four (4) names of retired Railway Officer(s) empaneled to work as Railway Arbitrator duly indicating their retirement date to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the General Manager.

Contractor will be asked to suggest to General Manager at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by Railway. The General Manager shall appoint at least one out of them as the Contractor's nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the 'Presiding Arbitrator' from amongst the 3 arbitrators so appointed. General Manager shall complete this exercise of appointing the Arbitral Tribunal within 30 days from the receipt of the names of Contractor's nominees. While nominating the arbitrators, it will be necessary to ensure that one of them has served in the Accounts Department.

6a.(3)(c)(i): If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator, or vacates his/their office/offices or is/are unable or unwilling to perform his functions as arbitrator for any reason whatsoever or dies or in the opinion of the General Manager/Additional General Manager fails to act without undue delay, the General Manager/Additional General Manager shall appoint new arbitrator/arbitrators to act appointed. Such re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator (s).

64.(3) (c) (ii): (a) The Arbitral Tribunal shall have power to call for such evidence by way of affidavits or otherwise as the Arbitral Tribunal shall think proper, and it shall be the duty of the parties hereto to do or cause to be done all such things as may be necessary to enable the Arbitral Tribunal to make the award without any delay. The proceedings shall normally be conducted on the basis of documents and written statements.

(b) Before proceeding into the merits of any dispute, the Arbitral Tribunal shall first decide and pass its orders over any plea submitted/objections raised by any party, if any, regarding appointment of Arbitral Tribunal, validity of arbitration agreement, jurisdiction and scope of the Tribunal to deal with the dispute (s) submitted to arbitration, applicability of time 'limitation' to any dispute, any violation of agreed procedure regarding conduct of the arbitral proceedings or plea for interim measures of protection and record its orders in day to day proceedings. A copy of the proceedings duly signed by all the members of tribunal should be provided to both the parties.

64.3(c)(iii): (i) Qualification of Railway Empanelled Arbitrator (s):

(a) Retired Railway Officers not below SA Grade level, one year after his date of retirement.

(b) Age of arbitrator at the time of appointment shall be below 70 years.

(c) Persons not involved in any current vigilance/CBI cases or against whom disciplinary or prosecution proceedings are not in process.

(d) Persons who had not been imposed a major penalty or two or more minor penalties or against whom administrative action has not been taken three times or more or

(e) Persons who have not been imposed one minor Penalty and against whom two administrative actions have not been taken as a result of vigilance/CBI action while in service on Railways.

(ii) An arbitrator may be appointed notwithstanding the total number of arbitration cases in which he has been appointed in the past.

(iii) While appointing arbitrator(s) under Sub-Clause 6 .Q)@), 64.(3)(a)(i), 64.(3)(a)[ii] & 64.(3)0) above, due care shall be taken that he/they is/are not the one/those who had an opportunity to deal with the matters to which the contract relates or who in the course of his/their duties as Railway servant(s) expressed views on all or any of the matters under dispute or differences. A certification to this effect as per annexure- XVI shall be taken from Arbitrators also. The proceedings of the Arbitral tribunal or the award made by such Tribunal will, however, not be invalid merely for the reason that one or more arbitrator had, in the course of his service, opportunity to deal with the matters to which the contract relates or who in the course of his/their duties expressed views on all or any of the matters under dispute.

64.(3)(d)(i): The arbitral award shall state item wise, the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award could be inferred there from.

64.(3)(d)(ii): A party may apply for corrections of any computational errors, any typographical or clerical errors or any other error of similar nature occurring in the award of a Tribunal and interpretation of a specific point of award to Tribunal within 60 days of receipt of the award.

64.(3)(d)(iii): A party may apply to Tribunal within 60 days of receipt of award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

**GCC clause No.64.(4):** In case of the Tribunal, comprising of three members, any ruling on award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

**GCC Clause No 64.(5):** Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

**GCC Clause No 64. (6):** 6a.(6): The cost of arbitration shall be borne by the respective parties. If all the three arbitrators are selected from the Railway Panel, the fee of the arbitrators shall be determined as per the rates fixed/revised by Railway Board from time to time and the fee shall be borne equally by

both the parties, provided parties sign an agreement in the format given at Annexure XV to these conditions after/ while referring these disputes to Arbitration. However, if any of the three arbitrators is selected from the Panel of Indian Council of Arbitration (ICA), the fee of the arbitrators shall be determined as per the rates fixed/revised by the Indian Council of Arbitration from time to time and the fee shall be borne equally by both the parties, provided parties sign an agreement in the format given at Annexure XV to these conditions after/ while referring these disputes to Arbitration.

**GCC Clause No 64.(7)** Subject to the provisions of the aforesaid Arbitration and Conciliation Act 1996 and the rules there under and relevant para of the standard General Conditions of Contract (GCC) and any statutory modifications thereof shall apply to the appointment of arbitrators and arbitration proceedings under this Clause.

**GCC Clause No.64.(8)** In case arbitration award is challenged by a party in the Court of Law, 75% of award amount, pending adjudication by Court of Law, shall be made by party to other party. In case payment is to be made by Railway to Contractor, the terms & conditions as incorporated in the Ministry of Railways letter No. 2016/CE(I)/CT/ARB/3(NITI Aayog)/Pt. dated 08th Mar,2017 as amended from time to time, shall be followed. In case Contractor has to pay to the Railway, then 75% of the award amount shall be deducted by the Railway from the Contractor's bills, Performance Guarantee/ Security Deposit or any other dues of Contractor with the Government of India.

### **33.0 JURISDICTION OF THE COURTS:**

The courts of the place where the contract has been entered by South Central Railway i.e. courts Hyderabad/Secunderabad shall alone have the Jurisdiction to decide any dispute arising out of or in the respect of the contract.

### **34.0 SUBLETTING AND ASSIGNMENT:**

The Contractor shall not assign or sublet the contract or any part thereof or allow any person to become interested therein in any manner whatsoever without the special permission in writing of the Chief Engineer, save as provided below.

Any breach of this condition shall entitle the Railway to rescind the contract under Clause 62 of these Conditions and also render the Contractor liable for payment to the Railway in respect of any loss or damage arising or ensuing from such cancellation; provided always that execution of the details of the work by petty Contractor under the direct and personal supervision of the Contractor or his agent shall not be deemed to be sub-letting under this clause.

In case Contractor intends to subcontract part of work, he shall submit a proposal in writing seeking permission of Chief Engineer for the same. While submitting the proposal to railway, Contractor shall ensure the following:

- (a) (i) Total value of work to be assigned to sub-contractor(s) shall not be more than 50% of total contract value.
- (ii) The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract in last 5 years, ending date of submission of proposal by Contractor to Railway, costing not less than 35% value of work to be sublated, through a works contract. For fulfilment of above, Work Experience Certificate issued by a Govt. Department/Organisation shall be considered. Further, Work Experience Certificate issued by a Public listed company shall be considered provided the company is having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, registered at least 5 years back from the date of submission of proposal by Contractor to Railway and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates. Note: for subletting of work costing up to Rs 50 lakh no previous work experience shall be asked for by the Railway. In case contractor submits subcontractor's work experience certificate issued by public listed company, the contractor shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.
- (iii) There is no banning of business with the sub-contractor in force over IR.
- (b) The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be permitted without a formal agreement between Contractor



and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractor and the terms of payment in clear & unambiguous manner.

(c) On receipt of approval from Chief Engineer, Contractor shall enter into a formal agreement legally enforceable in Court of Law with subcontractor and submit a copy of the same to the Engineer.

(d) The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.

(e) Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of Railway, with prior intimation to Chief Engineer.

(f) The Contractor shall indemnify railway against any claim of subcontractor.

(g) The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractor(s), so that the execution of work is not affected in any manner whatsoever.

(h) In addition to issuance of work experience certificate to Contractor, the Engineer, when, based on documents, is satisfied that subcontracted work has been carried out by subcontractor, shall issue work experience certificate to the subcontractor also for the portion of work subcontracted and successfully completed by the sub-contractor.

Note: Work Experience Certificate to the subcontractor shall be issued only when the contractor's work is complete and contractor is entitled for the issuance of Work Experience Certificate. However, in the same contract, when the Chief Engineer, based on documents, is satisfied that the subcontractor has successfully carried out sublated work; without issuance of work experience certificate to subcontractor at this stage, the Chief Engineer can, only once, consider the successfully completed sublated work for the fulfilment of eligibility for further subletting of work to the subcontractor in the same contract. When the contractor's work is complete and contractor is entitled for the issuance of work experience certificate, the subcontractor shall be issued one Work Experience Certificate for the total scope of work executed by the subcontractor in the contract.

(i) The responsibility of successful completion of work by subcontractor shall lie with Contractor. Subcontracting will in no way relieve the Contractor to execute the work as per terms of the Contract.

(j) Further, in case Engineer is of the view that subcontractor's performance is not satisfactory, he may instruct the Contractor to remove the subcontractor from the work and Contractor has to comply with the above instructions with due promptness. Contractor shall intimate the actual date of discontinuation of subcontract to Engineer. No claim of Contractor whatsoever on this account shall be entertained by the Railway and this shall be deemed as 'excepted matter' (matter not arbitrable).

(k) The permitted subcontracting of work by the Contractor shall not establish any contractual relationship between the sub-contractor and the Railway and shall not relieve the Contractor of any responsibility under the Contract.

### **CONTRACT PERIOD:**

35.0

The contractor shall maintain the work in all respects within **12 months** from the date of letter of acceptance.

### **PAYMENT TERMS:**

36.0

**MODE OF PAYMENT:** 70% Payment will be made for supply portion balance 30% will be paid after completion of work, no advance payment will be considered by Railways.

Payment will be made based on schedule rates for the items in schedule, loaded with the percentage quoted by the contractor for schedule items deducting taxes and penalties.

The payment will be arranged to the contractor on monthly basis on submission of bills.

### **Nominated Supervisors:**

100% test check will be done by SSE/EM/FBWP

Based on the work done statement, measurements will be recorded in the Measurement Book (MB) by the Nominated Railway supervisor

Certified that the 20% check conducted against the work undertaken by me and found satisfactory (this should be done by concerned ADEEs)

### **Payment Conditions**

- a) All payment will be made on the name of the firm of the successful bidder.
- b) The bidder shall be entitled to be paid from time to time by way of "On Account Payment" as per the General Conditions of the Contract.
- c) No advance payment will be made to the contractor.

#### **iii) Information to be furnished by the contractor.**

- a) The following information regarding Electronic Payment System (NEFT/RTGS) shall be furnished by the contractor duly signed by him and same shall be attested by bank manager with stamp/ seal.
  1. Name of beneficiary:
  2. Name of bank:
  3. Branch Name and Address:
  4. Account No:
  5. Account Type:
  6. IFSC Code:
  7. Telephone No / E-Mail Address:

NOTE: a) The payment towards contractors/ supplier's bill will be paid through Electronic Payment System i.e. NEFT/RTGS and commission charges if any to be borne by contractor/supplier Certified that the work is done as per given schedule as per site requirement by the contractor.

**Note:** Nominated supervisor / officer in-charge shall keep the register / record for the previous bills paid for each coach to avoid delinquency of payment.

#### **37.0 PAYING AUTHORITY:-**

The paying authority will be Dy.FA&CAO/LGDS.

#### **38.0 OFFICERS IN-CHARGE : Deputy Chief Electrical Engineer / Shops / Lallaguda**

**20% test check will be conducted by concerned ADEE/S/LGD**

#### **39.0 NOMINATED SUPERVISORS: SSE/EM/FBWP: 100% test check will be done by the supervisor.**

#### **40.0 MULTIPLE L1 SELECTION: Selections of bidder from multiple L1 for awarding the work will be as per RB letter No.2017/Trans/01/policy dated 08.02.2018.**

#### **41.0 PAYMENT OF WAGES/SALARIES TO THE CONTRACTOR STAFF :**

The contractor should arrange payment to the workers towards wages/salaries through their bank accounts in the mode of NEFT/RTGS only. Contractor shall keep a register for payment of wages paid to contractor staff (under minimum wages act) and contractor shall also submit statement showing the recoveries of PF/EPF contributions in respect of contract employees employed by him. Contractor bills will be withheld if above statements not submitted to Railway nominated supervisor. **No third party payments will be accepted.**

#### **42.0 UPLOADING IN SHRAMIK KALYAN PORTAL: Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55, 55-A and 55-B of Indian Railways General Condition of Contract. 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 Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in 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 Acceptances (LOA) / Contract Agreements on Shramik kalyan portal within 15 days of issue of any 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, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on Shramik kalyan 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 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 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 Shramik kalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till \_\_\_\_Month, \_\_\_\_Year."

#### **43.0 WAGES TO LABOUR:**

- (i) All the rules under the Contract Labour (Regulation & Abolition) Act, 1970 & Rules 1971 shall be applicable.
- (ii) The contractor has to maintain Muster roll and Wage register as per the Contract labour (Regulation & Abolition) Act 1971.
- (iii) The contractor shall arrange bank payment for his contract labour as per the minimum wages notified by the Labour Commissioner from time to time, and shall produce documentary proof for the same at the time of Billing, without which bills will not be cleared. Statutory payments like EPF, ESI etc. as applicable will be reimbursed on submission of proof of payment at prescribed rates.

#### **44.0 NON-EMPLOYMENT OF LABOURERS BELOW THE AGE OF 15:**

- 1. The Contractor shall not employ children below the age of 15 as labour directly or through petty Contractors or subcontractors for the execution of work.
- 2. The Railway is not responsible to pay compensation/insurance in case the contractor's staff, gets injury/an accident or in the event of death during working or in the premises. It is total responsibility of the contractor to take care and liability in such issues.
- 3. The contractor shall furnish a list of manpower deployed by him along with full description, address etc. for this work prior to start of the work to the officer-in-charge of this work at Lallaguda and shall notify the changes there in from time to time.
- 4. The persons so engaged by the contractor should be courteous, well-mannered and well behaved.
- 5. Railway reserves the right to ask the contractor to remove any person, if found to be unsuitable for work or on any other ground like bad conduct, bad performance etc. In such situation the contractor must remove and dismiss the concerned person and replace with a suitable person forthwith. The person so removed, must not be entertained by the contractor at the site of Railways.
- 6. Contractor shall ensure that only identified and authorized persons are engaged by him to carry out the work in the Lallaguda premises and they do not create any nuisance or disturbances.
- 7. That the contractor shall not allow/entertain any outsider other than the list of labor as given in any form in the premises of Lallaguda Workshop without the specific permission of the competent authority of Lallaguda failing which this contract can be terminated & security deposit forfeited.
- 8. POH Attention of Bio-Toilet tanks at Carriage Workshop, Lallaguda, Secunderabad.
- 9. The contractor shall remain liable for theft of any Railway material by his staff. He must take necessary proceedings against each staff to prevent such occurrence and shall reimburse the cost of any stolen material, which will be determined by the Railway administration. In the event of there being repeated cases, the contract shall be liable to be terminated by giving 7 days' notice and the contractor shall be liable for the loss of damage suffered by the administration.

#### **45.0 LETTER OF CREDIT: Instructions for tenderers on Letter of Credit mode of Payment.**

Scheme of Letter of Credit for Works Tenders having estimated value of Rs. 10 Lakhs and above:  
All Tenders invited by Zonal Railways and PUs, having estimated value of Rs. 10 Lakhs and above, shall have an option for the contractor to take payment from Railways through a letter of

Credit (LC) arrangement.

The LC will be a sight LC.

**The bidder, at the time of bidding itself, shall exercise an option, in favour of taking payment due against the said tender, through LC arrangement. The option so exercised, shall be an integral part of the bidder's offer.**

**Option once exercised shall be final and no change shall be permitted, thereafter, during execution of Contract.**

**The incidental cost@ 0.15% (or any amount decided by administration from time to time) of LC value, towards issue of LC and operation thereof shall be borne by the contractor and shall be recovered from their bills.**

State Bank of India through its branches shall be the Banker for Railways for opening domestic letters of credit for ensuing year. The arrangement would cover all such contracts finalized against tender issued during the said period and shall extend till final execution of these contracts.

The schedule of payment liability arising in the contract shall be established by the Railways based on the prescribed progress of work.

The acceptable, agreed upon document for payments to be released under the LC so opened, shall be a Document of Authorization.

The Contractor shall submit their bills for completed work to the bill processing authority mentioned in contract agreement to issue Document of Authorization to enable Contractor to claim the authorized amount from their Banker.

Accounts Officer responsible for passing the claim will issue the Document of Authorization. The contractor shall take print of the Document of Authorization available on IREPS portal and present his claim banker (advising bank) for necessary payments as per LC terms and conditions. The claim shall comprise LC Document of Authorization, Bill of Exchange and invoice.

The bank shall also recover any amount as may be advised by Railway against the Contractor.

#### **46.0 MAINTENANCE AND GUARANTEE:**

The contractor shall guarantee and maintain satisfactory working of the installation and erected by him, the supply portion of work contract the Warranty /guarantee should be covered for a minimum period of 24/30 months i.e. from date of commissioning / 30 months from date of supply whichever is earlier, and for work portion the warranty /guarantee should be covered for minimum period of 24/ 30 months i.e. 24 months from date of commissioning / 30 months from the date of installation whichever is earlier OR the period as per approved specification in case it is higher than above. During the period of guarantee and maintenance the contractor shall replace free of cost any parts which may be found defective in the equipment whether such equipments be of his own manufacture or of his contractors, whether arising from faulty design, material and workmanship. The contractor shall bear the cost of repairs carried out on his behalf by the Railways at site. In such case, the contractor shall be informed in advance of the works proposed to be carried out by the Railways. During the maintenance period, the contractor shall bear the responsibility and be liable for maintenance as envisaged in clause 47 of the GCC.

##### **WARRANTY:**

- i. The contractor shall warrant that entirely new material will be used for execution of the work under the contract and the material/work will be free from all defects/faults in designs, workmanship and manufacture and shall be of the highest grade and consistent with the established standards and in full conformity with technical specifications drawings and other contract stipulations.
- ii. This warranty shall expire 24 (twenty-Four) months, from the date of acceptance of the completed work by the railway except in respect of complaints, defects and/or claims notified to the contractor before the expiry of the warranty period.
- iii. The contractors liability in respect of any complaint, defect or claim shall be limited to the

execution, installation and erection of replacement parts/equipment free of any charge, or the repair of defective parts only to the extent that such replacement or repairs are attributable to or arise from faulty workmanship or design or material in the manufacture of the equipment and also in the event of failure of the equipment to perform as intended.

- iv. The contractor shall, if required, replace, repair, execute and/or install the goods or such portion thereof as is rejected by the railways, free of cost at site or at the option of the railway the contractor shall pay to the railway the value thereof and such other expenditure and damage as may arise by reason of the breach of the conditions herein specified.
- v. All replacement and repairs that the railway shall call upon the contractor to deliver or perform under this guarantee shall be delivered and performed by the contractor within a period of 21 (twenty one) days promptly from the date of receipt of advice to that effect from the Engineer. In case where such replacement, repairs execution and/or installation takes place during warranty period the provision of this warranty clause shall apply to that portion until the expiry of 24 (twenty Four) months (Extended Warranty period). from the date of such replacement, repair, execution and/or installation.
- vi. In case if the reported defects are not rectified satisfactorily within the above mentioned 21 days, the railway may proceed to do the work at the contractors risk and cost and also without prejudice to any other rights of the railway under this contract.
- vii. The Railway may, at its discretion, recover the ground rent for the goods which have been rejected during the warranty period, if the rejected materials are not taken over within the period of 3 (three) months by the contractor or his representative.
- viii. If the replacement at site of any parts which may be found defective in the equipment whether such equipment be of his own manufacture or those of his sub-Contractor whether arising from faulty design, materials, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts as are not repairable at site are promptly returned to the Contractor if so required by him at his (Contractor's) own expenses.
- ix. In case of type defects in Contractor's equipment and components detected during guarantee period, Contractor should replace all such irrespective of the fact whether all such items have failed or not. The Contractor shall bear the cost or repairs carried out on his behalf by the Purchaser at site. In such a case, the Contractor shall be informed in advance of the works proposed to be carried out by the Purchaser.
- x. If it becomes necessary for the Contractor to replace or renew any defective portion of the equipment under the para-aforesaid then the provision of the said Para shall also apply to the portions of the equipment on replaced or renamed until the expiration of six months from the date of such replacement or renewal or until the end of the above-mentioned period whichever is late. Such extension shall not apply in case of defects of a minor nature, the decision of the General Manager or his successor/nominee being final in the matter. If any defect be not remedied within a reasonable time during the aforesaid period the Purchaser may proceed to do work at the Contractor's risk and expense, but without prejudice to any other rights and remedies which the purchase may have against the Contractor in respect of such defects or faults. The repaired or renewed parts shall be delivered and erected on site free of charge to the purchaser.
- xi. During the maintenance period, the contractor shall bear the responsibility and be liable for maintenance as envisaged in clause 47.0 of the GCC

Warranty period for LED items: The warranty period should be 5 (Five years) years from date of Commissioning. If failure/defective of LED items within the warranty period of 5 years should be replaced with new item.

Warranty for LED fittings: The warranty period of LED fittings is 5 (Five) years. 10% value of LED fittings are to be deposited by successful tenderer otherwise it will be deducted from on account bills. The same will be released on completion of warranty period of 5 (Five) years.

#### MAINTENANCE OF WORKS:

- i. The Contractor shall at all times during the progress and continuance of the works and also for the period of maintenance specified in the Tender Form after the date of issue of the certificate of completion by the Engineer or any other earlier date subsequent to the completion of the works that may be fixed by the Engineer, be responsible for and effectively maintain and uphold in good substantial, sound and perfect condition all and every part of the works and shall make good from time to time and at all times as often as the Engineer shall require, any damage or defect that may

during the above period arise in or be discovered or be in any way connected with the works, provided that such damage or defect is not directly caused by errors in the contract documents, act of providence or insurrection or civil riot, and the Contractor shall be liable for and shall pay and make good to the Railway or other persons legally entitled thereto whenever required by the Engineer so to do, all losses, damages, costs and expenses they or any of them may incur or be put or be liable to by reasons or in consequence of the operations of the Contractor or of his failure in any respect.

- ii. For the faithful fulfilment of the obligations of the warranty contemplated in this clause and for the due and faithful fulfilment of the contract as a whole, the contractor has to furnish Security Deposit as detailed at 2.20 (B) of General Conditions.
- ii. As and when an amendment to the contract extending the date of completion is issued, the contractor shall arrange, within 15 (fifteen) days of the receipt of letter, a letter of amendment to the Bank instrument for SD, rendering the same valid for the contract period as amended.

#### **EXPERIENCE CERTIFICATE:**

**47.0**

As per Dy.CE/Works Lr.No. W.148/P/=(Guidelines)/Vol.II dt: 27.05.2021 and PCEE/SCR Lr.No. E.29/P/Vol.XII dt: 01.06.2021)

‘Tender Shall Submit a self-attested copy of work experience certificate, signed by an officer not below the JA grade or bill passing officer in Railways and Bill passing officer/ Executive in-charge of the work in other Government department/ Govt Bodies/ Public sectors under taking to establish his eligibility criteria. The certificate should contain the following details:

- Name of the work
- Agreement No. and Date
- Name of the Agency
- Agreement Value in Rupees (amount in words and figures)
- Due date and actual date of completion
- Value of final bill passed (amount in words and figures)
- Performance of the contractor
- Signature, Name, Designation and seal of the issuing officer

The above details to be submitted as a proof of experience certificate, otherwise which the offer will be summarily rejected.’

### **B. GENERAL CONDITIONS OF CONTRACT**

- 1.0 "The General Conditions of Contract" governing the performance of the works covered by this Tender "Standard General Conditions of Contract in use in General in the South-Central Railway" as amended time to time. A copy of the book-let incorporating above General Conditions of the Contract may be had from the Office of the Deputy Chief Electrical engineer, Carriage Workshop, Lallaguda, South Central Railway at Secunderabad- 500017.
- 2.0 In submitting this letter it would be deemed that the Tenderer has kept himself fully informed of the provisions of the General Conditions of contract including all corrections and amendments issued up to the date of Tender Notice.
- 3.0 Railway Board vide their letter No. 2022/CE-I/CT/GCC-2022/Policy dated 27.04.2022 has issued Standard General Conditions of Contract (works contracts) is applicable to this contract.

#### **NOTE:-**

- 1). The General conditions of contract can be perused in the offices of Deputy Chief Electrical Engineer (Workshop) of South-Central Railway, Lallaguda / Secunderabad during office working hours.
- 2). The contract shall be governed by IRS conditions as applicable. All the terms and conditions in the tender are also equally applicable.

## C. SCOPE OF WORK AND SPECIFICATION

Name of work: “Replacement of over aged Electrical assets & Rewiring works at S&T Workshop, Mettuguda”

### 1.0 TECHNICAL DETAILS OF THE WORK:

#### TERMS AND CONDITIONS

While carrying out this activity, the other works mechanical/electrical will be attended by LGD staff simultaneously. The firm manager has to execute the work in workshop and he should furnish contact mobile phone No. for communication with administration whenever required.

The delay in execution of work after the agreement/work orders are finalized / issued due to labor unrest, non-availability of man-power or any other reason shall not be accepted as an excuse for delay in execution of contract. In such a situation the Railway administration shall have the liberty to terminate the contract with due service of 7 days' notice.

Contractor shall have to follow all the statutory requirement & Central & state Govt. rules and regulation and other subsequent amendments.

The Contract shall also be governed by the General Conditions of Contract with all its corrections and arrangements applicable at the time of opening of their tender. Wherever the special conditions are at variance with the General conditions of contract, the special conditions shall only prevail. Contractor is required to go through General Conditions of Contract before submitting their offer.

### 2.0 HAND TOOLS

The Contractor shall supply his own hand Tools to his workers like portable drilling/cutting/grinding machines etc., and consumables like drill bits/cutting/grinding wheels and any other tools required during execution of works.

### 3.0 SCOPE OF WORK:

**Replacement of over aged Electrical HT/LT cables, Supply and erection of light fittings/fans, Supply and erection of Transformers & LT switchgear etc., & Rewiring works at S&T Workshop, Mettuguda.**

The work shall be executed as per technical specifications, relevant IS standards and the Price Schedule.

#### INTERNAL ELECTRIFICATION WORKS:

- Supply, laying and erection of perforated GI cable tray, 100 mm (W) × 300 mm (D) × 2.5 mm thickness.
- Point wiring using single-core, multi-strand 1.5 sq.mm FRLS copper conductor in conduit pipe, complete with modular boxes, plates, switches and sockets for light, ceiling fan and exhaust fan points.
- Supply and erection/fixing of 4-way / 6-way / 8-way / 12-way modular boxes with top plates
- Supply and fixing of 10A single-pole, 1-way modular switches
- Supply and fixing of 5-pin 6 A/16 A modular plug sockets with shutter type and 20 A modular switch.
- Supply and erection of 6A/10A/16A/20A/32A/63A, SP/DP/4P MCBs (B Curve)
- Supply and laying of 4-core × 4 sq.mm / 6 sq.mm, 1.1 kV grade PVC insulated and PVC sheathed copper cable as per IS 694:2010.
- Supply of single core 1.5/2.5/4.0/6.0/10.0 sq.mm multistranded FRLS/FRSLH copper wire

for wiring.

- Supply, erection and commissioning of 8-way / 12-way / 18-way Single/Double door SDBs.
- Supply & fixing of 360° slim PIR ceiling-mounted occupancy sensors.

#### **LIGHTING INSTALLATIONS:**

- Supply, erection, testing & commissioning of 20W, 1200 mm LED tube light fittings.
- Supply, installation, testing & commissioning of 2 ft × 2 ft, 43W commercial LED recessed luminaires.
- Supply, erection, testing & commissioning of 50W LED High Bay fittings (IP65, minimum 5000 lumens), suitable for industrial workshop environment.
- Supply, erection, testing & commissioning of 70W outdoor LED street light fittings.
- Supply, installation and commissioning of 6 m single-arm hot-dip galvanized GI terminal poles complete with bracket and junction box.
- Supply, laying and connecting of 3-core × 1.5 sq.mm FRLSH copper conductor for street lighting connections.

#### **FANS & AIR-CONDITIONING:**

- Supply, erection, testing & commissioning of 1200 mm sweep BLDC ceiling fans (energy efficient).
- Supply, erection, testing & commissioning of 450 mm sweep BLDC wall-mounted fans.
- Supply, installation, testing & commissioning of 1.5 TR inverter-type split air-conditioning units (5-Star BEE rated).

#### **TRANSFORMER & HT/LT CABLE WORKS:**

- Dismantling and removal of existing 500 kVA & 250 kVA transformers.
- Supply, erection, testing & commissioning of 500 kVA, 11 kV/0.433 kV, 3-phase, copper-wound, outdoor type distribution transformer.
- Construction of transformer plinth pit (1.5 m × 1.5 m × 1.5 m) including excavation, masonry and plastering.
- Releasing of existing HT underground cable (3-core × 185 sq.mm aluminium).
- Releasing of existing LT underground cables.
- Excavation of cable trenches in all types of soil.
- Supply, laying, erection and commissioning of 4 runs of 3-core × 185 sq.mm, 11 kV grade HT XLPE cable as per IS 7098 (Part-2) between transformer plinth and HT VCB.
- Supply, fixing & commissioning of 11 kV heat-shrinkable straight-through jointing kits.
- Supply, laying and commissioning of 4 runs of 4-core × 400/240/150/120/16 sq.mm, 1.1 kV grade LT XLPE aluminium cable as per IS 7098 (Part-1).



#### **LT PANELS & DISTRIBUTION SYSTEM:**

- Design, fabrication, supply, installation & commissioning of Cubicle-Type LT Main Distribution Board (MDB), IP65, fabricated from 14 SWG CRCA sheet steel with powder coating/epoxy finish, complete with 1200A double copper bus bar (RYBN), fully sectionalized.
- Design, fabrication, supply, installation & commissioning of outdoor LT Power Distribution Panels (double-door type) with suitable copper bus bars.
- Design, fabrication, supply, installation & commissioning of LT Double-Door Sheet Steel Distribution Boards (SDBs), floor/wall mounted.
- Dismantling of existing LT panels including copper bus bars and accessories and handing over released materials to SSE/EM Stores.

#### **EARTHING WORKS:**

- Supply, erection, testing & commissioning of earth pits.
- Supply, erection & connecting of 25 mm × 3 mm PVC insulated GI strip.

#### **DISMANTLING WORKS:**

- Dismantling and removal of existing over-aged wiring, light fittings, fans, switches, sockets, MDBs, SDBs and switchboards from service buildings and workshop sheds.
- Segregation and handing over of released materials to Railway authorities.

#### **4.0 PENALTY CLAUSE:**

- i. The penalty will be imposed against any deviation mentioned in the special condition of contract, Scope of the work as per the failure from the contractor/Agency side. The penalty will be imposed Rs. 1,000/- to 5,000/- per occasion depending upon the reasons and conditions for the failure of contract. The penalty decisions made by Dy.CEE/S/LGD is final.  
  
During the inspection of Railway officials, if any deviation from the conditions of contract such as non-deployment of machinery specified, use of improper (non-standard/ non- specified) tools, materials, consumables etc., or quality of work is not up to the satisfaction of Railway administration, Rs.2,000/- shall be levied per occasion.
- iii. Within the period of warranty of the work if any deficiency or defect noticed then the same will be intimated by railway representative. After the receipt of information, contractor has to rectify the same within the period of 48 hrs. Otherwise, a penalty of **Rs.500/-** per day will be imposed.
- iv. If the contractor does not maintain the work place neat, clean and hygienic, a penalty of **Rs.200/-** will be levied per report of the Railway Representative.
- v. PPEs: Employees must be provided with suitable uniform and PPE's. If found any contract employee is not wearing personnel protective equipment while executing the contract work, a penalty of **Rs.100/-** per person / per day will be imposed.
- vi. If found any contract employee is not having identity card while executing the contract work, a penalty of **Rs.100/-** per person / per day will be imposed.
- vii. Any other mistake/error on part of contractor or his employee, which are not specified above, will be penalized suitably as decided by Dy.CEE/S/LGD.

## **5.0 TECHNICAL SPECIFICATIONS:**

### **General Instruction for Designed Based Criteria for General Electrical Works:**

#### **i. Design criteria: -**

- a. System voltage: 415V 3 Phase 4 wires /240V 1 Phase 2 wires, 50Hz
- b. Ambient temperature: As per ISHRAE recommendations
- c. Demand Factor: 80%
- d. Load power factor: 0.95
- e. Voltage Drop (Final Circuit): 5%
- f. Earthing system: TN-S System
- g. Spare capacity (Distribution Panel): 20%
- h. Spare capacity (Cable raceway): 40%

#### **Colour Code**

Cable and Busbar shall be phasing identified with colour codes as;

Phase A : Red

Phase B : Yellow

Phase C : Blue

Neutral : Black

Ground : Green or Yellow Strip Green

Emergency Lighting Cable : Orange

- ii. It is Contractor's responsibility to execute the job in all respect as per the detailed drawings /specifications. The Contractor shall be responsible for all electrical installations and electrical fixtures including lighting and other power equipment for Station Building and suitable systems for Platforms, Station Parking, Circulation, landscaping etc.
- iii. Provision of MDBs, DBs, with proper rating switchgear (MCBs, MCCBs, ELCBs etc.), suitable rating XLPE Cables along with laying with HDPE pipes, FRP cable trays, FRLS copper conductor of suitable rating for the concealed conduit wiring on walls and ceilings, modular switchboard, modular switches, lighting, BLDC fan, exhaust fan, air cooling, power points, ACs, Geysers, Road lighting, pathway, Earthing's etc as per the yardsticks, guidelines of Railway board for respective assets and specification mentioned. (Letter No: RB letter No.2018/LM(PA)03/06 Dt:14.02.2022). Electrical General Services Manual Volume-I (Power Supply) circulated by Railway Board to be followed.
- iv. Quality of Electrical Works planned & executed should be confirming to IE Rules/CEA Regulations, National Building Code (NBC) of India – 2016, National Electrical Code (NEC) of India – 2023, Super ECBC Codes, relevant IS Standards etc. Proper earthing is to be planned & incorporated in proposals. HT/LT switchgears and cables to be provided as per load requirements. All cables to be laid in trenches/pipes/cable trays for ease of maintenance & aesthetic look. Proper fault protection & gradation system to be ensured. For ventilation of various areas ceiling fans shall be provided in offices/small cabins, waiting rooms, platforms etc. BLDC fans with remote regulators to be provided as per PCEE/SCR specification No.207/6/Nomenclature Dt.11.05.2022.
- v. The wiring shall generally be done using FRLS PVC insulated copper conductor wires of 1100V Grade in M.S./PVC conduits as called for including providing switches, sockets, plug tops, electronic fan regulators, outlet boxes etc.
- vi. HDPE pipe shall be used in all exposed applications. Earth wire shall also be insulated and of same cross-sectional area as phase wire.
- vii. Color Code shall be maintained for the entire wiring i.e., Red, Blue & Yellow for phase wires, black for neutral & green for earth wire.
- viii. Minimum size of copper wire shall be 1.5 Sq mm. for light points. Minimum wire for sub-circuit light point will be 2.5 Sq mm.
  - i. Wires of size 4 Sq mm. and above shall be used for power outlets.
  - ii. Modular type switches/ outlets shall be provided.

#### **Wire Sizes:**

- The size of the copper cable/ wires used for internal wiring shall be as follows:
  - Light Point wiring for single & two points - 1.5 Sq mm
  - Light Point wiring for more than two points - 2.5 Sq mm
  - Light Plug Wiring - 2.5 Sq mm
  - Power Plug (6/ 16 Amp Socket outlet) - 4.0 Sq mm
  - Power Plug (20/ 30 Amp MCB) - 6.0 Sq mm
  - Circuit Wiring from DB to First Switch - 2.5 Sq mm

- For wiring of higher capacity out lets, size of wires will be decided keeping in view load and distance from DB.
- The size of earth continuity conductor shall be same as phase wire.

Outdoor:

- All cables from MDB to SDB's in buildings (stations/service buildings etc.) shall be copper.

#### **Design Criteria for Distribution Boards:**

- For connection of lighting/ power circuits, MCB type distribution boards shall be provided suitable for 3 phase 415 V and single phase 230 V.
- All distribution boards shall be fabricated from 1.6 mm thick sheet and shall be of double door construction. The incomers shall be with MCCB/ MCB. In each phase 30mA ELCBs/RCCBs shall be provided for protection against earth leakage. All Distribution boards shall be with minimum IP42 protection.
- MCBs shall be of 10 kA fault rating and capacity shall be as per load requirement.
- Distribution boards, MCCB, MCB, ELCB shall be of reputed manufacture and same make.
- Distribution boards shall be provided in an accessible location. Each circuit load shall not be loaded with more than 1000-Watt load. Minimum wire size shall be for sub circuit wiring for light points 2.5sqmm and for power 4sqmm with FRLS Cu wire. Separate neutral to be pulled for each circuit.
- For External feeders all above specifications except IP protection which shall be IP67 shall be followed. All cable entries for External feeder pillar shall be from bottom. All External feeders shall be provided with Real time delay timer with Day light sensor and contactor for Automatic operation.
- All distribution boards and Feeder pillar shall be provided with RAL-7032 Powder coating.

#### **Design Criteria for Lighting and Fans:**

- General lighting of various common areas shall be planned as per NBC-2016 and Guidelines issued by Ministry of Railways.
- Internal Lighting has to be done for all areas of Station Building. Electrification of all stations, service buildings, LC gates, end goomties etc. as per SCR Technical Circular No.4/2022 issued vide letter No.77/2/P/GE/WORKS(T) Dt.07.04.2022.
- Electrification of all LC gates, Station platforms (with 30%-70% Automatic Control system to save energy), yards, circulating area, approach road, Cabling and Lighting arrangements at ROB/RUBs as per the details given by civil engineering department.
- Lux levels at various areas will be maintain proper, minimum LUX levels in the entire building or external areas. All Energy efficient reputed brand LED Lighting Should be 5\*BEE Ratings. The minimum lux level to maintained in station premises/circulating area to be ensured.
- For ventilation of various areas ceiling fans shall be provided in offices/small cabins, waiting rooms, platforms etc. BLDC fans with remote regulators to be provided as per PCEE/SCR specification No.207/6/Nomenclature Dt.11.05.2022.
- Energy efficient exhaust fans to be provided in wash areas, S&T installation, battery rooms, power rooms, stores etc.
- Inside COP's, SDB(DP) to be provided with MCB's control of different circuits
- On Each COP one SDB to be provided.
- For FOB one Junction box with 16-32 terminals to be provided on bottom of FOB
- For COP/FOB BUS trunking system to be adopted for Power supply to lights, Fans, Coach Boards and Signage boards.
- Power Bus trunking system for Water coolers, and commercial stalls to be adopted.
- In False Ceiling Location Panel lights to be provided.
- For Engineering station name board at end of the each Platform a separate light to be provided (say 4 feet LED tube light).

**SPECIFICATION FOR LED BULBS FOR INDOOR APPLICATIONS**  
**(for luminaries system wattage Upto 10 W)**

S.N	Parameters	Technical Specifications (Revised)
1	LED make	Nichia/Osram/Samsung/Lumileds/Cree/Avago Seoul/Bridgelux or any other LED with LM-80 certified by National/International Accredited Certifying Agencies
2	Type of LED	High Power, SMD (Surface Mounting Device)
3	Lumen Output/ Efficacy of the system	$\geq 120$ Lumens/W
4	LED Bulb life	$\geq 30,000$ burning hours
5	Nominal Voltage	220 -240 V AC
6	Input Operating Voltage	100 - 300 V AC (Auto restart)
7	Cap base	B22
8	Cap Material	Aluminium
9	Driver type	Constant current driver with short circuit protection with inbuilt high & low voltage cut off
10	Bulb Shape	A19 (OR) As Specified
11	Bulb Cover	UV stabilized Poly Carbonate
12	Correlated Colour Temperature (CCT)	Cool White 5000-6500 K (OR) As Specified
13	Colour Rendering Index (CRI)	$\geq 80$
14	Power Factor (PF)	$\geq 0.90$
15	Ingress Protection (IP)	IP 20
16	Surge Voltage/Protection	To Withstand 2.5 kV
17	Driver Efficiency	$\geq 85\%$
18	Total Harmonics Distortion	Maximum 15%
19	Lumen Maintenance @25° C ambient ( $\pm 2^\circ$ C)	Minimum 80% after 6000 Hrs (Indoor application)
20	Working Humidity	10% to 90 % RH
21	Temperature for Performance	25° C ( $\pm 2^\circ$ C)
22	Conforming to	IS: 16102 (Part 1 &2)/2012 (OR) Latest

- NOTE:**
1. LM- 80/15: 16105 test reports for LEDs should be from accredited National/ International Certifying Agencies.
  2. Firm shall submit warranty (for free replacement) certificate for 5 years along with supply

**SPECIFICATION FOR LED (INDOOR) LIGHT FITTINGS**  
**(for luminaries system wattage upto 45 W)**

S.N	Parameters	Technical Specifications
1	LED make	Nichia/Osram/Samsung/Lumileds/Cree/ Bridgelux /Seoul or any other LED with LM-80 certified by National/International Accredited Certifying Agencies
2	Type LED	High Power LED, SMD (Surface Mounting Device)
3	System Lumen Output/ Efficacy	≥ 120 Lumens/W
4	LED life	≥ 50,000 burning hours
5	Depreciation	30% max. after 50,000 burning hours
6	Switching Cycle	50,000
7	Rated Voltage	220 -240 V AC
8	Input Operating Voltage	140-300 V AC (Auto restart)
9	Driver type	Constant current potted driver with short circuit protection with inbuilt high & low voltage cut off
10	Surge protection	≥ 4kV (Indoor)
11	Driver Components	Industrial grade only
12	Insulation class	Class - II
13	THD	≤10%
14	Efficiency of Driver electronic	≥85%
15	Correlated Colour Temperature (CCT)	5000-6500 K (OR) As Specified
16	Colour Rendering Index	≥80
17	Power factor	≥0.95
18	Construction of Housing	Pressure die-cast aluminium / CRCA anodized/ Extruded Aluminium
19	Finishing	Powder Coated / Anodized as applicable
20	Lamp Cover	High Efficacy, toughened glass of thickness ≥ 4mm or UV stabilized poly carbonate 1.5mm OR as specified.
21	Mounting	Suitable for Surface/ recessed mounted
22	Ingress protection	≥ IP54

- NOTE:**
1. NABL Test reports for LED luminaire **shall be** submitted. **Driver performance** requirements to IS:16104/IEC: 62384 & **Driver safety** requirements to IS: 15885/ IEC: 61347. Firm shall submit driver performance/Safety from NABL/BIS.
  2. Firm shall submit LM 79/IS: 16106 test reports for luminaire from NABL accredited laboratory and LM- 80/IS: 16105 test reports for LEDs should be from accredited National/ International Certifying Agencies. LM79 report with wattage variation upto ±5% of the specified rating is acceptable.
  3. Firm shall submit warranty (for free replacement) certificate for 5 years along with supply

**SPECIFICATION FOR LED (INDOOR) LIGHT FITTINGS**  
**(for luminaries system wattage above 45 W)**

S.N	Parameters	Technical Specifications
1	LED make	Nichia/Osram/Samsung/Lumileds/Cree/Avago/Bridge lux/ Seoul or any other LED with LM-80 certified by National/International Accredited Certifying Agencies
2	Type LED	High Power LED, SMD (Surface Mounting Device)
3	Lumen Output/ Efficacy of the system	$\geq 120$ Lumens/W
4	LED life	$\geq 50,000$ burning hours
5	Depreciation	30% max. after 50,000 burning hours
6	Switching cycle	50,000
7	Rated Voltage	220 -240 V AC
8	Input Operating Voltage	140-300 V AC (Auto restart)
9	Control of distribution	Fully cut off
10	Driver type	Constant current potted driver with short circuit protection with inbuilt high & low voltage cut off
11	Surge protection	$\geq 4$ kV
12	Driver components	Industrial Grade only
13	Insulation class	Class-II
14	THD	$\leq 10\%$
15	Efficiency of Driver electronic	$\geq 85\%$
16	Correlated Colour Temperature (CCT)	5000-6500 (OR) As Specified
17	Colour Rendering Index	$\geq 80$
18	Power factor	$\geq 0.95$
19	Construction of Housing	Pressure die-cast aluminium /CRCA anodized/Extruded Aluminium
20	Finishing	Anodized/ Powder Coated
21	Lamp Cover	High Efficacy, toughened glass of thickness $\geq 4$ mm/ UV stabilized Poly Carbonate lens or as specified.
22	Secondary Optics	Poly carbonate lens/ Silicon
23	Mounting	Suitable for surface/recessed/Truss Mounting
24	Ingress protection	$\geq IP54$

- NOTE:**
1. NABL Test reports for LED luminaire shall be submitted. **Driver performance** requirements to IS:16104/IEC: 62384 & **Driver safety** requirements to IS: 15885/ IEC: 61347. Firm shall submit driver performance/Safety from NABL/BIS.
  2. Firm shall submit LM 79/IS: 16106 test reports for luminaire from NABL accredited laboratory and LM- 80/IS: 16105 test reports for LEDs should be from accredited National/ International Certifying Agencies. LM79 report with wattage variation upto  $\pm 5\%$  of the specified rating is acceptable.
  3. Firm shall submit warranty (for free replacement) certificate for 5 years along with supply



**SPECIFICATION FOR LED (OUTDOOR) LIGHT FITTINGS**  
(for luminaries system wattage Upto 45 W)

S.N	Parameters	Technical Specifications	
1	LED make	Nichia/Osram/Samsung/Lumileds/Cree/Avago/Bridgelux/Seoul or any other LED with LM-80 certified by National/International Accredited Certifying Agencies	
2	Type LED	High Power LED, SMD (Surface Mounting Device)	
3	Lumen Output/ Efficacy of the system	≥ 140 Lumens/W	
4	LED life	≥ 50,000 burning hours	
5	Depreciation	30% max. after 50,000 burning hours	
6	Nominal Voltage	220 -240 V AC	
7	Input Operating Voltage	140-300 V AC (Auto restart)	
8	Control of distribution	Fully cut off	
9	Driver type	Constant current potted driver with short circuit protection with inbuilt high & low voltage cut off	
10	Surge protection	Internal ≥ 4kV & External ≥ 10kV SPD	
11	THD	≤10%	
12	Efficiency of Driver electronic	≥85%	
13	Driver Components	Industrial grade only	
14	Beam Angle	≥ 140° along with road ≥ 80° across the road	} Street light + Flood light 60°
15	Correlated Colour Temperature (CCT)	5000-6500 K (OR) As Specified	
16	Color Rendering Index	≥70	
17	Power factor	≥0.95	
18	Construction of Housing	Pressure die-cast aluminium / Extruded Aluminium	
19	Finishing	Anodized/ Powder Coated	
20	Lamp Cover	High Efficacy, toughened glass of thickness ≥ 4mm / UV stabilized Poly carbonate ≥ 1.5mm or as specified. Transparency ≥ 95%	
21	Secondary Optics	Poly carbonate lens/ Silicon	
22	Mounting	Suitable for existing pole/ Truss/ Lantern mounted or as per site conditions.	
23	Ingress protection	≥ IP66	
24	Impact Resistance	≥IK 07	

- NOTE:
1. NABL Test reports for LED luminaire shall be submitted. **Driver performance** requirements to IS:16104/IEC: 62384 & **Driver safety** requirements to IS: 15885/ IEC: 61347. Firm shall submit driver performance/Safety from NABL /BIS.
  2. Firm shall submit LM 79/IS: 16106 test reports for luminaire from NABL accredited laboratory and LM- 80/IS: 16105 test reports for LEDs should be from accredited National/ International Certifying Agencies. LM79 report with wattage variation upto ±5% of the specified rating is acceptable.
  3. Firm shall submit warranty (for free replacement) certificate for 5 years along with supply

**SPECIFICATION FOR LED (OUTDOOR) LIGHT FITTINGS**  
**(for luminaries system wattage above 45 W)**

S.N	Parameters	Technical Specifications (Revised)
1	LED make	Nichia/Osram/Samsung/Lumileds/Cree/Avago/Bridgelux/ Seoul or any other LED with LM-80 certified by National /International Accredited Certifying Agencies
2	Type LED	High Power LED, SMD (Surface Mounting Device)
3	Lumen Output/ Efficacy of the system	≥ 140 Lumens/W
4	LED life	≥ 50,000 burning hours
5	Depreciation	30% max. after 50,000 burning hours
6	Nominal Voltage	220 -240 V AC
7	Input Operating Voltage	140-300 V AC (Auto restart)
8	Control of distribution	Fully cut off
9	Driver type	Constant current potted driver with short circuit protection with inbuilt high & low voltage cut off
10	Surge protection	Internal ≥ 5kV & External ≥ 10kV
11	THD	≤10%
12	Efficiency of Driver electronic	≥85%
13	Driver Components	Industrial grade only
14	Beam Angle	Street light 90° to 120° or as specified High Mast 40° to 90° or as specified
15	Correlated Colour Temperature (CCT)	5000-6500 K
16	Color Rendering Index	≥70
17	Power factor	≥0.95
18	Construction of Housing	Pressure die-cast aluminium / Extruded Aluminium
19	Finishing	Anodized/ Powder Coated
20	Lamp Cover	High Efficacy, toughened glass of thickness ≥ 4mm/ UV stabilized Poly Carbonate lens or as specified. Transparency ≥ 95%
21	Secondary Optics	Poly carbonate lens/ Silicon
22	Mounting	Suitable for existing pole/ Truss/ Lantern mounted
23	Ingress protection	≥ IP66
24	Impact Resistance	≥ IK07

- NOTE:**
1. NABL Test reports for LED luminaire shall be submitted. **Driver performance** requirements to IS:16104/IEC: 62384 & **Driver safety** requirements to IS: 15885/ IEC: 61347. Firm shall submit driver performance/Safety from NABL/BIS.
  2. Firm shall submit LM 79/IS: 16106 test reports for luminaire from NABL accredited laboratory and LM- 80/IS: 16105 test reports for LEDs should be from accredited National/ International Certifying Agencies. LM79 report with wattage variation upto ±5% of the specified rating is acceptable.
  3. Firm shall submit warranty (for free replacement) certificate for 5 years along with supply.



## **Specification for High Tension and Low Tension under ground cables and cable trenches, cable laying etc.**

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**1. SCOPE:** This specification covers supply of low tension and high tension under \ground cables and laying of cables in the cable trenches running of cables along the structures, wall, steel framework, trusses, etc. with connected materials indicators, etc.

### **2 .HT 11 KV UG CABLE:**

2.1: Power cables shall be suitable for 11kv, 3phase earthed system and for heavy duty use.

2.2: The cable shall be 11kv grade, three core, aluminum conductored, screened, cross-linked Polyethylene (XLPE) insulated, inner sheath (common covering) of proofed or plastic taped, galvanized steel single strip armoured and outer PVC sheathed.

2.3: The conductors shall be of stranded aluminum of 3|4" or "H" temper, compacted and shaped.

2.4: The XLPE insulated PVC sheathed cables shall conform to IS 7098 part.II /1973 or its latest edition.

### **3. LT UG CABLE:**

3.1: power cables shall be suitable for 440/435 V 3 phase with neutral earthed system and for heavy-duty use.

3.2: The cable shall be of 1100 Volts grade, 2 /3 1/2 / 4 core, PVC insulated and PVC sheathed, aluminum conductored, cores laid up, surrounded by common covering inner sheath applied either by extrusion or by wrapping of a filling material containing un-vulcanized rubber or thermo-plastic material applied with Proofed or plastic tape and armoured with galvanized steel round wire /flat strip and outer sheathing with PVC.

3.3: The conductors shall be of stranded aluminum wires, sizes conforming to class-2 of table 13 of IS -8130/76 or latest.

3.4 :The PVC insulated and PVC sheathed LTUG cables shall conform to IS -1554 (Part.I)/1976 or latest.

### **4. CABLE TRENCHES (ORDINARY):**

Excavation of cable trenches of different sizes in all types of soils. The bottom of trench is levelled freed from stones, and sharp edges of rock. A layer of 10 cms. thick sand is laid at the bottom of trench after laying the cable, it is covered once again with 10cms. thick sand and covered with well burnt country bricks at the rate of 9to 10 bricks per metre depending upon width of brick for each cable without leaving any gap in between so as to prevent damages to the cables due to crow bars etc. (during any excavation at a later date) and one brick to be placed in between the cables at every one metre of regular interval and duly filling the trench with earth after positioning the cable markers and ramming well in stages to bring the surface in level with original surface.

If two separate feeders are to be laid in the same trench a horizontal interval spacing is advisable in order to reduce the effect of mutual heating and also to ensure the a fault occurring on the cable will not damage the adjacent one.

If single core cables are used for forming a three phase circuit, the three cables are laid in triangular formation (trefoil).

**5. ROAD CROSSING:** Cutting of roads, excavation of the cable trench of different sizes and laying of RCC Hume pipes and jointed with collers in an approved manner. The pipes are required to be laid so as to keep the cable at one metre below the ground level. The pipes shall be extended upto 2 meters on either side of the road, measured from the edge of the road. The pipes shall be positioned so as to maintain a slope of about 1 in 30, to allow drainage of seepage water. No bricks or sand are required to be placed at such places. A number of pipes are laid for number of cables, if are required to be laid. The cable trench can be closed with the excavated earth and ramming well in stages to bring the surface in level with the original and making the road as earlier.

The cable can be drawn through pipes without disturbing the traffic when once the above arrangement is made. The cable markers can be placed on either side of the road so as to identify the cable route.

**6. Track crossings:** Removing of existing ballast, excavation of the cable trench of different sizes under the track and laying of RCC hume pipes and jointed with collers in and approved manner. The pipes are required to be laid so as to keep the cable at minimum one metre below the track or formation level. The pipes shall be laid upto the railway boundary at both ends or upto the point as prescribed by the Railway. The pipes used shall be of long lengths and the pipes shall be positioned so as to maintain a slope of about 1 in 30 to allow drainage or seepage water. No bricks or sand are required to be placed at such places. A number of pipes are laid for number of cables if are required to be laid. The cable trench can be closed with the excavated earth and ramming well in stages to bring the formation/cutting as per the original and replacing the removed ballast as earlier.

The cables can be drawn through pipes without disturbing the traffic, when once the above arrangement is made. The cables markers can be placed on either side of the track at a convenient place so as to identify the cable route.

#### 7. Laying of cables on Racks and Cleats:

In side buildings, workshops, sheds, sub- stations etc. it is sometimes necessary to lay the cables on racks or brackets, spaced at regular intervals or sometimes they are required to be cleated directly on the walls/trusses/beams or M.S. structures fixed on walls.

The cables are laid direct upon trays with or without spacers sometimes instead of using metal trays the cables are required to be supported and clamped on brackets spaced at such regular intervals so as to prevent under sag.

For horizontal runs, brackets or supports made from angle iron are grouted in the walls and they are arranged in a single place when only a few cables are involved. When large numbers of cables have to be laid over the same route the brackets are fixed as per formation.

For horizontal run of one or two cables can be clamped/cleated directly on walls/beams preferably with the non-magnetic materials like aluminum wood etc. For vertical runs, the cables are clamped/cleated on walls/columns or on MS flats or on angle irons fixed on walls and they are required to be spaced at such intervals so as to prevent buckling of cables and creepage of load.

All steel work shall be painted with two coat of Red Oxide and finished with suitable colour anti corrosive paints.

#### 8. Cables along with structures:

The GI pipes shall be fastened to the structures up to 2.5 mtrs. From ground level by suitable MS clamps at an interval of not more than one metre with suitable bolts, nuts, washers, etc. the cable shall be drawn through the GI pipe. Both the ends of GI pipe shall have a PVC/Wooden bushes to avoid abrasion to the cable. In addition, the top end shall be sealed with cable compound to arrest ingress of rain water.

The cable shall be run above pipe level up to cable termination end through suitable teak wood cleats duly clamped to the structure by suitable clamps, bolts, nuts, washers etc.

#### 9. Cable laying in the masonry trench:

Inside the sub-stations, repair sheds, workshops etc. suitable sizes of masonry trenches will be constructed by the Railways.

The cable shall be laid in the trenches and covered with RCC slabs/MS sheet/Aluminum checkard plates as per the schedule and instructions of Engineer at site.

10. Bends: The cable trench shall be straight as far as possible without bends and at places where obstacles are encountered, there shall be no abrupt bends or sharp, corners, such bends if unavoidable, the cable shall be laid with minimum bend as per following specification.

10.1: Bending radius for PVC cables while installing/laying PVC cables the following minimum bending radius should be observed in order that the cables, especially insulation may not undergo damage.

For 1.1KV cables:

- (a) Single core cables -  $15 \times D$  (where D is the overall diameter of cable)
- (b) Multi core cables -  $12 \times D$

#### 10.2. Bending Radius for XLPE cables:

While installing/laying XLPE HT cables the following minimum bending radius should be observed so that the cable end especially the insulation is not damaged.

Voltage Grade of cable	Recommended minimum bending radius
a) Up to 11 KV	$15 \times D$
b) Above 11 kV	$15 \times D$ for multicore cables $20 \times D$ for single core cables.

where D - is overall diameter of cable.

11. Slope: The slope of the cable trench according to the formation of the land shall be made so as to keep the bend of the cable minimum as stated in item 10 above.

#### 12. Looping of cable:

12.1: The cable at the foot of the structures shall be looped to the lengths of 5 meters to allow for the future requirement the coil diameter shall be not less than minimum bending radius as stated in item 10 above. The excavation at structures shall be done suitably and covered with sand, bricks and earth as detailed under item 4 above.

12.2: At each end termination near the panel board a 5 meter loop shall be kept as an allowance and loop ring shall be formed circular and as recommended by the cable manufacturers.

#### 13.0: Accessories/Materials:

13.1: Cable Route Indicators (Cast Iron): The cable markers shall be positioned, fixed firm and cemented in a manner acceptable to the Engineer at site. The M.S. Items shall be dipped in hot tar and dried before they are fixed. The cable marker shall be painted with 2 coats of red oxide, one coat before providing at site and another after positioning and cementing. The spacing of the markers shall be not more than 6 meters in straight runs.

#### 13.2: Country Bricks:

13.2.1:GENERAL: Country bricks must free from cracks large chipped surfaces and broken corners stones and lumps inclusions of burnt kankar if of small extended may be permitted. The brick surface should be so hard as not to get scratched by the finger nail. Franchres surface should not have cavities to any appreciable extent and the texture should be as even as possible. The country bricks when struck with a piece of steel should give a fairly ringing and not a dull earthy sound. It should not absorb more than 25% of its own dry weight of water. When dropped on ground from a height of 1 metre, it should not crack or break.

13.2.2:Quality and size: Country bricks may be slightly over burnt but not under burnt in any case. The colour may be dull red or even reddish yellow, provided it is not due to under-burnt material and is only a feature of the type of moulding clay used. The normal size of country brick should be 225mm x 115mm x 75 mm. The size of the frog in the upper face should be same as per first or second class bricks.

13.3: Sand: The sand shall be preferably of river sand or as per the quality required by the Engineer at site. The sand shall be free from lumps of earth, clay, etc. and screened.

13.4:RCC Hume Pipes: RCC hume pipes supplied shall be of size 150 mm internal dia and 210 mm external dia to the standard lengths. Necessary collars for jointing the above pipes shall also be supplied. The pipes and collars shall be conforming to relevant latest ISS and same should be approved by the Engineer at Site before laying in the trenches.

13.5: Clamps, bolts, etc: Clamps shall made out of Aluminum or M.S.Flat. The bolts used shall be of suitable dia and of sufficient length. One M.S.Hex nut and a check nut with one spring washer between two nos. of flat washers shall be used for tightening the bolts. The M.S.Clamps shall be painted with one coat of Red Oxide and 2 coats of Aluminum paint.

13.6: GI Pipes: The GI Pipes shall be of 'B' Class of 50 mm dia/100mm 3.4mm dia thickness to the standard lengths. Necessary collars bends etc. for joining the above pipes shall also be supplied. The pipes and accessories shall be conforming to relevant latest ISS and same should be approved by the Engineer at site before use.

13.7: HT Cable end boxes/kits to use with 11 KV earthed system XLPE Cables;

13.7.1: Out door end termination: The kit should essentially contain the following contents:

1. Required quantity of cable jointing compound.
2. Required quantity of hardener
3. Plastic mould
4. Mould adhesive cum-solvent
5. Earth continuity connection.
6. Stress grading paste.
7. Self bonding insulating tape
8. Insulators
9. Copper binding wire
10. Aluminum Oxide tape
11. Nylon stringer cutting XLPE insulation
12. Polyester tape
13. Semi conducting self bonding tape
14. M. Seal (Fast setting) epoxy putty
15. Instruction sheet

13.7.2:Indoor end terminations: The kit should essentially contain the following contents.

1. Required quantity of cable jointing compound
2. Required quantity of hardener
3. Plastic mould
4. Mould adhesive cum solvent
5. M. Seal (fast settings) epoxy putty
6. Earth continuity connection
7. Stress grading paste
8. Self bonding insulating tape.
9. Copper binding wire.
10. Aluminium oxide tape
11. Nylon string for cutting XLPE insulation
12. Semi conducting self bonding tape.
13. Instruction sheet

13.8:LT Cable end boxes/kits to use with 1.1 KV PVC Cables:

For indoor & outdoor end terminations: The kit should essential contain the following contents.

1. Required quantity of cable jointing compound
2. Required quantity of hardener
3. Plastic mould

4. Mould adhesive cum solvent
5. M. Seal (fast settings) epoxy putty
6. Earth continuity connection
7. Spacer
8. Instruction sheet

13.9: WP Junction Boxes: These shall be made out of MS Sheet iron with weather proof arrangements type with suitable terminals, locking arrangements knock out cable entry holes etc.

The box shall be painted with one coat of red oxide and two coats of aluminum paint. These shall be made & provided as per the instructions of the Engineer at site.

13.10: Cable gland: The cable gland shall be of brass with fixing check nuts etc. The correct size of gland shall be used for the particular size of cable. The glands to be used should be approved by the Engineer at site.

13.11: (Cable jointing lugs): These shall be made of aluminium, crimping type (i.e. solderless) and bolted type and also shall have adequate current carrying capacity. The lugs to be used should be approved by the Engineer at site.

13.12: Cable markers for track crossings: These shall be made of cast iron the design shall be approved by the Railway. The following information shall be clearly marked on the marker.

1. Electric cable : Volts
2. Number : Cables
3. Danger : In English, Hindi and the vernacular of the Dist.
4. Depth of cable : Below track level
5. Depth of cable : Below ground level between the toe of bank and Railway fencing

13.13: Cable markers used where No. of feeders involved:

These shall be made of cast iron, the design shall be approved by the Rly. The following information shall be clearly marked on the marker.

a) Electric cables, volts (b) No. & sizes of cables Length of cable (d) origin & destination of cable.

14: General:

14.1: Test Certificates shall be produced for the cables supplied from the manufacturers:

14.2: Kit materials/accessories supplies should have approval of site Engineer before using the same.

14.3: The method of laying the cables shall be generally as indicated in Drg. No.SC/E/A3/STD/1288.

14.4: The cable routes shall be actually measured at site and the requirement accessed before the supplies are effected. No joints in straight runs will be permitted. Measurement for cables will be taken as straight runs and from gland to gland. Covering of trenches shall be carried out only after measurements are taken and recorded. Insulation resistance tests shall be repeated after laying the cable and before the terminations are made in the presence of the Engineer-in-charge at site.

14.5: While connecting the cables to OH Mains/switch panels the cable end boxes shall be used as per the directions of Engineer at site, required to be laid in existing trenches within the unit substations/shop bays, the contractor shall ensure that this is done by removing the existing slabs and replacing the same after laying, duly cleaning the trench wherever warranted.

14.6: Wherever the cables enter or leave the buildings they shall be through walls in 150mm. Dia RCC pipes/GI pipes with collar as directed by the Engineer-in-charge at site including civil works.

14.7: The cables shall be treated through RCC pipes at all road and rail line crossings and at all other service line crossings like drain pipes, sewage and water-mains as per instructions of the Engineer-in-charge at site.

14.8: Where track crossings are involved in two cable markers shall be fixed at both ends of the underground crossing as directed by the Engineer at site.

14.9: Where we have to deal with No. of feeders like workshops, repair shops, sub-stations etc.

Approved type C.I Cable route indicators shall be grouted in concrete along the route of the cable at intervals of 20 metres in straight runs and at every diversion point and at every entry and exist points of buildings sheds etc. These shall be used along with other types of cable markers as directed by the Engineer at site.

14.10: All cables ends shall be provided with cable glands and each lead provided with crimped aluminium shoes of suitable sizes.

14.11: Any foundation/drainage/walls/masonry structure will be remade with a good mason after passing the cable, by the contractor. Pipes will be provided by the contractor.

15: CABLE TERMINATIONS:

15.1: All the exposed cable runs in shop, floors, particularly being terminated on SDBs, Fuse boxes, shall be encased

in a suitable size of GI Pipe and secured to the pillars/columns by means of clamps.

15.2: Termination of cables shall be carried out using approved crimping type "dowels: aluminium lugs and approved type of crimping tools.

15.3: The method of termination shall be as per the procedure laid down in the relevant manufacturer's literature.

15.4: The prices quoted shall include all the necessary supply of materials such as glands, lugs, consumables etc.

15.5: Every piece of cable shall be tested before taking up the termination work and after completion of the same and the results of such tests shall be recorded.

15.6: All testing shall be carried out in the presence of the Engineer-in-charge at site.

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### **Specification for Conduit wiring including switches and fittings.**

#### **1.0 Scope**

This specification covers the detailed requirements for concealed/ recessed type of wiring work in non-metallic conduits including switches and fittings.

#### **2.0 Materials**

##### **2.1 Conduits**

- i. All non-Metallic conduits, pipes and accessories shall be of suitable materials complying with IS: 9537/Pt.3 or latest and IS: 3419 or latest for rigid conduit and IS: 6946 or latest for flexible conduits. The interior of the conduits shall be free from obstructions. The rigid conduits pipes shall be ISI marked.
- ii. The conduits shall be circular in cross-section. The conduits shall be designated by their nominal outside diameter.
- iii. No non-metallic conduit not less than 20 mm in diameter shall be used.
- iv. Wiring capacity: The maximum number of PVC insulated Aluminum/copper conductor cables of 650/1100 V grade conforming to IS: 694 -1990 that can be drawn in one conduit of various sizes shall be selected accordingly.

##### **2.2 Conduit accessories :**

- i. The conduit wiring system shall be complete in all respects including accessories.
- ii. Rigid conduit accessories shall be normally of grip type
- iii. Flexible conduit accessories shall be of threaded type
- iv. Bends, couplers etc. shall be solid type in recessed type of works.
- v. Saddles for fixing conduits shall be heavy gauge non-metallic type with base.
- vi. For all sizes of conduit, the size of clamps shall be 4.5 mm (7 SWG) diameter

##### **2.3 Outlets :**

- i. The switch boxes shall be made of either rigid PVC moulding, or mild steel, or cast iron on all sides except at the front.
- ii. PVC boxes shall comply with the requirements laid down in IS: 14772 or latest. These boxes shall be free from burrs, fins and internal roughness. The thickness of the walls and base of PVC boxes shall not be less than 2 mm. The clear depth of PVC boxes shall not be less than 60 mm.
- iii. The specification for metallic boxes shall be as per requirements.
- iv. 3 mm thick phenolic laminated sheet covers for all types of boxes shall be as per requirements laid down.

#### **3.0 Installation:**

##### **3.1 Aspects for Concealed/ Recessed conduit works:**

- i. The erection of conduits of each circuit shall be completed before the cables are drawn in.
- ii. Conduit Joints: All joints shall be sealed/cemented with approved cement. Damaged conduit pipes/fittings shall not be used in the work. Cut ends of conduit pipes shall have no sharp edge nor any burrs left to avoid damage to the insulation of conductors while pulling them through such pipes.
- iii. Bends in Conduit:
  - a. All bends in the system may be formed either by bending the pipes by an approved method of heating, or by inserting suitable accessories such as bends, elbows or similar fittings, or by fixing non-metallic inspection boxes, whichever is most suitable. Where necessary, solid type fittings shall be used.
  - b. Radius of bends in conduit pipes shall not be less than 7.5 cm.
  - c. Care shall be taken while bending the pipes to ensure that the conduit pipe is not injured, and that the internal diameter is not effectively reduced.

- iv. Outlets: All switches, plugs, fan regulators etc. shall be fitted in flush pattern. The fan regulators can be mounted on the switch box covers, if so stipulated in the tender specifications, or if so directed by the Engineer-in-charge.
  - v. Painting: After installation, all accessible surface of metallic accessories shall be painted
- 3.2 Additional requirements for recessed conduit work :
- i. Making Chase:
    - a. The chase in the wall shall be neatly made, and of ample dimensions to permit the conduit to be fixed in the manner desired
    - b. In the case of building under construction, the conduits shall be buried in the wall before plastering, and shall be finished neatly after erection of conduit.
    - c. In case of exposed brick/rubble masonry work, special care shall be taken to fix the conduit and accessories in position along with the building work.
  - ii. Fixing conduits in chase:
    - a. The conduit pipe shall be fixed by means of staples, or by means of non-metallic saddles, placed at not more than 60 cm apart or shall be fixed by any other approved means of fixing.
    - b. At either side of the bends, saddles/staples shall be fixed at a distance of 15 cm from the center of the bends.
  - iii. Erection in RCC work:
    - a. The conduit pipes shall be laid in position and fixed to the steel reinforcement bars by steel binding wires before the concreting is done. The conduit pipes shall be fixed firmly to the steel reinforcement bars to avoid their dislocation during pouring of cement concrete and subsequent tamping of the same.
    - b. Fixing of standard bends or elbows shall be avoided as far as practicable, and all curves shall be maintained by bending the conduit pipe itself with a long radius which will permit easy drawing in of conductors.
    - c. Location of inspection/junction boxes in RCC work should be identified by suitable means to avoid unnecessary chipping of the RCC slab subsequently to locate these boxes.
  - iv. Fixing inspection boxes :
    - a. Suitable inspection boxes to the minimum requirement shall be provided to permit inspection, and to facilitate replacement of wires, if necessary.
    - b. These shall be mounted flush with the wall or ceiling concrete. Minimum 65 mm depth junction boxes shall be used in roof slabs and the depth of the boxes in other places shall be as per IS: 2667 or latest.
    - c. Suitable ventilating holes shall be provided in the inspection box covers.
  - v. Fixing switch boxes and accessories : Switch boxes shall be mounted flush with the wall. All outlets such as switches, socket outlets etc. shall be flush mounting type, unless otherwise specified.
  - vi. Fish wire : To facilitate subsequent drawing of wires in the conduit, GI fish wire of 1.6 mm/1.2 mm (16/18 SWG) shall be provided along with laying of the recessed conduit.
  - vii. Bunching of cables: For ease of maintenance, cables carrying direct current or alternative current shall always be bunched so that the out going and return cable are drawn in the same conduits.
- 4.0 **Earthing requirements:**
- i. A protective (earth) conductor shall be drawn inside the conduit in all distribution circuits to provide for earthing of non-current Carrying metallic parts of the installation. These shall be terminated on the earth terminal in the switch boxes, and/or earth terminal blocks at the Distribution boards.
- 5.0 **Wiring Specification for Service Buildings :**
- 5.1 All the light points, fan points should be wired with 2 Nos. of PVC insulated 1.5 Sq.mm multistranded copper conductor wires and 2/3 pin SA plug sockets wired with 2 Nos. of PVC insulated 2.5 Sq.mm multistranded copper conductor wires and 5/15 A power plugs with 2 Nos. of PVC insulated 4 Sq.mm copper conductor wires along with earth continuity wires (separate circuit should be drawn from sub distribution board to the 5/15 A power plug).
  - 5.2 All power circuits should be wired with 2 Nos. of PVC insulated 4 Sq.mm multistranded copper conductor wires along with 2.5 Sq.mm PVC insulated multistranded copper wire as earth continuity. The individual circuit should be taken from nearest main distribution board/sub distribution board/distribution board as per the directions of Engineer at site.
  - 5.3 All the fittings should be earthed properly with earth continuity wire. The size of the earthing wire should not be less than half of the size of the conductor along which it is provided, the minimum being 1.5 Sq.mm.
  - 5.4 The PVC insulation should conform to IS: 694/90 or latest and copper conductor should conform to IS: 8130/84 or latest.
  - 5.5 All cables/conductors, wiring material makes shall be anyone of the approved make/brand.
  - 5.6 All the lights, fans, 5A modular plug sockets should be controlled by 5A modular switch of approved make/ brand
  - 5.7 The modular type bell push should be of approved make/brand.

- 5.8 All the FT light fittings & fans should be connected from three terminal ceiling rose with three-core PVC insulated copper flexible cable.
  - 5.9 The 5/15 A modular power plug should be of approved make/brand
  - 5.10 The 2/3 pin 5A modular plug socket should be of approved make/brand.
  - 5.11 All the boards should be of MS/polycarbonate fire retardant unbreakable type as specified in the schedule.
  - 5.12 The FT fitting shall be fixed on 2 Nos. of round blocks and connected from ceiling rose with PVC insulated flexible copper cable.
  - 5.13 All the incoming mains from sub distribution board to meter board should be connected with 2 Nos. of suitable size PVC insulation conforming to IS: 694/1990 or latest and Copper conductor conforming to IS: 8130/84 or latest along with 1 No. of suitable size PVC insulated multistrandard copper wire as earth continuity.
  - 5.14 All the sub-circuit mains from meter board to individual distribution boards/switch boards should be connected with 2 Nos. of suitable size PVC insulation conforming to IS: 694/1990 or latest; copper conductor conforming to IS: 8130/84 or latest along with 1 No. of suitable size PVC insulated multistrandard copper wire as earth continuity.
  - 5.15 The patch works left after electrical wiring/rewiring, are to be attended and to be brought back as it was prevailing earlier duly taking up necessary plastering and distempering/ whitewashing etc. Further, while doing drilling etc., it should be ensured that no damage is caused to the walls of the building ..
  - 5.16 PVC conduits shall be laid in parallel/perpendicular to the walls/roof shall be arranged properly. Further the total wiring in the service buildings shall appear elegant.
  - 5.17 As per Railways site Engineer's instructions, the wiring is to be taken up in PVC concealed wiring suitable to the site conditions.
  - 5.18 Conformity with the Indian Electricity Rules :  
The installation work shall be generally carried out in conformity with the requirement of Indian Electricity Rules 1956 as amended from time to time.  
All the materials, fittings, equipment and other accessories used in the electrical installations shall conform to relevant Indian standard specification wherever they exist and shall be of approved make. In case an Indian standard specification does not exist the materials and other items shall be approved by the competent authority. Specification of materials used generally in the wiring installations and electrical fittings to be of approved makes. Approval of samples to be obtained by the contractor from the Engineer-in-charge of the Railways before commencement of the work.
  - 5.19 Workmanship: Good workmanship is an essential requirement for compliance of the wiring of installation. The work of electrical installation shall be carried out under the supervision of a person holding a certificate of competency issued by recognized authority.
  - 5.20 All the wiring work should be carried out in the presence of Rly's Engineer at site and in accordance with the of Indian Electricity Act 1910 & with IE rules 1956 amended up to date. During wiring colour code of cables/conductors as per IE Rules 1956 shall be strictly followed.
  - 5.21 The specification to be strictly followed for point wiring, sub-circuit wiring, main circuit wiring etc., specified in the scope of work and tender schedule and the work shall conform to relevant Indian standard code of practice. For the electrical installation works, relevant codes of practice for safety shall be followed.
  - 5.22 The sample of fittings/switches and any schedule item should be got approved by Dy.CEE/S/LGD before commencement of the work. The approved samples will be kept with the nominated Section Engineer. The divisional officer will exercise adequate care to ensure that approved fittings, switch boards, modular switches and other accessories etc., are suitable as per aesthetics of civil engineering structure.
- 6.0 Wherever composite tender for combined civil engineering and electrical works are not existing, the concerned electrical in-charge will give the conduit plan as well as the location of inspection boxes, junction boxes and switch boards to the engineering department before tenders for the work are floated so that conduit pipes are provided inside the walls and ceiling at the time of construction itself in order to facilitate concealed wiring by the electrical department later. The conduit pipe shall preferably be procured and provided by the Engineering department. Suitable openings will be provided during civil engineering construction, as per the plan given by Electrical department, for providing inspection boxes, junction boxes and switch boards etc; later by the Electrical department.

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## **Specification for Low Tension/compact, Compartmentalized Cubicle type power control boards.**

### **1. Scope**

This specification covers the requirements of Low Tension compact, compartmentalized cubicle type power control board accommodating incoming / outgoing switch gears mounted in multi tier construction and with busbar alleys and cable alleys.

### **2. Governing Specification**

The switch gears to be used in the boards :

2.1 Shall conform to the latest relevant IS specification and Railway specifications and of duty class suitable for heavy duty inductive loads.

2.2 The bus bar alley shall conform to IS and shall be provided with dead front arrangements.

2.3 The control board as a whole shall also comply to the following Indian standards of current editions.

IS 8623 - Factory built Assemblies.

IS 2147 - Protection of enclosure.

IS 4237 - Creepage distance.

IS 3618 }

IS-6005 } Phosphate treatment

### **3.0 Construction :**

3.1 The control board shall consist of identical vertical section coupled together, made out of high quality sheet steel. Each vertical Section shall be divided into well designed compartment for housing main bus bar, vertical risers feeder switches, interior cabling etc., to ensure safety of equipment as well as personnel.

3.2 The control board shall be made of non-magnetic frame, to this load bearing "U" channels shall be added at appropriate locations for uniform load distribution. The load bearing partitions and door shall be made out of 2mm thick sheet steel. The non-load bearing sheets and partition can be of 1.6mm thickness. Gland plates shall be of 3.2mm thick, all the doors shall be provided with concealed hinges.

3.3 All steel work shall be subjected to the following, treatment in order to achieve a durable finish with epoxy base/ Synthetic enamel base. Degreasing, pickling in acid, cold rinsing phosphating, passivating and spraying with high corrosion resistant primer of grey colour.

3.4 The construction of the control boards shall be such that access to feeders/ bus-bars and cable ducts is from the front.

3.5 Control boards shall be so designed to facilitate future extension on both sides of the panel.

### **4.0 Bus bar system**

4.1 The bus-bar shall be of electrolytic quality aluminum and shall be designed to carry load current as prescribed. All bus bar joints and tap off points shall be scratched, brushed and greased before assembly and shall be provided with removable shrouds for complete insulation of the bus-bar-system.

4.2 The bus bars support system shall be designed for circuit rating of not less than 50 Amps, for 1 sec. 110KA peak.

4.3 The bus bar and inter connections shall be designed for similar short circuit rating and shall be, rigidly supported to provide for the electro magnetic stresses at the time of short circuit.

4.4 The bus-bars and inter-connections shall be insulated with RYB coloured PVC SLEEVES. Insulated barriers shall be provided to ensure safety to operation and maintenance personnel.

4.5 The neutral bus shall also be of the main bar capacity having same cross section and shall be so located in a separate chamber nearest to gland plate so that the neutral core of cables can be connected to the neutral bus directly without passing through cable duct and feeder compartments.

4.6 The bus bars shall be supported at uniform intervals on high impact, antitracking, non-hygroscopic, arc-resistant, flame retardant, moulded insulation preferably from glass fiber re-inforced thermosetting plastic.

4.7 A continuous earth bus shall be provided at approved location along the entire length of the control board and all the switch chassis shall be connected rigidly to the earth bus.

### **5. Cabling**

The cable alley shall be of adequate dimension to receive the cable cores duly clamped. Adequate space shall be available for termination. The alleys shall be provided with terminal blocks on which the cables can be terminated and also shall be provided with arrangements on which the cable cores shall be insulated from the rest of the earthed frame work.

All the nuts, bolts used for current carrying parts shall be of brass and all other fasteners shall be galvanized.



Minimum space of 225mm shall be available at the bottom most their for termination of cable.

## **6. Metering**

Indicating meters : flush type voltmeter and ammeter with suitable current transformers shall be provided on the distribution board panel. The meters shall be of 96mm x 96mm size with three way selector switches. The ranges of ammeters and voltmeters shall be provided suitably depending upon the board capacity.

Current Transformers : Air cooled ring type current transformers conforming to relevant BSS/ISS shall be provided in the distribution board for metering. The CTs shall be of Class "C" accuracy with 15 VA burden and suitable ratios depending upon the Ammeter ranges.

## **7. General Requirements :**

The control board shall be complete with inter connections from bus bar to MCCB and from MCCB to terminal blocks in the cable alley.

The tenderer shall furnish the fabrication drawing the power control board indicating among other things the size of the bus bars and the inter connections indicating meters etc.

The control board shall be provided with foundation bolts and nuts.

The painting of the board shall provided with one coat of redoxide and two coats of grey coloured enameled paint.

The power control board shall be installed after leveling the place where the board has to be installed.

The installation shall be carried out as per approved drawing after grouting foundation bolts in 1:2:4 concrete. The installation shall be neat to the satisfaction of the Engineer incharge.

The testing of the power control board shall be carried out as per the procedures of commissioning test stipulated in IS 3072 in the presence of the engineer incharge and the result shall be recorded and got signed by him.

7.8. If the test results are not satisfactory, corrective steps shall be taken by the contractor to ensure that the results satisfy the requirements of IS 3072 •

7.9. Commissioning shall be carried out in the presence of the Engineer incharge.

7.10. Each of the switch gear shall be provided with an inscription plate to indicate the serial number and the load details.

## **LT Switch panel**

8.1 L.T Breaker panel shall be erected on the foundations/plinths which will be provided by the contractor at the locations given by the Railways site Engineer. The requirements of these plinths/foundation have to be clearly furnished by the contractor within 10 days of receipt of order for approval.

8.2 All bus bar joints shall be made carefully. The contact surfaces of the bus bars and connectors shall be cleaned vigorously either by hand with a dry coarse emery cloth or by power driven wire brush suitable for this purpose. All the surfaces shall be smeared with a suitable joint compound of approved quality. If necessary and the joint closed up as soon as possible thereafter similar procedure should be followed while connecting the equipment terminals bus bars.

8.3 The termination arrangements on the LT.breaker panels shall be designed for 1100V grade PVC armoured cables. The incoming switches shall have termination arrangements suitable for taking suitable size PVC armoured cables from the LT breaker panel provided in the sub-station.

The outgoing L.T. Switches shall have termination arrangements suitable for the number of sizes of outgoing feeder cables. The rates quoted shall be inclusive of designing –supply, installation/testing/commissioning and handing over of power control board and shall include the cost of the necessary Civil works and supply and installation of any minor items related to the work.

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### **Supply & erection of BLDC fans with remote**

The price shall cover Supply and erection of Energy Efficient BEE 5 star rating brushless DC motor (BLDC) fan of size 1200mm sweep with double ball bearing, 300mm down rod, canopies, shackles, 3 Nos. of blades, suitable for operation on 230V AC 50Hz, Single phase supply, of the following specification.

<b>S.No</b>	<b>Description</b>	<b>Specification parameters</b>
1	Motor	Brushless DC (BLDC)
2	Sweep size	1200mm
3	Min. Air delivery	220 Cu.M/min
4	BEE star rating	5 Star
5	Power Consumption & Power factor	28 Watts(Mas.) & 0.98
6	Speed	Variable speed
7	Total Harmonic Distortion	8%
8	Speed control	Step type Electronic Regulator or/and IR Remote operated.
9	Voltage Range	140 V to 240 V
10	Standard Color	White/Cream/Ivory
11	Blade thickness and No.of blades	1.1 mm and 3
12	Blade material	Aluminum
13	Double Ball Bearing	Yes
14	Down Rod Size (Without Shackle)	300 mm
15	Shank Thickness (Min.)	2 mm
16	Shackle Thickness (Min.)	2 mm
17	Canopy	2 Nos.
18	Testing	Type testing reports to be submitted, issued by NABL accredited certifying agency.
19	Warranty	<b>5 years</b>

**Supply & erection of BLDC wall-mounted fans with remote**

The price shall cover Supply and erection 450 mm sweep Energy Efficient BEE 5 star rating brushless DC motor (BLDC) wall-mounted fans for operation on 230V AC 50Hz, Single phase supply, of the following specification.

Sl. No.	Description	Specification parameters
1	Motor	Brushless DC (BLDC)
2	Sweep size	450mm / 18 Inches
3	Min. Air delivery	110–145 CMM (Cubic Meters per Minute).
4	BEE star rating	5 Star
5	Power Consumption	30W–60W
6	Speed	1300–1400 RPM.
7	Noise level	Low noise/silent operation
8	Control	Push buttons/Remote control
9	Voltage Range	220V–240V AC
10	Speed settings	Multiple speeds or Stepless Speed Control
11	No.of blades	3
12	Blade material	Aluminum or ABS Plastic.
13	Blade thickness	Aluminum: 1.2 to 2.5 mm ABS Plastic: 2.0 to 3.0 mm
14	Double Ball Bearing	Yes
15	Covering Area	300-450 Sq.ft.
16	Guard/Body	Metal grill or ABS body with durable finish
17	Protection	Thermal or surge protection built in for safety.
18	Mounting type	Wall mounted vertical tilt adjustment with oscillation.
19	Length of cord	2 meters
20	Protection	Reverse polarity protection, over voltage protection, short circuit protection and Blocked blade protection.
21	Testing	Type testing reports to be submitted, issued by NABL accredited certifying agency.

## 6.0 WORK FORCE:

1. The contractor shall provide adequately trained man power for prompt and efficient execution of subject work within the specified time. The contractor shall furnish a list of man power deployed by him along with full description, name, address, Aadhar card etc. for this work before commencement to the officer in charge of this work at CWS/LGD and a copy of details to IPF/RPF and shall notify the changes there in from time to time. The contractor shall be responsible for supply of IDENTITY cards. The contractor staff needs to show their ID card to duty RPF while entering into the workshop/Divisions.
2. The contractor has to engage the full-time responsible supervisor with diploma qualified Engineer to supervise the quality of work. He should be provided with mobile and should immediately respond to call given by the Railway Administration. His Mobile Number & email ID should be furnished to concerned SSE. Any communication like Coach Program, non-availability of staff, defects etc., made on these shall be deemed as proof of communication.
3. The contract staff shall behave properly and shall not quarrel with Railway staff. If any problems arise, they shall be immediately brought to the notice of SSE concerned. Decision of Division/workshop officer in-charge and is final in these issues. If Railway administration is having any problem with any contractor staff, those staff shall be removed from work and shall not be allowed in to workshop premises.

## 7.0 Consumption of Alcoholic Drinks & Narcotic Drugs:

**Contractor's staff shall not consume any Alcoholic drinks or narcotic drugs while performing duty. If any staff are found to have consumed drunk narcotic drugs or alcoholic drinks, a penalty of Rs.2,000/- (Rupees Two Thousand only) per staff shall be recovered from the contractor's bill and such staff will not be permitted for future work. The staff will be dealt accordingly to Railway Laws in force from time to time.**

## 8.0 Railway pass:

No Railway pass for the conveyance of the Contractor or his agents or his labor and/or stores will be granted. The Contractor may, however, carry free of charge but at his own risk such labor, Supervisory staff and supply of materials as far as necessary for the delivery of service.

- 8.1 The contractor staff should not carry any Unauthorized/dangerous/inflammable/explosives in the premises of CWS/LGD.
- 8.2 **Identity cards**: The contractor's staff should have Identity card at contractor's cost and made up of durable market material, laminated with passport size photograph. The identity cards prepared and submitted to depot in-charge for authorization by the Railway Administration.
- 8.3 **Subletting of Contract**: The contractor shall not assign sublet the contract in the interest there in or the part thereof to any other party or partner(s) without the consent of the Railway.

## 9.0 Additional Conditions:

### i). **Injury or accidents/deaths of contractor staff/Public**

In case of Injury or accidents/deaths of contractor staff or public during maintenance, the full responsibility and all consequences thereof, shall lie with the contractor only. The Railways shall pay no compensation whatsoever in this regard. Any litigation or any law and order problems arising due to accidents or deaths shall be the total responsibility of the contractor. The Railway shall not bear any responsibility and the Railway will not pay any compensations.

- ii). The insurance coverage of operator working in this contract shall be valid and comprehensive and should have renewed from time to time and valid up to entire contract period. Copies of the same may be furnished to the concerned Railway Engineer in charge at the time of claiming of payments.
- iii). Outsourcing staff should not leave the premises without reliever.
- iv). While executing the works, any damages made to existing Railway structures etc. should be made good by the contractor at his own cost.
- v). Contractor must submit license of the Contract Labor (Regulation & Abolition Act, 1970) in case number of employees 20 or above (as per latest guidelines of Ministry of labor) operated in this contract during execution of the work.
- vi). The contractor's representative/supervisor shall always be available at the same phone number for contact to undertake the restoration of the failures.

- vii). The contractor shall provide identification to the staff engaged by him, so that the Railway Authorities can contact them at the time of inspection.
- viii). The cost of salary, TA, DA, Night Duty and other allowances if any for contractor deputed staff for will be borne by contractor. During the day/night working shifts contractor must make his own arrangements for stay and food for their staff.
- ix). **In case of failure of contract allotted agency to carry out work in time, Railway Reserves the right to get the work done through any other alternative agency with similar works in the Division / Railway.**
- 10.0 Railway reserves all rights to terminate the contract before/after the expiry of the contract period without assigning any reasons as per GCC. This will normally be as a result of unsatisfactory performance of the contract.
- 11.0 The above particulars, instructions have been gone through fully and are understood and accepted by me / us. I/We am/are bound by all the conditions referred in above.
- 12.0 The contractor has to claim the bill for previous month by the end of the following month.
- 13.0 The Railway shall reserve the right to draft any of the vehicles and/or equipments mobilized by the contract at the site of work along with its operator employed by the contractor to assist in rescue and restoration operation in case of any accidents/natural calamities involving human lives. The contractor shall be responsible to arrange mobilization of his operator/equipment/vehicle so drafted with shortest possible delay.
- 14.0 The Railway shall arrange to duly compensate the contractor, whose vehicle/ equipment/operator are so drafted by operation of suitable Non/ schedule (NS) items(s) as per Railway's existing norms.
- 15.0 The Railway reserves the right to terminate the contract at any stage without assigning any reason by giving seven days advance notice to the firm and in that event no claim whatsoever shall be entertained by the Railways.
- 16.0 **SAFETY PROTECTIVE WEAR FOR MANPOWER:**  
Workers engaged for the work must wear the following safety gear confirming to ISI brand. The Contractor shall supply these items as per requirement such that the workers should wear all the times while working.
- 16.1 **Coverall/Uniform:** A full-bodied apron covering both the upper & lower half. The cloth Used shall be made reputed quality. The coverall color shall be sky blue color for women, Navy blue color for men and cream color for supervisor.
- 16.2 **Hand Gloves:** Workers shall wear ISI quality rubber gloves all the time while working in Bogie shop. It shall be of size 18" long.
- 16.3 **Gumboots/leather shoes:** ISI quality gumboots (for jetter& drier)/leather shoes (other than drier) shall be given to all workers. They shall be knee length & comfortable wearing so that no obstacles are caused to workers while operating on workstations.
- 16.4 **Mask for mouth covering:** Each worker shall be given a green colored surgical type mask for avoiding any direct infection.
- 16.5 **Helmet:** Workers shall wear ISI quality Helmet all the time while working in shops. It shall be Steel grey colored.
- 17.0 **RECOVERY CLAUSE:** The cost of the damage, if any, caused by the negligence/fault of the contractor's staff to the Railway property shall be recovered from the contractors on hand bill, which will be equivalent to the cost as recovered from Railway employees.
- 18.0 **INSPECTION OF MATERIALS:**  
All the material, required for this work shall be subject to inspection to ensure that the work is done in accordance with specification, drawings and is of the best quality suitable for the purpose. Following inspection schedule shall be followed.  
**Material inspection:** The material supplied whenever by the contractor should be as per the specification mentioned in the scope of work and from the approved suppliers as mentioned below:
  - i) Item mentioned in the schedule costing total value more than Rs.5 lakh requires RITES inspection.
  - ii) The charges for RITES inspection will be borne by contractor.
- 19.0 **Employment/Partnership etc. of Retired Railway Employees:**
  - (a) Should a tenderer
    - i) be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement,

whether in the executive or administrative capacity or whether holding a pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, OR

- ii) being partnership firm / joint venture (JV) / registered society / registered trust etc have as one of its partners/members a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, OR
- iii) being an incorporated company have any such retired Engineer of the gazetted rank or any other gazetted officer working before his retirement as one of its directors

AND

in case where such Engineer or officer had not retired from government service at least 1 year prior to the date of submission of the tender

THEN

the tenderer will give full information as to the date of retirement of such Engineer or gazetted officer from the said service and as to whether permission for taking such contract, or if the Contractor be a partnership firm or an incorporated company, to become a partner or director as the case may be, has been obtained by the tenderer or the Engineer or officer, as the case may be from the President of India or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.

- b) In case, upon successful award of contract, should a tenderer depute for execution of the works under or to deal matters related with this contract, any retired Engineer of gazette rank or retired gazetted officer working before his retirement in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, and now in his employment, then the tenderer will ensure that retired Engineer or retired gazetted officer had retired from government service at least 1 year prior to the date of his employment with tenderer and in case he had retired from service within a year then he possesses the requisite permission from the President of India or any officer, duly authorized by him in this behalf, to get associated with the tenderer.
- c) Should a tenderer or Contractor being an individual, have member(s) of his family or in the case of partnership firm/ company / joint venture (JV) / registered society / registered trust etc. one or more of his partner(s)/shareholder(s) or member(s) of the family of partner(s)/shareholder(s) having share of more than 1% in the tendering entity employed in gazetted capacity in the Engineering or any other department of the railway, then the tenderer at the time of submission of tender, will inform the authority inviting tenders the details of such persons.

Note: -If information as required as per 19.a), b), c) above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of the Standard General Condition of contract.

**Office of CWM/S/LGD**  
**Division: Lallaguda**

**Place of Work: S&T WS/MFT**

**Tender Notice No: LGD/L/07/2026-27/OT**

**Bill(s) of Quantities**

Name of the work: Replacement of over aged Electrical assets & Rewiring works at S&T Workshop, Mettuguda					
Item. No.	Description	Qty	Unit	Rate	Total
1	Supply, erection, laying and commissioning of perforated GI cable tray, 100 mm (W) × 300 mm (D) × 2.5 mm thickness, made from 12 SWG galvanized iron, including all supporting fixtures, clamps, fasteners, and accessories, along with curve joints, L-bends, T-joints, cross joints, reducers, couplers, and all necessary hardware for a complete cable tray system, as per site conditions and directions of the Engineer-in-Charge.	500	Mtrs	958.00	479000.00
2	Supply and laying of 4-core × 6 sq.mm, 1.1 kV PVC insulated and PVC sheathed cable with bare annealed copper conductor, as per IS 694:2010, including all required connecting accessories such as glands, lugs, ferrules, clamps, saddles, identification markers, and all incidental materials necessary for proper installation, termination, and commissioning, complete as per site conditions and directions of the Engineer-in-Charge.	2900	Mtrs	495.00	1435500.00
3	Supply and laying of 4-core × 4 sq.mm, 1.1 kV PVC insulated and PVC sheathed cable with bare annealed copper conductor, as per IS 694:2010, including all required connecting and termination accessories such as glands, lugs, ferrules, clamps, saddles, identification markers, and all incidental materials necessary for proper installation, testing, and commissioning, complete as per site conditions and directions of the Engineer-in-Charge.	2450	Mtrs	381.00	933450.00
4	Supply of single core 1.5 sq.mm multistranded FRLS copper wire for point wiring of lights and fans through SCH 80 PVC conduit pipes or PVC casing/capping as per site conditions, using Red (Phase), Black (Neutral), Green (Earth) color coding, including all bends, clamps, saddles, terminations, testing, and commissioning. Wires shall conform to IS 694 / IEC standards.	81000	Mtrs	25.00	2025000.00

5	Supply, laying, and testing of single core 2.5 sq.mm multistranded FRLS copper wire for circuit mains and 5-pin, 6 A power sockets through SCH 80 PVC conduit pipes or PVC casing/capping as per site conditions, using Red (Phase), Black (Neutral), Green (Earth) color coding, including all bends, clamps, saddles, terminations, testing, and commissioning. Wires shall conform to IS 694 / IEC standards.	39000	Mtrs	48.00	1872000.00
6	Supply, laying, and testing of single core 4 sq.mm multistranded FRLSH industrial copper wire for 6 A/16 A/20 A power sockets and power circuit mains through SCH 80 PVC conduit pipes or PVC casing/capping as per site conditions, using Red (Phase), Black (Neutral), Green (Earth) color coding, including all bends, clamps, saddles, terminations, testing, and commissioning. Wires shall conform to IS 694 / IEC standards. Cable make: Polycab / Finolex.	34300	Mtrs	72.00	2469600.00
7	Supply, laying, and testing of single core 6 sq.mm multistranded FRLSH PVC insulated industrial copper cable for power sockets and power circuit mains through SCH 80 PVC conduit pipes or PVC casing/capping as per site conditions, using Red (Phase), Black (Neutral), Green (Earth) color coding, including all bends, clamps, saddles, terminations, testing, and commissioning. Wires shall conform to IS 694 / IEC standards.	29400	Mtrs	90.00	2646000.00
8	Supply, laying and Testing of single core 10 sq.mm multistranded copper cable HRFR PVC type for power supply arrangement RYB (Red, Yellow and Blue colour and neutral Green) run through SCH 80 PVC conduit pipes/PVC casing capping as per the requirement of site condition.	3748	Mtrs.	175.00	655900.00
9	Supply of 8-way modular boxes with top plates, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	245	Nos	454.00	111230.00
10	Supply, erection, testing, and commissioning of 20 A double-pole MCB (B curve), including all connected accessories as per site conditions.	245	Nos	677.00	165865.00
11	Supply, erection, testing, and commissioning of 63 A 4-pole MCB (B curve), including all connected accessories as per site conditions.	25	Nos	3149.00	78725.00
12	Supply, erection, testing, and commissioning of 32 A double-pole MCB (B curve), including all connected accessories as per site conditions.	196	Nos	734.00	143864.00
13	Supply, erection, testing, and commissioning of 6 A single-pole MCB (B curve), including all connected accessories as per site conditions.	392	Nos	183.00	71736.00
14	Supply, erection, testing, and commissioning of 16 A single-pole MCB (B curve), including all connected accessories as per site conditions.	98	Nos	212.00	20776.00



15	Supply, erection, testing, and commissioning of 10 A single-pole MCB (B curve), including all connected accessories as per site conditions.	200	Nos	183.00	36600.00
16	Supply of 10A single-pole, 1-way modular switches, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with commissioning.	784	Nos	48.00	37632.00
17	Supply of 5-pin 6 A/16 A modular plug sockets with shutter type and 20 A modular switches, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	294	Nos	675.00	198450.00
18	Point wiring with single core 1.5 sq.mm multistranded FRLS copper wire for lights and fans etc., through SCH 80 PVC conduit pipes or PVC casing/capping as per site conditions, including all connected accessories, bends, clamps, saddles, terminations, testing, and commissioning. Wires shall conform to IS 694 / IEC standards.	650	Points	230.00	149500.00
19	Wall cutting, chipping, erection, and laying of SCH 80 PVC conduit pipes, including plastering after laying, masonry works, and wherever not possible, laying PVC casing/capping as per site conditions, including all related hardware, accessories, clamps, bends, joints, and complete with testing and commissioning.	400	Mtrs	108.00	43200.00
20	Supply of PVC junction boxes (4-way, 3-way, 2-way, and single-way) with suitable top round plates as per site conditions, including all related hardware, accessories, clamps, screws, and complete with testing and commissioning.	588	Nos	25.00	14700.00
21	Supply of 3-pin ceiling roses with PVC round plates, including all required hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	550	Nos	25.00	13750.00
22	Supply, erection, testing and commissioning of FOS LED High Bay Light, 50 W, with IP65 protection (dust-tight and water-jet resistant), suitable for harsh, dusty, and industrial workshop environments, having minimum 5000 lumens light output, complete with robust die-cast aluminium housing, integrated LED driver, mounting brackets / chains, connectors, wiring, and all associated hardware and accessories, including fixing, alignment, testing, and commissioning, as per site conditions and directions of the Engineer-in-Charge.	180	Nos	3100.00	558000.00
23	Supply of 6 Feet /2 Meters Ceiling Fan Down Rod/Iron Rod 1.4mm thickness with all connected accessories	50	Nos	411.00	20550.00

24	Supply of 20/25 mm dia. SCH 80 PVC conduit pipes conforming to IS 9537 Part 3 or latest / PVC casing and capping BIS certified conforming to IS 14927 Part 2 or latest, as per site conditions, including all related hardware and accessories, bends, clamps, saddles, and terminations, complete with testing and commissioning.	3000	Mtrs	25.00	75000.00
25	Supply of 32 mm dia PVC conduit pipes / PVC casing and capping, including straight joints, L bends, T bends, and all related hardware and accessories as per site conditions, complete with bends, clamps, saddles, terminations, testing, and commissioning.	800	Nos	39.00	31200.00
26	Supply, erection, testing and commissioning of 500 kVA, 11 kV/0.433 kV, 3-phase, copper-wound, outdoor type energy-efficient distribution transformer (Level 3 or latest), complete with all required accessories including bushings, tap changer, terminals, earthing connections, mounting hardware, radiators, and other connected accessories, as per site conditions and directions of the Engineer-in-Charge.	2	Nos	1281272.00	2562544.00
27	Construction of pit for transformer plinths for outdoor transformers, size 1.5 m × 1.5 m × 1.5 m, including excavation, stone/brick masonry, plastering, and all connected accessories, complete in all respects as per site conditions and directions of the Engineer-in-Charge.	2	Nos	5788.00	11576.00
28	Dismantling and removal of existing 500 kVA transformer with all connected accessories, including disconnection, lifting, loading, transportation, unloading, and handing over to SSE/EM/S&T/MFT stores, as per site conditions and directions of the SSE/EM/S&T/MFT.	1	Nos	9708.00	9708.00
29	Dismantling and removing of existing 250 KVA transformer with all connected accessories and handing over to SSE/EM/S&T/MFT at his stores including loading unloading and transportation of the same as per the direction of the SSE/EM/S&T/MFT	3	Nos	9708.00	29124.00
30	Supply of 4-way modular boxes with top plates, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	295	Nos	66.00	19470.00
31	Supply of 6-way modular boxes with top plates, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	295	Nos	125.00	36875.00
32	Supply of 12-way modular boxes with top plates, including all connected hardware, screws, clamps, and accessories as per site conditions, complete with testing and commissioning.	295	Nos	199.00	58705.00

33	Supply, erection, testing and commissioning of inverter-type split air-conditioning units, 1.5 TR capacity, 5-Star BEE rated, complete with indoor and outdoor units, insulated copper refrigerant piping, drain piping, interconnecting control and power cables, outdoor unit mounting brackets / stands, vibration pads, fasteners, and all associated hardware and accessories, including fixing, vacuuming, gas charging (if required), testing, and commissioning, as per site conditions and directions of the Engineer-in-Charge, complete in all respects.	6	Nos	42911.00	257466.00
34	Supply, erection, and commissioning of 12 way SPN double door SDBs, including all connected accessories as per site conditions.	50	Nos	1974.00	98700.00
35	Supply, erection, and commissioning of 8-way single-door SDBs, including all connected accessories as per site conditions.	50	Nos	1292.00	64600.00
36	Supply, erection, and commissioning of 18-way single-door SDBs, including all connected accessories as per site conditions.	35	Nos	2109.00	73815.00
37	Supply & fixing of 360° Slim PIR Ceiling mounted Occupancy (Presence) Sensor Similar to Legrand make as per the direction of Engineer at site	40	Nos	3590.00	143600.00
38	Supply, erection, testing, and commissioning of 20 W, 1200 mm LED tube light fittings with LED lamps and inbuilt driver including all wiring connections and accessories as per site conditions, complete with testing and commissioning.	85	Nos	582.00	49470.00
39	Supply, erection, testing and commissioning of 1200 mm sweep energy-efficient BLDC ceiling fans, conforming to latest specifications No. SCR/CEE/SPC/BLDC.02/2022 or latest amendment, complete with BLDC motor, down rod, canopy, shackle assembly, remote control / regulator (wherever applicable), wiring connections, fixing clamps, fasteners, and all connected accessories, including mounting, alignment, testing, and commissioning, as per site requirements, drawings, and directions of the Engineer-in-Charge.	100	Nos	2756.00	275600.00
40	Dismantling and disconnecting of all connected accessories of existing over-aged electrical wiring, all types of electrical light fittings, fans, switches, sockets, MDBs, SDBs, and switchboards, from existing service buildings, workshop sheds, and SSE chambers at S&T Workshop, MFT area. Segregation of released materials and handing over to SSE/EM/S&T Workshop/MFT Stores, complete as per site conditions and directions of Engineer-in-Charge	1	LS	12000.00	12000.00

41	Dismantling and disconnecting of all connected power supply accessories, including copper bus bars and associated hardware of existing over-aged LT panels in shop floor areas inside the S & T Workshop, with all released materials segregated and handed over to SSE/EM stores / MFT, as per site conditions and directions of the Engineer-in-Charge.	1	LS	18000.00	18000.00
42	Releasing of HT underground cable, 3-core × 185 sq.mm aluminium, from transformers to HT VCB, including careful handling, pulling, laying in trench or route, and making it ready for termination, as per site conditions and directions of the Engineer-in-Charge.	1	LS	2000.00	2000.00
43	Excavation of HT underground cable trench for 3-core × 185 sq.mm aluminium cable in the substation, from HT VCB to transformers, including excavation to required depth and width, removal of surplus soil, leveling, dressing of sides and bottom, and disposal of excavated material as per site conditions and directions of the Engineer-in-Charge.	1	LS	4000.00	4000.00
44	Releasing of existing LT underground cable from transformers to substation panels, including careful handling, pulling, laying in trench or route, and making it ready for termination, as per site conditions and directions of the Engineer-in-Charge.	1	LS	3800.00	3800.00
45	Supply, erection, laying, fixing, connecting and commissioning of 4 runs of 3-core × 185 sq.mm HT XLPE underground cable, 11 kV grade, as per IS 7098 (Part 2):1985 or latest, between 500 kVA transformer plinth to HT VCB, including cable glands, lugs, jointing, terminations, supports, trenches or ducts, and all required connected accessories, as per site conditions and directions of the Engineer-in-Charge.	125	Mtrs	975.00	121875.00
46	Supply, fixing, connecting, testing and commissioning of 11 kV HT heat-shrinkable straight-through jointing kits, suitable for 3-core × 185 sq.mm XLPE HT cable, complete with all required accessories including aluminium crimping lugs, SS nuts & bolts, insulation materials, sealing compounds, and other connected accessories, as per site conditions and directions of the Engineer-in-Charge.	8	Sets	11139.00	89112.00
47	Excavation of cable trench in all types of soil for LT/HT cables, including excavation to required depth and width, removal of surplus soil, levelling and dressing of sides and bottom, and disposal of excavated material as per site conditions and directions of the Engineer-in-Charge.	630	Mtrs	134.00	84420.00

48	Supply, erection, laying, connecting, testing and commissioning of 4 runs of 4-core × 400 sq.mm LT XLPE aluminium underground cable, 1.1 kV grade, as per IS 7098 (Part 1):1988 or latest, between new 500 kVA transformer plinth to substation MDB panel board, including suitable crimping lugs at both ends, terminations, supports, glands, ferrules, and all required connected accessories, as per site conditions and directions of the Engineer-in-Charge.	175	Mtrs	1846.00	323050.00
49	Supply, laying, erection, connecting, testing and commissioning of 4-core × 240 sq.mm LT XLPE aluminium underground cable, 1.1 kV grade, as per IS 7098 (Part 1):1988 or latest, including all required accessories such as crimping lugs, suitable nuts & bolts, glands, clamps, supports, and other connected hardware, as per site conditions and directions of the Engineer-in-Charge.	580	Mtrs	1271.00	737180.00
50	Supply, laying, erection, connecting, testing and commissioning of 4-core × 120 sq.mm LT XLPE aluminium underground cable, 1.1 kV grade, as per IS 7098 (Part 1):1988 or latest, including all required accessories such as crimping lugs, suitable nuts & bolts, glands, clamps, supports, and other connected hardware, as per site conditions and directions of the Engineer-in-Charge.	580	Mtrs	586.00	339880.00
51	Supply, laying, erection, connecting, testing and commissioning of 4-core × 150 sq.mm LT XLPE aluminium underground cable, 1.1 kV grade, as per IS 7098 (Part 1):1988 or latest, including all required accessories such as crimping lugs, suitable nuts & bolts, glands, clamps, supports, and other connected hardware, as per site conditions and directions of the Engineer-in-Charge.	190	Mtrs	1226.00	232940.00

52	Supply, erection, testing, and commissioning of earth pits, including all materials and construction as per IS 3043:1987 (or latest revision), comprising CI pipe electrode (100 mm ID, 13 mm wall thickness, 3000 mm length) painted with two coats of bitumen, fabrication, laying, and fixing of GI strips for earthing connections with all required bolts, nuts, double washers, clamps, and accessories to ensure proper electrical continuity. The excavated pit shall be backfilled with a mixture of charcoal/coke, salt, and sand (approx. 2.5 CMT of charcoal and salt) up to ground level. Provision of a brick masonry inspection chamber (650 mm × 650 mm × 1000 mm deep) with light-duty CI cover and frame, 12 mm cement plaster in 1:3 cement mortar on inside surfaces and exposed faces up to 300 mm below foundation, including curing, finishing, and making good. The item also includes all incidental materials such as CI pipe cover with frame, bricks, cement, sand, charcoal, salt, gravel, identification number plates, and any other items necessary for complete execution as per site conditions and directions of the Engineer-in-Charge.	25	Nos	8661.00	216525.00
53	Supply, erection, and connecting of 25 mm × 3 mm PVC insulated GI strip, including all required supporting hardware, clamps, saddles, fasteners, joints, bends, connectors, and accessories necessary for proper installation and continuity, complete in all respects as per site conditions and directions of the Engineer-in-Charge.	290	Mtrs	42.00	12180.00
54	Supply, installation, testing and commissioning of 6 m single-arm hot-dip galvanized GI terminal pole complete with arm, having top dia 90 mm, bottom dia 155 mm, thickness 3.5 mm, base plate 260×260×12 mm, PCD 250 mm, M20×600 mm foundation bolts (4 Nos.), and access door 90×400 mm, including RCC concrete foundation with excavation, backfilling, curing, grouting, erection, alignment, earthing provision, and all connected hardware and accessories, as per site conditions and directions of the Engineer-in-Charge.	32	Nos	10551.00	337632.00
55	Supply, erection, testing and commissioning of 70 W outdoor LED street light fitting, with IP65 / IP66 protection (waterproof and dustproof), complete with LED driver, mounting brackets, wiring, connectors, fasteners, and all required connected accessories, including fixing, aiming, testing, and commissioning, as per site conditions and directions of the Engineer-in-Charge.	32	Nos	7368.00	235776.00

56	Supply, laying, erection and testing of 4-core × 16 sq.mm LT XLPE underground cable, 1.1 kV grade, conforming to IS:7098 (Part-1):1988 or latest amendment, including excavation, sand bedding, protective covering, laying, jointing, termination with glands and lugs, backfilling and route marking, along with all connected accessories, complete in all respects, as per site conditions and directions of the Engineer-in-Charge.	580	Mtrs	145.00	84100.00
57	Supply, laying, connecting and erection of 3-core × 1.5 sq.mm multistranded FRLSH copper conductor, including connections to light fittings and 6 m pole junction boxes, complete with lugs, connectors, clips, saddles, and all required accessories, as per site conditions and directions of the Engineer-in-Charge.	190	Mtrs	35.00	6650.00
58	Design, fabrication, supply of Cubicle-Type LT Main Distribution Board (MDB), IP65 weatherproof or above, fabricated from 14 SWG CRCA sheet steel with powder-coated or epoxy finish, comprising double bus bar arrangement of electrolytic copper for RYBN phases rated 1200 A, fully sectionalized. Switchgear: Microprocessor-based MCCBs (>125 A) conforming to IS 8623 / IS 2516 with lockable safety arrangements. Meters & Indications: Advanced bidirectional meters for each incoming/outgoing feeder, 0.2 S class CTs, RYB LED indicators, Ammeters, Voltmeters, PF meter, Frequency meter, selector switches, and digital 3-phase KWH meters with RS485 port. Incoming Feeders: 2 × 800 A ACBs, 1 × 600 A ACB with Auto Changeover Switch; Outgoing Feeders: 4 × 400 A TPN MCCBs, 3 × 320 A TPN MCCBs, 3 × 200 A TPN MCCBs, 3 × 165 A TPN MCCBs, 3 × 125 A TPN MCCBs, 4 × 63 A TPN C-Curve 10 kA MCBs, 4 × 40 A TPN C-Curve 10 kA MCBs, 3 × 32 A TPN C-Curve 10 kA MCBs. All MCCBs shall have ICs = 100% Icu <sup>2</sup> and be microprocessor-based. The MDB shall include all CTs, wiring, lugs, ferrules, cable entries, gland plates, name/danger plates, earthing, and shall be suitable for indoor installation, dust, moisture, and vermin resistant, fully compliant with IS 8623 / IS 2516 / IEC standards. Scope includes design, fabrication, supply, erection on suitable foundation/structure, testing, commissioning, and all connected accessories required for a complete and operational LT MDB installation as per site conditions and directions of the Engineer-in-Charge.	1	Set	2889234.00	2889234.00

59	Design, fabrication, supply of LT Power Distribution Panel, double-door, outdoor type, weatherproof and waterproof, with suitable copper bus bars, microprocessor-based MCCBs with adjustable current settings, 3-phase RYB LED indications, and multifunction meters with RS485 port for incoming and outgoing feeders, comprising: Incoming: 1 × 400 A MCCB, 36 kA; Outgoing: 2 × 200 A TPN MCCBs, 35 kA; 3 × 125 A TPN MCCBs, 35 kA; 4 × 63 A TPN MCCBs, 35 kA. The panel shall include all cable entries, glands, lugs, ferrules, earthing, name/danger plates, and connected accessories, erected on masonry foundation/bed, tested and commissioned in accordance with IS standards and site conditions. All MCCBs shall be microprocessor-based with adjustable current settings, and the panel shall include 3-phase RYB LED indications and multifunction meters with RS485 communication port. Scope includes all accessories, cable glands, lugs, ferrules, earthing, name/danger plates, testing, and commissioning as per directions of the Engineer-in-Charge.	1	set	700339.00	700339.00
60	Design, fabrication, supply of LT Double-Door Sheet Steel Distribution Board (SDB), floor / wall mounted as specified, fabricated from CRCA sheet steel with powder-coated finish, IP-rated enclosure, complete with microprocessor-based MCCB having adjustable current settings, suitable rated copper bus bars (phase, neutral & earth) with adequate supports and shrouding, and comprising the following switchgear: * RYB LED phase indication lamps * Multifunction energy meter with RS-485 communication port for monitoring of electrical parameters. Incoming: * 125 A, 4-Pole MCCB – 01 No. Outgoing: • 63 A, 4-Pole RCBO – 02 Nos. * 32 A, 4-Pole RCBO – 04 Nos. * 40 A, Double-Pole RCBO – 06 Nos. The panel shall include internal control wiring, cable terminations, glands, lugs, ferruling, earthing terminals, nameplates, danger labels, testing of protections, and commissioning, complete in all respects, in accordance with relevant IS / IEC standards and site requirements, to the satisfaction of the Engineer-in-Charge.	3	Sets	256622.00	769866.00



61	Design, fabrication, supply of LT Double-Door Sheet Steel Sub Distribution Board (SDB), floor / wall mounted as specified, fabricated out of CRCA sheet steel with powder-coated finish and suitable IP rating, complete with microprocessor-based MCCB having adjustable current settings, and adequately rated copper bus bars (Phase, Neutral & Earth) with proper supports and shrouding, comprising the following switchgear and accessories: Accessories & Indications: * RYB LED phase indication lamps * Multifunction energy meter with RS-485 communication port for incoming and outgoing monitoring Incoming: * 150 A, 4-Pole MCCB – 01 No. Outgoing: * 63 A, 4-Pole MCCB – 03 Nos. * 40 A, 4-Pole RCBO – 04 Nos. * 32 A, 4-Pole RCBO – 04 Nos. * 32 A, Double-Pole RCBO – 04 Nos. The panel shall include internal wiring, control wiring, cable glands, lugs, ferruling, earthing terminals, danger and circuit identification labels, hardware, fasteners, complete in all respects, and shall be installed, tested, and commissioned as per relevant IS/IEC standards, approved drawings, and site conditions, to the satisfaction of the Engineer-in-Charge.	3	Sets	402411.00	1207233.00
62	Installation & Commissioning Charges for the LT Main Distribution Board (MDB)-Qty.1 Set, LT Double-Door Sheet Steel Sub Distribution Board (SDB) -Qty 3 Sets, LT Double-Door Sheet Steel Distribution Board (SDB)- Qty. 3 Sets, LT Power Distribution Panel- Qty.1 Set with all connected MCCBs, RCBOs, RS 485,bus bars, energy meters and all its connected accessories	1	set	67129.00	67129.00
63	Supply, installation, testing and commissioning of 2 ft × 2 ft commercial LED recessed-mounted luminaires, 43 W, complete with all required drivers, connectors, wiring, fixing accessories, and mounting hardware, as per site conditions and drawings, including making good the surfaces after installation, to the satisfaction of the Engineer-in-Charge.	50	Nos	1397.00	69850.00
64	Supply, erection, testing, and commissioning of 450 mm sweep energy-efficient BLDC wall-mounted fans, conforming to the latest applicable standards and specifications including all mounting brackets, hardware, fasteners, electrical connections, and accessories required for proper installation and operation, complete as per site conditions and directions of the Engineer-in-Charge.	60	Nos	5313.00	318780.00
<b>Total including GST</b>					<b>26862032.00</b>

**(Rupees Two Crore Sixty-Eight Lakh Sixty-Two Thousand Thirty-Two Only)**

**NOTE:**

1. The Tenderer is advised to quote on percentage basis of single rate for tender.
2. The Tender cost is inclusive of GST. GST will be paid as per GST Law.
3. Percentage rate quoted will be applied uniformly on each item of work shown in above schedule.

4. The work shall be carried out as per scope of work and Bill of quantities.
5. The quantities shown in above table are approximate and are as a guide to give the tender(s) an idea of quantum of work involved.
6. The Railway reserves the right to increase/decrease any of the quantities given above and/ or include any other items as per SOP/SGCC.
7. The Tenderer has to go through the scope of work thoroughly before submission of tender.
8. The execution of the work shall be done in according to the planning of the RailwayEngineer (nominated by Dy.CEE/S/LGD).

I/We undertake to do the work at % quoted above/below/AT PAR of the schedule of Rates of the S.C. Railway as applicable to SCR Division or at the rates quoted above for each item and also abide by the Special terms and conditions of contract and General Conditions of Contract.

**Dated** \_\_\_\_\_

**Signature of Tenderer**

### APPROVED MAKES

Sl.No.	Item	Approve brands/supplier
1	ACBs, MCCBs & MCBs, COS, DBs	ABB, Schneider, Havells, L & T, Siemens, Legrand , C&S, Salzer
2	LED fittings/Rope lights	Philips, Crompton, Bajaj, Wipro. Havells, Polycab, GM, Yamini, K-lite./Kesslec/Lightman/Bega/Iguzzini, Jaquar, Leksa lighting, Edison
3	LED	LUMILEDS, Samsung, NICHIA, OSRAM, CREE, Avago any other LED with LM-80 Certified by National/International Accredited certifying Agencies.
4	FRLS Copper conductors & copper cable	Polycab, Fincab, Finolex, Havells, GM, Nakoda, torrent, Sudhakar
5	PVC conduit pipe/Rigid PVC pipe	Sudhakar, Godavari, Astral, GM, Polycab, Precision/Universal & Marudhar/VIP / GoldMedal / Million plast / Polycab/Anchor/ Polyline/ Orbit/ AKG/Beljin
6	Modular box, plate, box, switches etc,	GM, Havells, Legrand, L&T, C&S, Anchor Roma, Salzer
7	BLDC fan	Gorilla (Atomberg ), Crompton, Bajaj, Havells, Usha, Orient, Polycab, GM, Super fan, Halonix.
8	Pedestal fan	Crompton, Bajaj, Havells, Usha, Orient, GM, Almonard
9	Bracket fan	Usha, Crompton greaves, Havells, Bajaj, GM, Almonard
10	Split AC/ Cassette AC	Blue star/O-General/Hitachi/DAIKIN/Carrier/Toshiba/ Voltas/Mitsubishi
11	HDPE pipes	Nagarjuna, Godavari, Ganga Kaveri, Narmada, Sudhakar,
12	HT/LT XLPE cable	Polycab, Havells, Torrent, Finecab, Gloster, Nakoda, KEI
13	Termination Kits	Recham, Densen, M-Seal
14	B class GI pipe	Jindal, Tata, Oswal
15	4 way junction box/Pelx junction Box	Lagrand, Havells, C&S, L&T, Cape, Hensel, Sintex, Kakatiya
16	Exhaust fan	Almonard, Bajaj, Crompton, Havells, Usha
17	Solar water heating system	Solar idea/Aditya solar/Aar pee technology/ Honeywel/Supreeme/Andromeda
18	Geyser	Bajaj, CGL, V-Guard, Crompton, Havells
19	Water cooler	Usha, Blue star, Voltas, Honybee
20	Energy efficient motors/ Pump	CGL, KSB, Kiloskar, Grundfos, CRI
21	DOL starters with protection system	Schneider Siemens, L&T, Gelco, Gokul, Havells, L&T, ABB
22	VFDs, VVVF	ABB, Schneider, Siemens, Danfoss
23	High mast/Octagonal Pole	CG, Philips, Bajaj, Valmont, Utkarsh, Transrail
24	Computers (Power analyser)	Dell, HP, Lenevo
25	Printers	HP, Cannon
26	Bolard LED lighting	Havells, Bajaj, CG, Wipro, Philips
27	Occupancy Sensors	Legrand, L&T, Schneider, Havells
28	Air Circulator	Crompton, Bajaj, Havells, Usha, Orient, Almonard
29	On-line UPS, Inverters	Power One, Delta, Fronius, Uniline, Deye, ABB, Numeric
30	RMU & VCB	Lucy, ABB, Siemens, Schneider
31	Industrial plug socket	Legrand, Havells, L&T, C&S, Hensel, CAPE
32	LED Pit/catwalk Lights	Yamini, S2 light, OSSE
33	2KVA 24V DC and 48V AC Power supply unit/ SMPS unit	Yamini, S2 light, OSSE
34	Batteries	EXIDE, Amaron, Luminous, QUANTA

Sl.No.	Item	Approve brands/supplier
35	Refrigerators	LG, Samsung, Whirlpool
36	Decorative pole/ Decorative Bollards	KLITE, KESSLEC, LIGHTMAN, BEGA, IGUZZINI, Bajaj, Philips, CG, Havells, Wipro
37	Façade lights	Bajaj BA WW series, Philips, Wipro, Polycab, K-lite, LIGHTING TECHNOLOGIES/ LIGHTMAN/ Jaquar/ Havells/ Leksa lighting, Edison
38	DMX Controllor System	Nicolaudie, Pharos, Osram ECUE, Philips, Havells,
39	DMX Splitter cum Booster	Pioneer, Briteq, Swisson, Havells
40	Signage Boards	Yamini, S2
41	LED Name Boards	Yamini, S2
42	Cablofill cableTrays	Legrand, Eaton, Panduit
43	DG Set	Kirlosker, Cummins, Honda, Bajaj, Mahindra
44	Hand dryer	Euronics, Dolphy
45	Solar Panels	Sri savitr solar Pvt. Ltd, Aksaya Solar Power India Pvt. Ltd., Sirius Solar energy system pvt Ltd, TATA, Gautham Solar Pvt Ltd, Adani,
46	Multi function meters	L&T, C&S
47	Submersible pumps, Mono block pumps	Kirlosker, CRI, CG, Waterman, Texmo, Deccan, Karvel
48	ULM 320 Series Constant power	MEANWELL
49	IFD	L&T, KL itech, Efftronics
50	CTS	L&T, KL itech, Efftronics, Electrohms
51	Level sensor	Pulsar, Kaifeng Instruments, Efftronics
52	LED Gobo Projector	Eshark, Yufan, Claypaky, Leksa, Martin, Aura, Philips
53	LED Giraffe, Elephant, Panda structures	Leksa
54	APFC/ Active Power Filter	L&T, C&S, Havells, Delta, Schneider, ABB/Hitachi
55	Submersible pumps, Mono block pumps, Booster pump	Kirloskar, Crompton, Grandforse, Lubi, CRI, Texmo, DECCAN
56	Fire suppression system	Kanex Fire, AutoFireX, Safe Pro Fire, Honey well, Simplex fire Fire trace, Supremex,
NOTE:	1) The make should be got approved by Dy.CEE/S/LGD before procurement and executing the work.	
	2) If any make not mentioned in the list it should be approved by Dy.CEE/S/LGD	

#### **UTES Inspection:**

As per PCEE/SCR office letter no.E.29/P/Vol.XI dated 27.09.2017

Pre-inspection of items by RITES/RDSO for the material procured through works contract

**In the works contract for which supply items value is more than 5.0 lakhs on par with store supply items, RITES/RDSO inspection should be carried out by the contractor.**

## IMPORTANT I.E. RULES

Sl. No.	RULE No.	DESCRIPTION
01	RULE – 3	Authorized person
02	RULE – 29	Construction, Installation, Protection, Operation and maintenance of electric supply lines and apparatus.
03	RULE – 33	Earthed terminal on consumer's premises.
04	RULE – 34	Accessibility of bare conductors.
05	RULE – 35	Danger Notices.
06	RULE – 36	Handling of electric supply lines and apparatus.
07	RULE – 42	Accidental charge.
08	RULE – 43	Provision applicable to protective equipment.
09	RULE – 44	Instruction for restoration of persons suffering from electric shock.
10	RULE – 44 A	Intimation of accidents.
11	RULE – 45	Precautions to be adopted by consumers, owners, occupiers, electrical contractors, electrical workman and suppliers.
12	RULE – 46	Periodical inspection and testing of consumer' installation.
13	RULE – 47	Testing of consumer's installation.
14	RULE – 48	Precaution against leakage before connection.
15	RULE – 50	Supply and use of energy.
16	RULE – 51	Provisions applicable to medium, high or extra high voltage installations.
17	RULE – 58	Point of commencement of supply.
18	RULE – 63	Approval by Inspector.
19	RULE – 64	Use of energy at high and extra high voltages.
20	RULE – 65	Voltage Tests.
21	RULE – 66	Metal sheathed electric supply lines.
22	RULE – 67	Connection with earth.
23	RULE – 68	General Conditions as to transformation and control of energy.
24	RULE – 69	Pole type sub-station.
25	RULE – 70	Condensers
26	RULE – 80	Clearances from buildings of high and extra high voltage lines.
27	RULE – 83	Clearances – General
28	RULE – 88	Guarding.
29	RULE – 90	Earthing.
30	RULE – 92	Protection against lightning
31	RULE – 134	Relaxation by Inspector.
32	RULE – 138 A, 139, 140, 140A and 141	Penalty for breach of Rules.

### GOVERNING SPECIFICATIONS

Sl.No.	ITEM	SPECIFICATION NO:
	<b>Cables</b>	
01	Cable 1100 Volts, PVC Aluminum	IS: 1554/Part.I/1976
02	PVC insulated copper conductor cables of 650/1100 volts grade	IS: 694/1990
03	Cross linked poly ethylene (XLPE) insulated PVC sheathed cable above 1.1 kV but up to 11 kV supply	IS: 7098 (Part-II)
04	Paper insulated lead sheathed cables for electricity supply	IS: 692/1973
05	Recommended short circuit ratings of High Voltage PVC cables.	IS: 5819/1970
06	Recommended current ratings for cables – PVC insulated and polyethylene insulated.	IS: 3961 (Part II/1967 & Part IV & V/1968)
	<b>TRANSFORMERS</b>	
01	Power Transformers.	IS: 2026 (Part II, III & IV/1977)
02	Potential Transformer	IS: 3156/1978 Part I & II
03	Current transformers. Part – 1 General requirements.	IS: 2705 (Part-1) 1981
04	Voltage transformers. Part – 1 General requirements.	IS: 3156 (Part-1) 1978
05	Outdoor type 3 phase distribution transformer up to and including 100 kVA/11kV	IS: 1180/1964
06	Code of practice for installation and maintenance of transformers.	IS: 1886/1967
07	Current Transformers for special purpose	IS: 2705 (Part-IV/1968)
08	Application guide for voltage transformer	IS: 4146/1967
09	Maintenance of transformer	IS: 10028
10	Insulating oil for transformer and switchgear	IS: 335/1972
	<b>SWITCHGEARS/ CIRCUIT BREAKERS /SWITCHES</b>	
01	ICTP Switch	IS: 4064 Part.I
02	MCB	IS: 8828/1978
03	Front operated cubicle fuse switch, triple pole with neutral	IS: 4064 / 1978
04	Change over switch, Iron clad front handle operated for 415 volts ac, 50 Hz, supply	IS: 2208
05	Air Circuit breaker	IS: 2516
06	Marking and arrangement for switchgear busbars, main connections and auxiliary wiring.	IS: 375/1963
07	Alternating current circuit breakers	IS: 2516 (Part I & II Sec.1; Part-I – Sec. 2 & 3/1977, 1963 & 1972)
08	Code of practice for installation and maintenance of switchgear	IS: 3072/1975
09	Molded case circuit breaker (MCCB)	IS: 2516 / 1966
10	Code of practice for selection, installation and maintenance of fuses not exceeding 650 V	IS: 3106/1966
11	Metal enclosed switchgear and control gear for voltages above 1000 V but not exceeding 11 kV	IS: 3427/1969
12	Heavyduty Air Break switchgear and composite units of airbrake switches and fuses for voltages not exceeding 1000 Volts.	IS: 4047/1967
13	General Requirements for switchgear and control gear for voltages not exceeding 1000 V.	IS: 4237/1967
14	Switches and switch isolators above 1000 V. But not exceeding 11000 V.	IS: 4710/1968
15	Air break Isolators: Alternating current disconnectors	IS: 9921 (Part-1) 1981

Sl.No.	ITEM	SPECIFICATION NO:
	(isolators) earthing switches for Voltages above 1000 V. part-1 general and definitions.	
16	Maintenance of control Panel and switchgear	IS: 10018
17	Cutouts: Enclosed distribution fuse Boards and cut outs for voltages not exceeding 1000 Volts.	IS: 2675 - 1966
18	Fuses: Carriers and bases used in re-wirable type electric fuses up to 650 volts.	IS: 2086 – 1963
19	Air break switches, air break disconnectors, air break switch disconnectors and fuse combinations units for voltages not exceeding 1000 V ac or 1200 V DC. Part-1 General requirements.	IS: 4064 (Part-1) 1978
20	High voltage, 11 kV Vacuum Circuit breaker	IS: 2516
21	Starters for AC motors of voltage not exceeding 1000 volts	IS: 1822 / 1967
22	Enclosed distribution fuse boards and cutouts for voltages not exceeding 1000 V	IS: 2675 / 1983
23	Distribution pillars for voltages not exceeding 1000 V, ac.	IS: 5039 / 1969
	<b>Insulators</b>	
01	Porcelain guy strain insulators	IS: 5300
02	Porcelain insulators for lines with voltage greater than 1000 volts	IS: 731/1971
03	Insulator fittings for 11 kV insulators	IS: 2486 (Part –I) / 1971
04	Insulator fittings for 33 kV insulators	IS: 2486 (Part –II) / 1989
05	Insulator fittings for LV/MV insulators	IS: 7935 / 1975.
06	Porcelain insulators for overhead power lines with a nominal voltage up to and including 1000 V.	IS: 1445/1977
07	Insulator fittings for overhead power lines with a and nominal voltage greater than 1000 V.	IS: 2486 (Part I/1971) (Part II/1974)
08	Porcelain insulators for overhead power lines (3.3 kV and above)	IS: 731 – 1971
09	Porcelain post insulators (3.3 kV and above)	IS: 2544 – 1963
	<b>Conduits for Electrical Installations/ Wiring Accessories</b>	
01	Rigid steel conduits for electrical installations	IS: 9537 (Part-2)
02	Fittings for rigid steel conduits for electrical wiring	IS: 2667 / 1976
03	Accessories for rigid steel conduits for electrical wiring	IS: 3837 / 1966
04	Flexible non metallic conduits for electrical installations	IS: 6946
05	Rigid type PVC conduit	IS: 2509
06	Fittings for rigid non metallic conduits	IS: 3419 / 1965
07	Conduits for Electrical Installations. Part-1 General requirements	IS: 9537 (Part-1) 1980
08	Conduits for Electrical Installations. Part-2 Rigid steel conduits.	IS: 9537 (Part-2) 1981
09	Conduits for Electrical Installations. Part-3 Rigid plain conduits of insulating materials.	IS: 9537 (Part-3) 1983
10	Flexible steel conduit for electrical wiring.	IS: 3480 – 1966
11	Socket Outlet, 250Volts, 16Amps	IS: 1293/1988
12	Combined Switch cum socket Outlet	IS: 4615/1968
13	Switch, Piano	IS: 3854/1988
14	Ceiling Rose, 3 way, 5 Amps, 230 volts	IS: 371/1979
15	Lamp Holder, Boynet	IS: 1258/1980
16	PVC wiring outlet boxes	IS: 5133 (Part II)
	<b>Lightning Arrestors and Surge absorbers</b>	
01	Application guide for non-linear resistor type surge	IS: 4004/1978

Sl.No.	ITEM	SPECIFICATION NO:
	arrestors for alternating current systems.	
02	Lightning arrestor	IS: 3070 (Part-I)/1974
	<b>Relays / Contactors</b>	
01	Contactors for voltage not exceeding 1000 V ac or 1200 V DC	IS: 2959/1975
02	Electrical relays for power system protection.	IS: 3231 / 1965
03	Application guide for Electrical relays for AC Systems	IS: 3842 – Part I/1967, Part-II & III/1966, Part IV & XII)
	<b>Metres / Testers/Instruments</b>	
01	KWH Meters	IS: 722/1972
02	Insulation resistance testers hand operated (Magneto-Generator type)	IS: 2992/1983
	<b>Electrical Conductors</b>	
01	All Aluminum stranded conductor	IS: 398 (Part-I)
02	Aluminum conductors galvanized steel reinforced	IS: 398 (Part-II)
03	Aluminum conductors for overhead transmission purposes	IS: 378 (Part-I, II & III/1976)
04	Fittings for aluminum and steel cored aluminum conductors for overhead power lines.	IS: 2121/1962
05	Code of practice for design, installation and maintenance of overhead power lines.	IS: 5613 – Pt.I/Sec.2-1971; Pt.II/Sec I & II/1976.
	<b>Shunt capacitors</b>	
01	Shunt Capacitor for Power systems, 440 volts, ac, 50 Hz.	IS: 2834/1986
	<b>Earthing</b>	
01	Code of practice for earthing.	IS: 3043 – 1966
	<b>Safety Items</b>	
01	<b>Rubber Gloves for Electrical purpose</b>	<b>IS: 4770/1991</b>
02	Rubber Mat for Electrical purpose.	IS: 5424/1969
03	Danger Notice Plates	IS: 2551/1982
04	Guide for safety procedures and practices in electrical work.	IS: 5216/1969
05	Safety belt made with nylon rope	IS: 3521/1983
06	Fire Extinguisher CO2 type.	IS: 2878/1976
	<b>AC Electric fans</b>	
01	Electric ceiling type fans and regulators.	IS: 374 / 1979
02	Electrical pedestal type fans and regulators.	IS: 1169 / 1967
03	Air circulator type electric fans and regulators.	IS: 2997 / 1964
04	Exhaust type fan 230 Volts, ac	IS: 2997 / 1964
	<b>Lamps &amp; Luminaries</b>	
01	Ballasts for Fluorescent lamps.	IS: 1534 / 1967
02	Starter for fluorescent lamps	IS: 2215 / 1968
03	Tubular fluorescent lamps for general lighting service.	IS: 2418 / 1964
04	Bypin lamp holders for tubular fluorescent lamps.	IS: 3323 / 1965
05	F.T. Lamp	IS: 2418/1977
06	F.T. Fitting, Box type, 230 volts, ac.	i) IS: 1534/1977 (Ballast) ii) IS: 2215/1989 (Starter) iii) IS: 3323/1980 (Holder)
07	Tungsten filament general service electric lamps.	IS: 418/ 1978
08	High pressure Sodium vapour lamps. Part –1 General requirements and tests.	IS: 9974 (Part-1)/ 1981
09	HPSV Lamp	IS: 9974/Part.I



Sl.No.	ITEM	SPECIFICATION NO:
10	Flood light Luminaries 230 Volts, ac	IS: 10322/1987
11	Bulk Head Electric Light fitting	IS: 2206 / 1984
12	HPSV Out door Luminaries 230 V, ac	IS: 10322 / 1987
13	Street Light fitting F.L. Tube type 40 W, 230 V, ac	IS: 10322 / 1987
14	High bay Luminaries 230 Volts, ac	IS: 1777 / 1978
	Pumps	
01	Submersible pump sets for clear, cold, fresh water.	IS: 8034 / 1976
02	Motors for submersible pump sets.	IS: 9283 / 1979
	Air – Conditioners	
01	Room air conditioners.	IS: 1391 / 1971
	Cast Iron/ Galvanised Items / wires	
01	Galvanised steel barbed wire	IS: 278/1978
02	Cast Iron manhole covers and frames	IS: 10322
03	G.I.Wire	IS: 239
04	G.I pipe class heavy	IS: 1239
05	Steel tubular poles	IS: 2713 (Part 1 to 3)
06	Stay wire, Galvanized Iron	IS: 2141
	Paint	
01	Paint enamel	IS: 2932
	Miscellaneous	
01	Guide for short circuit calculations.	IS: 5728/1970
02	Bitumen based filling compound for electrical purposes.	IS: 7084/1973
03	General requirements and method of test for lead acid storage batteries.	IS: 8320/1976
04	Code of practice for building and tower lighting protection.	IS: 2309
05	Code of practice for installation.	IS: 1255/1967
06	Wiring exceeding 650 Volts	IS: 2274/1967
07	Code of Practice for wiring for installation.	IS: 732
08	Storage type Automatic Electric water Heater 230 volts, ac	IS: 2082/ 1965

**Note:** The tenderer shall fill up proforma and sign and submit scanned (PDF) copy along with the offer.

RAILWAY  
TENDER FORM (First Sheet)

Tender No. \_\_\_\_\_

Name of Work \_\_\_\_\_

To

The President of India

Acting through the \_\_\_\_\_ Railway

1. I/We \_\_\_\_\_ have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of \_\_\_\_\_ days from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our “Bid Security”. I/We offer to do the work for \_\_\_\_\_ Railway, at the rates quoted in the attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects within \_\_\_\_\_ months from the date of issue of letter of acceptance of the tender.

2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR) with all correction slips up-to-date for the present contract.

3. A Bid Security of ₹ \_\_\_\_\_ has already been deposited online/ submitted as Bank Guarantee bond. Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:

- (a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
- (b) I/We do not execute the contract documents within seven days after receipt of notice issued by the Railway that such documents are ready; and
- (c) I/We do not commence the work within fifteen days after receipt of orders to that effect

4. (a) I/We am/are a Startup firm registered by ..... Department of Industrial Policy and Promotion (DIPP) and my registration number is ..... valid upto ..... (Copy enclosed) and hence exempted from submission of Bid Security.

5. We are a Labour Cooperative Society and our Registration No. is ..... with ..... and hence required to deposit only 50% of Bid Security.

2. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

GCC April 2022

Signature of Witnesses:

(1) \_\_\_\_\_

(2) \_\_\_\_\_

Signature of Tenderer(s)

Date \_\_\_\_\_

Address of the Tenderer(s)

**SOUTH CENTRAL RAILWAY  
CONTRACT AGREEMENT**

CONTRACT AGREEMENT NO. \_\_\_\_\_ DATED \_\_\_\_\_

ARTICLES OF AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between President of India acting through the Railway Administration hereafter called the "Railway" of the one part and \_\_\_\_\_ herein after called the "Contractor" of other part.

WHEREAS the Contractor has agreed with the Railway for performance of the works \_\_\_\_\_ set forth in the Bill(s) of Quantities hereto annexed upon the Standard General Conditions of Contract, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Specifications of \_\_\_\_\_ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the applicable Standard Schedule of Rates (SSOR) of \_\_\_\_\_ updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents and the Special Conditions and Special Specifications, if any and in conformity with the drawings here-into annexed AND WHEREAS the performance of the said works is an act in which the public are interested.

NOW THIS INDENTURE WITNESSETH that in consideration to the payments to be made by the Railways, the Contractors will duly perform the said works in the said Bill(s) of Quantities set forth and shall execute the same with great promptness, care and accuracy in a workman like manner to the satisfaction of the Railway and will complete the same in accordance with the said specifications and said drawings and said conditions of contract on or before the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ and will maintain the said works for a period of \_\_\_\_\_ cable  
ndar months from the certified date of their completion and will observe, fulfill and keep all the conditions therein mentioned (which shall be deemed and taken to be part of this contract, as if the same have been fully set forth herein), AND the Railway, both hereby agree that if the Contractor shall duly perform the said works in the manner aforesaid and observe and keep the said terms and conditions, the Railway will pay or cause to be paid to the Contractor for the said works on the final completion thereof the amount due in respect thereof at the rates specified in the Bill(s) of Quantities hereto annexed.

Contractor \_\_\_\_\_ (Signature)  
Address \_\_\_\_\_  
Date \_\_\_\_\_

Railway: Designation \_\_\_\_\_  
(For President of India)  
Date \_\_\_\_\_

Signature of Witnesses (to Signature of Contractor) with address:

Witnesses:

1. \_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**PERFORMANCE GUARANTEE**

In consideration of the President of India (hereinafter called “the Government”) having agreed to exempt ----- ( hereinafter called “ the said Contractor(s)”) from the demand, under the terms and conditions of an Agreement dated ----- made between ----- and ----- for ----- (hereinafter called “the said Agreement”), of Security deposit for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs ----- (Rupees- ----- only). We ----- (indicate the name of the Bank) (hereinafter referred to as the Bank) at the request of ----- (Contractor(s) do hereby undertake to pay to the Government an amount not exceeding Rs----- against any loss / damage caused to or suffered or would be caused to or suffered by the Government by reasons of any breach by the said contractor(s) of any of the terms or conditions contained in the said Agreement.

1. We ----- (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Government by reason of breach by the said contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the contractor(s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs -----.

2. We undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/supplier(s) in any suite or proceeding pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the contractor(s) / supplier(s) shall have no claim against us for making such payment.

3. We, ----- (indicate the name of bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till -----

----- (Office/Department) Ministry of ----- certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the ----- (date) we shall be discharged from all liability under this guarantee thereafter.

4. We, ----- (indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the Government or any indulgence by the Government to the said Contractor(s) or any such matter or thing whatsoever which under the law relating to the sureties would, but for this provision, have effect of so relieving us.

5. This guarantee will not be discharged due to the change in the constitution of the bank or the Contractor(s) / Supplier(s).

6. We, ----- (indicate the name of the bank) lastly under take not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Dated: the ----- day of ----- 2022

For -----

**PROFORMA**

## 1. ENGINEERING ORGANISATION AVAILABLE ON HAND.

Sl. No.	Name & Designation of Employee	Qualification	Previous Experience	Working From To
01	02	03	04	05
A				
B				
C				
Z				

## 2. ENGINEERING ORGANISATION PROPOSED TO BE ENGAGED FOR THIS WORK FROM ABOVE.

Sl. No.	Name & Designation of Employee	Qualification	Previous Experience	Remarks
01	02	03	04	05
A				
B				
C				
Z				

## 3. ENGINEERING ORGANISATION PROPOSED TO BE ENGAGED FOR THIS WORK FROM OUTSIDE.

(A SUITABLY WORDED CONSENT LETTER FROM SUCH A PERSON SHOULD BE OBTAINED AND ATTACHED).

Sl. No.	Name & Designation of Employee	Qualification	Previous Experience	Remarks
01	02	03	04	05
A				
B				
C				
Z				

SIGNATURE OF THE TENDERER (S):  
NAME OF THE TENDERER:

**PROFORMA****PLANT & MACHINERY****1. PLANT & MACHINERY AVAILABLE ON HAND.**

Sl. No.	Particulars of machinery, Plant & equipment	No. of Units	Kind and make	Capacity	Age and Condition	Approx. cost in ` . in lakhs	Purchase Bill No. & Date and Registration particulars
01	02	03	04	05	06	07	08
A							
B							
C							
Z							

**2. PLANT & MACHINERY PROPOSED TO BE INDUCTED FROM ABOVE.**

Sl. No.	Particulars of machinery, Plant & equipment	No. of Units	Kind and make	Capacity	Age and Condition	Approx. cost in ` . in lakhs	Purchase Bill No. & Date and Registration particulars
01	02	03	04	05	06	07	08
A							
B							
C							
Z							

**3. PLANT & MACHINERY PROPOSED TO BE INDUCTED FROM OUTSIDE.**

Sl. No.	Particulars of machinery, Plant & equipment	No. of Units	Kind and make	Capacity	Age and Condition	Approx. cost in ` . in lakhs	If to be purchased give likely date of receipt and supplier's Name.
01	02	03	04	05	06	07	08
A							
B							
C							
Z							

SIGNATURE OF THE TENDERER (S):  
NAME OF THE TENDERER:

**PROFORMA****LIST OF COMPLETED WORKS BY THE TENDERER**

Sl. No.	Name of Work	Agreement No., and date.	Designation and Address of Agreement signing authority.	Agreement Value in Lakhs	Completed Value of work (In Lakhs)	Date of Completion	Remarks
Railway Works:							
A							
B							
C							
D							
E							
Z							
State Govt. Works							
A							
B							
C							
D							
E							
Z							
Public Sector Undertaking Works							
A							
B							
C							
D							
E							
Z							

SIGNATURE OF THE TENDERER (S):  
NAME OF THE TENDERER:

**PROFORMA****LIST OF WORKS ON HAND WITH THE TENDERER**

Sl. No.	Name of work	Agreement No. and date	Designation and address of agreement signing authority	Agreement value in lakhs	Bill amount paid so far in lakhs	Due date of completion	Number of extensions taken
Railway works							
A							
B							
C							
D							
E							
Z							
State Govt. Works							
A							
B							
C							
D							
E							
Z							
Public Sector Undertaking Works							
A							
B							
C							
D							
E							
Z							

SIGNATURE OF THE TENDERER (S):

NAME OF THE TENDERER:



NAME OF BIDDER:

Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Contractual Turnover for last 3 years			

1. The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.
2. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years in respect of the bidder or all members constituting the bidder.
3. Contents of this form should be certified by a Chartered Accountant duly supported by Audited Balance Sheet duly certified by the Chartered Accountant.

## SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor’s reports. \_\_\_\_\_

(Signature of Chartered  
Accountant) Name of CA: \_\_\_\_\_  
Registration No: \_\_\_\_\_

(Seal)

***(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 HUF/Member of 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/ if from such a country, have been registered with the competent authority. I/We hereby certify that I/We fulfil all the requirements in this regard and I 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:

**(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 Deputy Chief Electrical  
Engineer, Carriage Workshop/Lallaguda,  
South Central Railway,

Beneficiary: South Central Railway

**Bank Guarantee Bond No.:**

**Date:** -----

In consideration of the President of India acting through----- (Designation & address of Contract Signing Authority), South Central Railway, ....., .... (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] ..... (here in after called "the Bidder") intends to submit its bid (here in after 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 authorized 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. 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	SBIN00RAIL
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.

**INSURANCE SURETY BOND FOR PERFORMANCE SECURITY**

Name of the issuer of surety bond:

President of India,  
Acting  
through Deputy Chief Electrical Engineer  
South Central Railway

Date: .....

.....

Surety Bond No: .....  
Amount of Bond: .....

Issue Date: .....  
Expiry Date.....

WHEREAS, In consideration of the President of India acting through------(Designation & address of contract signing authority),.....Railway,.....(hereinafter called “The Railway”) having accepted the bid of M/S XXXXX hereinafter called the contractor, for the work of XXX” under invitation for bids No XXXX dated XXXXX, vide Letter of Acceptance No.....

AND

WHEREAS, the contractor is required to furnish Performance security for the sum of ₹. XXXX (Rupees XXXX Only), in the form of Surety Bond, being a condition precedent to the signing of the contract agreement.

SB No:

Date:

WHEREAS, we, ----- (*Name of insurance company*) hereinafter called the Surety, acting through [*Designation(s) of the authorised person of the Surety*], have, at the request of the M/s. XXXX contractor, agreed to give Bond for performance security/ additional performance security as hereinafter contained:

1. KNOW ALL MEN by these present that I/We, the undersigned [*Insert name(s) of authorized representatives of the Surety*], being fully authorized to sign and incur obligations for and on behalf of the Surety, confirm that the Surety, hereby, unconditionally and irrevocably Bond to pay the Railway the full amount in the sum of XXXX (Rupees XXXX Only) as above stated.
2. The Surety 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 Surety shall be final, conclusive and binding, absolute and unequivocal not withstanding any disputes raised/pending before any court, tribunal, arbitration or any authority or any threatened litigation by the Bidder or Bank.
3. On payment of any amount less than aforementioned full amount, as per demand of the Railway, the Bond shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Railway.
4. The Surety shall pay the amount as demanded immediately on presentation of the demand by Railway without any reference to the contractor and without the Railway being required to show grounds or give reasons for its demand or the amount demanded.

5. The Surety Bond shall be unconditional and irrevocable.
6. The Bond herein before shall not be affected by any change in the constitution of the Surety or in the constitution of the Contractor.
7. The Surety agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Railway and the Contractor, will in any way release us from the liability under this Bond; and the Surety, hereby, waives any requirement for notice of any such change, addition or modification to the Surety.
8. This Bond is valid and effective from the date of its issue, which is *[insert date of issue]*. The Bond and our obligations under it will expire on XXXX (Expiry Date). All demands for payment under the Bond must be received by us on or before that date.
9. The Surety agrees that the Railways right to demand payment of aforementioned full amount in one instance or demand payments in parts totalling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Railway or the Bond is released by Railway before the Expiry date.
10. The Surety agrees that its obligation to pay any amount demanded by the Railway before the expiry of this Bond will continue until the amount demanded has been paid in full.
11. The expressions Surety and Railway herein before used shall include their respective successors, administrators and assigns.
12. The Surety hereby undertakes not to revoke the Bond during its currency, except with the previous consent in writing of the Railway. This Bond is subject to the Uniform Rules for Demand Bonds, ICC Publication No. 758.
13. We, the Surety Insurer, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, tribunal, arbitrator or any other authority.
14. The Bond shall be in addition to and without prejudice to any other security Bond (s) of the contractor in favour of the Railway available with the Railway. The Surety, under this Bond, shall be deemed as Principal Debtor of the Railway.

Notwithstanding anything to the contrary contained in these presents,

- a. Our liability under this Surety Bond shall not exceed XXXX ( Rupees XXXXX only).
- b. This Surety Bond shall be valid up to XXXX (*being the date of expiry*);
- c. Unless the bank is served a written claim or demand on or before XXXX (*date of expiry*) all rights under this Bond shall be forfeited and the Surety shall be relieved and discharged from all liabilities under this Bond irrespective of whether or not the original Surety bond is returned to the Surety.

Dated \_\_\_\_\_ the day of 2024

The Insurance Surety Bond shall be verified by sending mail to [customer.care@sbigeneral.in].

Place.....

Bank's Seal and authorized signature(s)

[Name in Block letters] .....

[Designation with code no.] .....

[P/Attorney] No.

Witness

1.

2.

\*\*\*\*\*

[Note: All italicized texts are for guidance on how to prepare this Insurance Surety Bond and shall be detected from the final document.]