



WESTERN RAILWAY

TENDER DOCUMENT

Tender No. SnT-RTM-26-Tele-14

NAME OF THE WORK: Ratlam division: Drone & DGPS Survey of existing underground Signal & Telecom cables in block Section and preparation of cable route plan.

SINGLE PACKET SYSTEM TENDER (E-TENDERING)

E-Tender Document Cost: Nil

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WESTERN RAILWAY

“E-Tender Notice”

Tender No. SnT-RTM-26-Tele-14

Date //2024

Sr DSTE Co Ratlam, acting for and on behalf of the President of India invites E Tender for the following work:

Name of work	Ratlam division: Drone & DGPS Survey of existing underground Signal & Telecom cables in block Section and preparation of cable route plan.
Tender Advertised Value	Rs. 77113920.00 /-
Bid Security/Earnest Money	Rs. 1542300.00
Time & Date of Closing of Bid	15.00 Hrs. on 20/07/2026
Time & Date of Opening of Bid	After 15.30 Hrs. on 20/07/2026
Completion period	12 Months
Tendering section Office IN charge & Place of Opening of Bid	Sr DSTE Ratlam, DRM office Ratlam M.P.
The tender can be viewed online at E-Tender Portal www.ireps.gov.in and the offer must be submitted on the same E-Tender Portal.	

1. General Information/Instruction of Tender

- Tender Document is available on www.ireps.gov.in at designated place.
- 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. Bank Guarantee bond to be submitted as per Annexure –VIA of Part I of GCC (Appendix 1, annexure M).The original Bank Guarantee should be delivered in person to the official floating this tender before closing date for submission of bids (i.e. excluding the last date of submission of bids) Tenderers are advised to keep a watch on any corrigendum to the documents being released by the tender inviting office to ensure that they use the latest document for their offers.
- It is the responsibility of the Tenderer to check any correction or any modifications published subsequently in the web site and to take into account while submitting their tender.
- If the Tenderer / Contractor makes any change / addition / deletion and the same is detected at any stage even after the award of the tender, full Bid Security will be forfeited and the contract will be terminated at his / their risk and cost. The tenderer is also liable to be banned from doing business with railways and / or prosecuted.
- Tenderer(s) to please note that after opening of tender, any document/credential pertaining to technical & financial eligibility, constitution of firm etc. shall neither be asked nor be entertained/considered under any circumstances and no claim or representation whatsoever from the tenderer in this regard shall be entertained. Scanned copy of the documents, uploaded by the tenderer shall be clear & readable.

However, Railway reserves the right to seek any clarification on the documents/credentials already submitted by the tenderer along with the offer. **E-Tender under Single Packet System** are invited from reliable, bonafide & experienced agencies with required experience as per prequalification criteria stipulated in Tender Document for the above work.

2. The Single Packet System Tender Document (forming the complete Tender which is deemed to be part of the contract) consists the technical & financial document for simultaneously evaluation are as following :-

2.1 Technical Document:

The Technical documents comprises of the following -

Section I:-

Chapter I: Tender form

Chapter II: Instructions to Tenderers

Chapter III: Special conditions of Tender & Contract

Chapter IV: GCC April 2022 with correction slip.

Section II: - Appendix, Annexure, Attachments

Section III: - Technical Specifications for the schedule of the Tender

1. Indian Railways Standard General Conditions of Contract 2022, hereinafter called General Conditions of Contract, and Indian Railway Code for the Engineering Department with up to-date corrections (not enclosed herewith). Relevant instructions to tenderer & general conditions of contract & formats are also available in GCC annexure /appendixes.

However, conditions/provisions in the Tender Form and Special Conditions of Tender & Contract and Technical Specifications will override any overlapping or conflicting conditions / provisions given in these documents.

It is presumed that Bidder has acknowledged the knowledge of GCC of Railways.

2. Indian Railway Signalling / Telecommunication Manual with latest corrections (not enclosed herewith).
3. All general and detailed drawings pertaining to this work which will be issued by the Chief Signal & Telecomm. Engineer, W R, or his representative from time to time with all changes and modifications.
4. **Order of Precedence of Documents:** In a contract agreement, in case of any difference, contradiction, discrepancy, with regard to conditions of tender/contract, specifications, drawings, Bill(s) of Quantities etc., forming part of the tender/contract, the following shall be the order of precedence:
 - i. Letter of Award/Acceptance (LOA)
 - ii. Bill(s) of Quantities /Schedule of Rates
 - iii. Special Conditions of Contract
 - iv. Technical Specifications as given in tender documents
 - v. Drawings
 - vi. Indian Railways Standard General Conditions of Contract updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
 - vii. IR Specifications/RDSO specifications/Guidelines updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
 - viii. Relevant B.I.S. Codes updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.

Note: The documents which are not enclosed herewith can be seen in the office of Sr. Divisional Signal & Telecom Engineer, Ratlam Div, Western Railway, on any working day during office hours.

5. Technical documents to be submitted by Tenderer should include the following-

(Pl. refer tender documents for details required in each Performa/Annexures etc. to be submitted along with the offer. Documents may be submitted carefully as eligibility will be decided generally based on documents submitted along with offer)

- i) Mandatory Information Fields required in IREPS Portal to be filled correctly.
- ii) Covering Letter if any.
- iii) Summary details of Technical documents duly filled by Bidder in attached Format. (Appendix 1, Annexure A)
- iv) Tender Form as per (Appendix 1, Annexure B)
- v) Affidavit/Certificate as per Annexure-V or (C&H for JV Bidder) of tender Doc. As the case may be.
- vi) Details of Technical Eligibility Fulfilment: List of 1 or 2 or 3 works which are similar in nature & of value mentioned in tender conditions. This shall be supported by

- credential/work completion certificate in respect of works fulfilling technical eligibility criteria issued by user/Employer.
- vii) Details of FINANCIAL CREDENTIAL in the form of
 - a. Average Annual contractual payment received/contractual turnover issued by CA. Duly supported by Audited Balance Sheets.
 - b. Audited Balance Sheets duly certified by the Chartered Accountant for required period (past 3 financial years).
 - viii) Details of Bid capacity Eligibility Criteria **:(for tender value more than 10 crore)**
 - a. CA certificate & Calculations of Bid capacity as per given formula.
 - b. Detailed Break up of financial turnover (Value A) duly supported by List of works showing contractual payment received in past 3 financial years duly certified by CA.
 - c. Details of Balance liabilities of contractual works (Value of B) duly supported by List of all ongoing works duly certified by CA.
 - ix) Details of make of specific Equipment & MOU/Authorisation from OEMs/Indian Representatives with relevant details like country of origin (to check land sharing country details), Local content related documents, past experience of OEMs/Equipment, etc. if asked in the tender. Power of Attorney duly supported by Board resolution/partnership deeds as the case may be.
 - x) Copy of MOA & Article of Association (AOA)/partnership deed/JV agreement based on type of Bidder as mentioned in tender document.
 - xi) Other documents as mentioned in tender documents/check list attached with tender documents including deviation certificates, MOU with OEMs (if asked), make of specific equipment offered (EI, IPS, MSDAC, Datalogger, switches, IP MPLS equipment, etc.)
 - xii) Certificate of Local content duly certified by CA. (Appendix 1, Annexure K)
 - xiii) Declaration of site acquaintance. (Appendix 1, Annexure J)
 - xiv) Other optional documents: (May be submitted within 30 days of issue of LOA):
 - a. List of plant & machineries.
 - b. List of technical manpower. (Appendix 2, Annexure 3)
 - c. List of works in hand (if not submitted with Bid capacity)
 - d. Planning of execution, proposed scheme and programme of work to complete It within the stipulated completion period.

2.2. FINANCIAL DOCUMENTS:

The financial documents comprise the following: -

SECTION IV:-SCHEDULE OF WORKS:

Different schedules (with details of items) as listed in IREPS portal.

Contents of the Offer Document:

- A. Offer Document should be complete with rates quoted by the tenderer for Supply, Works and execution in prescribed Proforma at designated place on www.ireps.gov.in website. An incomplete offer will be summarily rejected.
- B. The tenderer(s) shall quote single percentage against each item/schedule/tender (as specified in NIT) in the designated space provided on IREPS.

SECTION-I

CHAPTER-I:	Tender Form
CHAPTER-II:	Instructions to Tenderers
CHAPTER-III:	Special Conditions of Contract
CHAPTER-IV:	General Conditions of Tender & Contract (Attachments 2 and 2.x)

SECTION-I

CHAPTER-I: Tender Form

{TENDER FORM}

Appendix 1, Annexure – B
(Ref: Annexure -I of Part I of GCC)

WESTERN RAILWAY
TENDER FORM (First Sheet)

Tender No. SnT-RTM-26-Tele-14

Name of Work: Ratlam division: Drone & DGPS Survey of existing underground Signal & Telecom cables in block Section and preparation of cable route plan.

To
The President of India
Acting through the Sr DSTE Co RTM
Western Railway
DRM office, Ratlam
MP- 457001

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 **as specified in NIT** 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 Western 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 **a period as specified in NIT** 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 ₹ _____ (**as specified in NIT**) 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 withand 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 Witnesses:

(1) _____

(2) _____

Signature of Tenderer(s)

Date _____

Address of the Tenderer(s)

CHAPTER-II
{INSTRUCTIONS TO TENDERERS}

1.0 GENERAL INSTRUCTIONS:

- i) On behalf of the President of India, Sr. Divisional Signal & Telecom Engineer Ratlam Western Railway, invites tenders from established firms and reliable manufacturers or their authorised agents for the supply and execution.
- ii) All offers in the prescribed form, should be submitted before the time and date fixed for the receipt of offer or offers as set forth in the tender papers. Offers received after the stipulated time and date, are liable to be rejected.
- iii) All information in the offer should be in English. Information in any language must be accompanied by its authenticated translation in English. In the event of any discrepancy between an offer in a language other than English and its English translation, the English translation will prevail.
- iv) The offer shall be as per:
 - a. Instructions to Tenderers,
 - b. General Condition of Contract,
 - c. Special Conditions of Contract,
 - d. Technical Specifications,
 - e. Schedules,
 - f. Annexure.
- v) However, the tenderer shall indicate their compliance or otherwise against each clause and sub-clause of these conditions. The tenderer shall for this purpose enclose a separate statement indicating compliance or otherwise of each clause and sub-clause. Whenever, a tenderer deviates from such provision of a clause/sub-clause, he shall furnish his detailed justification for the same. However, acceptance of any such condition/deviation is not bound on the railway while accepting the offer.

2.0 SIGNING OF TENDER:

- i) The Tenderer must submit his offer on www.ireps.gov.in. This is to be submitted using the Registration process with Class III Digital Signature Certificate and Digital Encryption Certificate. Any document submitted through the above Digital Signature will be deemed to have been signed. However, all Annexures are to be properly filled up, signed & stamped wherever required and to be uploaded at designated place for the completion of offer.

3.0 SUBMISSION OF TENDER:

- i) Tender shall be submitted in Single part with compliance of Technical requirement and Financial Offer as instructed in Tender Document and IREPS guidelines.
- ii) Tenders must be submitted in the designated place on www.ireps.gov.in using the Class III Digital Signature Certificate and Digital Encryption Certificate.
- iii) The online offer will be accepted till Date and time as specified in above NIT Header.
- iv) **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.**
- v) **All rates must be submitted only under Specified Space only on ireps portal .**
- vi) Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing:
 - a. as sole proprietor of the concern or are attorney of the sole proprietor;
 - b. as a partner or partners of the firms;
 - c. as a director, Manager or Secretary in the case of a Limited company duly authorised by resolution passed by the board of directors or in pursuance of the Authority conferred by Memorandum of Association.
- vii) In the case of a firm not registered under the Indian partnership Act, all the partners or the attorney duly authorised by all of them should sign the tender and all other connected documents. The original power of attorney should be submitted to the W. Railway for verification, if required.
- viii) All prices and other information like documents etc. having a bearing on the price shall be written both in figures and in words in the prescribed offer form. In case of difference in word and figure the amount written in words will be taken into consideration. In the event of any discrepancy between unit rate and total cost (Unit rate X quantity), the value shown in unit rate will be taken for evaluation purposes.

- ix) Offer shall be as per the General and Special Conditions of Contract given in the Bid Documents. However, the tenderer shall indicate his acceptance or otherwise against each clause and sub-clause of the General and Special Conditions of Contract. For this purpose, the tenderer shall enclose a separate statement (Appendix 1, Annexure I) indicating only the deviations from any clause or sub-clause of the General and Special Conditions of Contract, which he proposes with full Justification for such deviations. Railway, however, reserves the right to accept or reject these deviations and Railway's decision thereon shall be final.
- x) The tenderer should avoid ambiguity in his offer e.g. if his offer is to his standard sizes/length/dimensions, he should specially state them in detail without any ambiguity. Brief descriptions such as "standard length" etc. should be avoided in the offer.
- xi) Tender documents in which tenders are submitted by the tenderer(s) shall become the property of Railway and the Railway shall have no obligation to return the same to the tenderer(s).
- xii) This tender document (in full) downloaded along with the various documents required to be uploaded at www.ireps.gov.in before the date and time stipulated in the tender document.
- xiii) 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.
- xiv) Tenderers intending to participate in the e-Tender must make payment of Bid Security 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.
- xv) Tenders other than in the form of e-Tendering shall not be accepted against this tender. For this purpose, tenderers are required to register themselves with IREPS. Registration requires procurement of Class III Digital Signature Certificate and Digital Encryption Certificate.
- xvi) Bidding unit to be entered as per ireps website requirement.
- xvii) In case of any difficulty faced by the tenderer while submitting their bid in the IREPS website assistance from a help desk available with the website may be sought.
- xviii) Railway Administration will not be responsible for any delay/difficulties /inaccessibility of the downloading facility for any reason whatsoever. In case of any discrepancy between the tender documents downloaded from the internet and the master copy available in the offices, the latter shall prevail and will be binding on the tenderer(s). No claim on this account will be entertained.
- xix) The tender document is available after having deposited the requisite cost of the tender document (if any) as per NIT on IREPS website. It is understood that you agree to abide by the conditions laid down in the tender document when you submit the tender.

4.0 OPENING OF THE BIDS:

- i) The E-Tender Bid will be opened on date and time as specified in NIT Header. Opening will be done as per IREPS Portal norms.
- ii) Price Bids will be opened on the IREPS Website.
- iii) The tenderer's representatives, who are present during the opening of Bids, shall sign a register as token of their attendance.
- iv) In the event of the specified date of Bid Opening happens to be holiday/bandh, the Bids will be opened at the appointed time and location on the next working day.

5.0 EVALUATION OF THE TENDER:

- i) The tender will be evaluated on aggregated cost of work comprising all Schedules.

6.0 COMPLIANCE TO TENDER CONDITIONS, SPECIFICATION & DRAWINGS:

- i) The equipment offered shall be in accordance with the drawings and specifications. Details of variation from the drawings and specifications, if any, should be clearly indicated and in such an event, a certificate from the users must be furnished to the effect that the product offered performs the requisite functions satisfactorily, & is an alternative acceptable in one or more other countries. The name of users in those foreign countries should also be indicated.

- ii) Firms who have not carried out the works and supplied the items tendered for in this case for the Indian Railways in the past should give details of supplies and works carried out and the customers along with their performance certificates.
- iii) The tenderer(s) shall indicate paragraph by paragraph for each section of the tender document that either his tender complies in every respect with the requirements of each clause and sub-clause or if not, precisely how they differ from the requirements of the tenderer(s). In later case, “the tenderers) shall enclose a separate statement as per Performa given, indicating only the deviations for any clause or sub-clause of General Conditions of Contract, Special conditions of Contract, Instructions to tenderer(s) and conditions of tendering, Technical specification, etc. which he proposes with” details justifications for deviations proposed. The purchasers, reserves the right to accept or reject these deviations and his decision thereon shall be final.
- iv) In case the tenderer(s) is not able to comply with the provisions of any condition(s) and/or technical specification of this tender, he shall submit clause-wise non-compliance report giving reasons, and to submit in writing “ I/We hereby confirm that I/We agree to comply all the conditions of the complete Tender this effect, he shall mentioned in different para of this tender document except those mentioned in my/our non-compliance statement enclosed,” along with his offer, without which his/their offer is liable to be rejected.

7.0 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:

Value of the Work	Bid Security
For all works	2% of the estimated cost of the work

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 the 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 fulfilment 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 of Part I of GCC and shall be valid for a period of 90 days beyond the bid validity period.
- (3) In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:
 - (i) A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
 - (ii) The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before the closing date for submission of bids (i.e. excluding the last date of submission of bids).(Appendix 2, Annexure M).

- (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 Bid 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 Security for the Tender No. _____**” 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 Authority 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.

8.0 SECURITY DEPOSIT:

- i) 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 fulfilment 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 Deposit, the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to the Contractor.
- ii) 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.
- iii) 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 her/him/them, 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.

i) 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) 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/Warranty period as per clause 50.(1) of GCC , in case applicable.

ii) **Forfeiture of Security Deposit:** Whenever the contract is rescinded as a whole under clause 62 (1) 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) of these conditions, the Security Deposit shall not be forfeited.

iii) 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) of this clause will be payable with interest accrued thereon.

9.0 BRIEF DESCRIPTION OF THE WORK:

Please refer to Appendix 2, Annexure 1.

For exact item wise details, schedule of work & its corresponding technical specification may be referred. However, any further clarifications thereof can be obtained from the office of Sr. Divisional Signal & Telecommunication Engineer RATLAM, Western. Railway well in advance.

10.0 QUALIFYING / ELIGIBILITY CRITERIA:

Tender eligibility criteria defined in para 10.1 to 10.5 must be fulfilled or else Bid may be rejected summarily. All Tenderer(s) irrespective of their being known to this organisation or not, must submit related supporting documents in respect of the following:

10.1 TECHNICAL ELIGIBILITY CRITERIA:

- a) The tenderer must have successfully completed or substantially completed any one 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:

Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or

Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or

One similar work costing not less than the amount equal to 60% of advertised value of the tender.

- b) (1) In case of tenders for composite works (e.g. works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges - substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any one 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:

Three similar works each costing not less than the amount equal to 30% of advertised value of each component of tender, or

Two similar works each costing not less than the amount equal to 40% of advertised value of each component of tender, or

One similar work each costing not less than the amount equal to 60% of advertised value of each component of tender.

Note for b (1): Separate completed works of minimum required values shall also be considered for fulfilment of technical eligibility criteria for different components.

(b) (2) In such cases, what constitutes a component in a composite work shall be clearly pre-defined with estimated tender cost of it, as part of the tender documents without any ambiguity.

(b) (3) To evaluate the technical eligibility of a tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in clause 7 of the Standard General Conditions of Contractor through subcontractor fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Chief Engineer in writing.

However, if required in tender documents by way of Special Conditions, a formal agreement duly notarised, legally enforceable in the court of law, shall be executed by the main contractor with

the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfilment of technical eligibility. Such subcontractor must fulfil technical eligibility criteria as follows:

The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract, costing not less than 35% value of work to be sublet, in the last 5 years, ending last day of month previous to the one in which tender is invited through a works contract.

Note: for subletting of work costing up to Rs 50 lakh, no previous work experience of subcontractor shall be asked for by the Railway.

In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract, with prior approval of Chief Engineer in writing.

Note for Item 10.1:

Work experience certificates from private individuals shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, 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 authorised 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.

Similar Nature of Work means:

Please refer to Appendix 2, Annexure 1.

For Joint Venture Firm please refer Clause 17 of GCC 2022. (Along with all correction slips)

10.2 Financial Eligibility Criteria: (Ref: para 10.2 of GCC (along with all correction slips))

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 the 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 of Part I of GCC, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

For Joint Venture Firm please refer Clause 17 of GCC 2022.

10.3 Bid Capacity:(Applicable for tender costing > 10 Cr.)

Applicable as per para 10.3 of GCC 2022.(along with all correction slips)

The tender/technical bid will be evaluated based on the bid capacity formula detailed as Annexure- VI of GCC.

For tenders having advertised value more than Rs 10 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total bid value of the present tender. The available bid capacity shall be calculated as under:

$$\text{Available Bid Capacity} = [A \times N \times 2] - 0.33 \times N \times B$$

Where,

A = Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress.

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

B = Existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender.

Note:

(a) The Tenderer(s) shall furnish the details of -

(i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) for calculating A, as per proforma at Appendix 1, Annexure F1 and

(ii) Existing commitments and balance amount of ongoing works with tenderer as per the prescribed Performa (Appendix 1, Annexure F2) of Railway for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished. The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

(b) In case if a bidder is JV, the tenderer(s) must furnish the details of

(i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) by each member of JV for calculating A in prescribed Performa at Appendix 1, Annexure F1 and

(ii) Existing commitments and balance amount of ongoing works with each member of JV either in individual capacity or as a member of other JV as per the prescribed Performa(.....) of Railway for statement of all works in progress and also the works which are awarded to each member of JV either in individual capacity or as a member of other JV but yet not started upto the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

(c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned bid capacity in the tender under consideration.

(d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".

(e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected summarily.

(f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirements.

10.4 Criteria related to with specific Equipment's OEMs

10.4.1 Criteria related to specific Equipments OEMs in RDSO approved Source

1) EI : : Not Applicable

- (a) The successful bidder shall submit an undertaking from RDSO-approved EI OEM, within 21 days from issue of LoA or at last with submission of PG, to confirm compliance with extant RDSO guidelines and to meet specific requirements and to provide after-sales support required during the warranty period and beyond the warranty period, failing which the contract is liable to be terminated.
- (b) The successful bidder shall submit authorised breakup of cards / modules, with complete details of EI system i.e detail of all modules, cards and accessories, full details of quantities (station/OC/autohut wise) & unit base rate item wise, including spares, in proforma provided with this tender, before signing of CA.

2) For EI Alteration: Not Applicable

- a) The successful bidder shall submit an undertaking from Existing EI OEM, within 21 days from issue of LoA or at last with submission of PG, to confirm compliance with extant RDSO guidelines and to meet specific requirements for the project for alteration/modification/augmentation and to provide after-sales support required during the project and during the warranty period, failing which the contract is liable to be terminated.

3) MSDAC: Not Applicable

For ease of maintenance, only one uniform made of MSDAC is to be supplied and installed in this Project. The systems to be offered against this tender shall be from RDSO approved sources only on the date of tender opening.

- (a) The successful bidder shall submit an undertaking from RDSO-approved MSDAC OEM, within 21 days from issue of LoA or at last with submission of PG, to confirm compliance with extant RDSO guidelines and to meet specific requirements and to provide after-sales support required during the warranty period and beyond the warranty period, failing which the contract is liable to be terminated.
- (b) The successful bidder shall submit authorised breakup of Material, with complete details of MSDAC system i.e detail of all modules, cards and accessories, full details of quantities (station) & unit base rate item wise, including spares, in proforma provided with this tender, before signing of CA.

10.4.2 Criteria related to special Equipment's venders (Non-RDSO approved Source)

(i) IT Networking Equipment (Industrial grade) and their OEMs/Authorised Indian Representative.

10G network is being proposed in the section due to introduction of large number of applications like AIML(Artificial Intelligence/Machine learning) powered, IOT device based early warning systems for predictive maintenance, CCTV surveillance system in tunnels, emergency communication system based on IP PA speaker, SIP based call points, SCADA system, etc. required in section. This project will have Distribution/edge switches of industrial grade to connect various sensors/equipment's. Switches required lot of configurations, logic and protocols which may not be known to Railway Engineers/contractors, hence MOU shall be submitted for proper sales, service and warranty purpose.

Normally Industrial switches are manufactured by Multinational companies. Some company started manufacturing in India also. Still Industrial grade switches are not 100% make in India as chip/cards are still not manufactured in India. Thus to comply GCC clause 7C & 7D, following information may be submitted to qualify the technical suitability of Bid.

- a. Authorization /MOU from OEM / Authorised Indian Representative of OEMs of IT Networking Equipment's. (Industrial switches & Enterprise grade core switch) for successful commissioning of robust backbone IT Network for integrated tunnel communication system consisting of CCTV, Comm. System, SCADA system, IOT device based (IP Modbus protocol) Predictive

maintenance system etc. and after sales and support for proper working of systems.”

- b. RDSO has issued General specification for enterprise switches (Non Industrial) but approval of sources has not been done so far. In this project only proven type Industrial grade equipment's need to be quoted. (Make CISCO, Allied Digital, Alcatel Lucent, Juniper, Extreme, HP or similar). All type switches shall be same make for smooth interoperability.
- c. This is applicable for OEM of Networking (industrial grade switches) whose products are proposed should meet the following criteria.

	Eligibility Criteria Requirements	Supporting Document Required
1	<p>The OEM of Industrial & other Switches, should have proven facilities for Engineering, manufacture, assembly, integration, testing and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Logistic Supports for above equipment's used for Backbone networking used in Tunnels/Railway sector; continuously for at least past one year in the India or any other country. In case OEM is located outside India, it should have authorized training, repair and service Centre facilities in India also.</p> <p>The OEM of equipment should not be form land border country If OEM major shareholder has dual citizenship, then that OEM will be considered form land border country and that OEM offered equipment supply from any other country will not be accepted</p>	<p>The certificates/Undertaking along with the complete address of OEM for the sales and support will have to be submitted along with bid.</p> <p>Certificate of incorporation of parent company or their Indian subsidiaries have to be submitted.</p> <p>If the parent company is sharing border countries, proper license from an Authorized government agency must be submitted.</p>
1	The Industrial grade series switch of OEM should preferably be satisfactorily working in Indian Railway Environment in RE area since last one year. This includes satisfactory working of equipment in Metro or in any Railways establishment since last one year successfully.	Satisfactory performance certificate from end user clearly mentioning the make and grade(industrial) of equipment.
2	Hardware and Software supplied by OEM should not have any malicious code.	No Malicious Code Undertaking Letter to be provided.(asperAppendix1, Annexure-Q).
3	The system must be interoperable with other make networking equipment.	Undertaking for system interoperability to other make equipment.(as per Appendix 1, Annexure-Q).
4	The OEM of Industrial grade switches or their authorized representative shall have service facility in India	Self-declaration of OEM having service facility in India or service Centre authorization letter to its representative in India
5	Deviation in technical specification are permitted if they are certified Authorized technical officer of OEMs.	Parawise Technical compliance declaration to be submitted.
6.	Datasheet of equipment may be submitted.	Copy of datasheet (optional)

(ii) Emergency communication system with IP based PA and SOS/Call point phone system and their OEMs/Authorised Indian Representative

- a. MOU from OEM / Authorised Indian Representative of OEMs of Emergency communication system with IP based PA and SOS/Call point phone system for successful commissioning of integrated tunnel communication system and after sales and support for proper working of systems.”
- b. RDSO has issued General specification for Industrial grade IP speaker & call point phones but approval of sources has not been done so far. In this project only proven type equipment needs to be quoted. (make Zenitel or similar)
- c. OEM of Emergency communication system with IP based PA and SOS/Call point phone system whose products are proposed should meet the following criteria

	Eligibility Criteria Requirements	Supporting Document Required
	<p>The OEM of Emergency communication system (Common server) with IP based PA and SOS/Call point phone system, should have proven facilities for Engineering, manufacture, assembly, integration, testing and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Logistic Supports for above equipment's used for PA system and Emergency call phones system in Tunnels/Railway sector; continuously for at least past one year in India or any other. In case OEM is located outside India, it should have authorized training, repair and service Centre facilities in India also.</p> <p>The OEM of equipment should not be form land border country If OEM major shareholder has dual citizenship, then that OEM will be considered form land border country and that OEM offered equipment supply from any other country will not be accepted</p>	<p>The certificates/Undertaking along with the complete address for the same will have to be submitted along with bid.</p> <p>Certificate of incorporation and shareholding of parent company and subsidiaries have to be submitted.</p> <p>If the parent company is sharing border countries, proper license from an Authorized government agency must be submitted.</p>
1	<p>The Communication server Equipment with IP speaker (Industrial grade) with or without phones offered by the OEM must be satisfactorily working in Railway Environment in RE area. This includes satisfactory working of equipment in Metro or in Railways since last one year successfully.</p> <p>Further Robust Industrial grade Call point /SOS phones must be working successfully in any tunnels since last one year successfully.</p>	Satisfactory Working certificate from end user clearly mentioning the make & model no./series/family of the offered equipment.
2	Hardware and Software supplied by OEM should not have any malicious code.	No Malicious Code Undertaking Letter to be provided (as per Appendix 1, Annexure-Q).
3	The system components like IP speakers, call point phones must be inter operable with other make SIP server based systems.	Undertaking for system interoperability to other SIP enabled components (Speakers/phones) and vice versa.
4	The OEM of Call point/SOS phones (Industrial grade) & IP speakers (Industrial grade) or their authorized representative shall have service facility in India	Self-declaration of OEM having service facility in India or service Centre authorization letter to its representative in India

5	They shall fulfil technical specifications with Nil deviations.	Technical compliance declaration to be submitted.
6.	Make of Equipment and its technical details need to be submitted with a tentative scheme.	Make Technical details of equipment.

10.5 Site Acquaintance verification criteria: (appendix 1, Annexure J)

Safety of material and staff will be the responsibility of the contractor. It is required that firms should compulsorily visit the site condition before filling the tender. The certificate to this effect may be submitted. Railway may like to have proof of visit of site to adjudged seriousness & sincerity of bidder while quoting rates.

10.6. Joint Venture will be permitted in this tender. All required documents to be as per Indian Railway GCC 2022. (along with all correction slips). Please submit MOU as per Appendix1-Annexure G & certificate by Each member as per annexure H.

10.7 Partnership Firm: The tenderer shall submit documents as mentioned in Clause 18 of the Tender Form (Second Sheet) of GCC 2022. (along with all correction slips)

10.8 Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India or entity authorised by RBI to do so for the relevant date or immediately previous date for which rates have been published. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date or immediately previous date for which rates have been published.

[Explanation for Para 10.1 to 10.5 - Eligibility Criteria:]

- 1. Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.*
- 2. In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfilment of credentials.*
- 3. If a work is physically completed and completion certificate to this extent is issued by the concerned organisation but final bill is pending, such work shall be considered for fulfilment of credentials*
- 4. In case of completed work, the value of the final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case the final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.*
- 5. If a bidder has successfully completed a work as subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organisation or public listed company as defined in Note for Item 10.1 Para 10 of the Tender Form (Second Sheet), the same shall be considered for the purpose of fulfilment of credentials.*
- 6. In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially*

completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.

- 7. In case of newly formed partnership firm, the credentials of individual partners from previous proprietary firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in the previous entity and his share in the present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of $0.3 \times 0.2 \times \text{value of the work done in the previous entity}$. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include a copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.*
- 8. In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm(e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include a copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.*
- 9. In case of an existing partnership firm if any new partner(s) joins the firm without in the name and PAN/TAN no. of the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include a copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.*
- 10. Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or proprietary firm without leaving the partnership firm of A&B partners.*
- 11. In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.*
- 12. If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of a partnership firm retires without taking away any credentials from the firm, the credentials of the partnership firm shall remain the same as it is without any change in their value.*
- 13. In a partnership firm "AB" of A&B partners, in case A also works as proprietary firm "P" or partner in some other partnership firm "AX", credentials of A in proprietary firm "P" or in other partnership firm "AX" earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.*
- 14. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.*
- 15. In case company A is merged with company B, then company B would get the credentials of company A also.]*

10.9 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 W. 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 a 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) **CA certified local content certificates for complete tender value need to be submitted.**

- a. **Note: minimum value shall be filled in IREPS Portal (Mandatory Field), However certificate may specify either minimum value or range of values as the case may be(Details may be submitted as attached Format Appendix 1, Annexure K).**
- iv) The list of personnel / organisation 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.
- v) A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with the bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Annexure-V. Non submission of a copy of certificate 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 she/he/they is/are qualifying the Qualifying Criteria mentioned in the Tender Document.
- vi) 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.
- vii) (a) In case any information submitted by a tenderer is found to be false, forged or incorrect at any time during the process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of two years.
(b) In case any information submitted by the 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 the agency shall be banned from doing business for a period of two years.

Non-compliance with any of the conditions set forth herein above is liable to result in the tender being rejected.

10.10 The tenderer(s) must submit copies of certificates and testimonials with regards to:

- i. Summary details of Technical documents duly filled by Bidder in attached Format. (Appendix 1, Annexure A)
- i) Tender Form as per (Appendix 1, Annexure B)
- ii) Affidavit/Certificate as per Annexure-V or (V and VA both) of GCC/Appendix 1, Annexure C or H of tender Doc.
- iii) Details of Technical Eligibility Fulfilment: List of 1 or 2 or 3 works which are similar in nature & of value mentioned in tender conditions. This shall be supported by credential/work completion certificate in respect of works fulfilling technical eligibility criteria issued by user/Employer.
- iv) Details of FINANCIAL CREDENTIAL in the form of
- a. Average Annual contractual payment received/contractual turnover issued by CA. duly supported by Audited Balance Sheets.
- b. Audited Balance Sheets duly certified by the Chartered Accountant for required period(past 3 financial years).
- v) Details of Bid capacity Eligibility Criteria:
- a. CA certificate & Calculations of Bid capacity as per formula
- b. Details of Break up of Financial turnover (Value A) duly supported by List of works showing contractual payment received in past 3 financial years duly certified by CA.
- c. Details of Balance liabilities of contractual works (Value of B) duly supported by List of all ongoing works duly certified by CA.
- vi) Power Of Attorney duly supported by Board resolution/partnership deeds as the case may be.
- vii) Copy of MOA & Article of Association (AOA)/partnership deed/JV agreement based on type of Bidder as mentioned in tender document.

- viii) Other documents as mentioned in tender documents/check list attached with tender documents including deviation certificates, MOU with OEMs (if asked), make of specific equipments offered (EI, IPS, MSDAC, switches, IPMPS equipments, etc.)
- ix) Certificate of Local content duly certified by CA.(Appendix 1, Annexure K)
- x) Declaration of site acquaintance.(Appendix 1, Annexure J)

Other optional documents: (May be submitted within 30 days of issue of LOA):

- List of Plant & Machineries.
- List of Technical Manpower. (Appendix 2, Annexure 3)
- List of Works In Hand (if not submitted with Bid capacity)
- Planning Of Execution, Proposed Scheme And Programme of Work To Complete It Within The Stipulated Completion Period.

10.11 Engineering Organization:

i) The Contractor shall also employ at least one Project Manager and 01 Site Engineer for this Work, details of which are to be given in (Appendix 2, Annexure 3).

ii) The above deployed persons must be trained in railway signalling system and safety in General from Railway signalling Training institute, with valid certificate. In case the person is not found trained, He will be sent to SBI/STTC for training immediately at the cost of the contractor.

10.12 Construction Machinery

The firm should have minimum construction machinery, Tools and plants, vehicles etc. Details of which will be furnished by them along with the tender.

10.13 Test and measuring instruments, special tools and installation material

Special tools required for installation and maintenance of all the equipment shall be arranged by the tenderer(s) in adequate quantities. All installation materials for complete commissioning of the system shall be provided by the tenderer(s).

All tests and measuring instruments and other arrangements required for all the acceptance tests shall be provided by the tenderer(s) free of cost.

11.0 Documents to be submitted by different type of tenderer

- A. The tenderer shall clearly specify whether the tender is submitted on his own (Proprietary Firm) or on behalf of a Partnership Firm / Company / Joint Venture (JV) / Registered Society / Registered Trust / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc. The tenderer(s) shall enclose the attested copies of the constitution of their concern, and copy of PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the firm, company, association, trust or society, as the case may be.

i. Following documents shall be submitted by the tenderer:

a. Sole Proprietorship Firm:

All documents in terms of Para 10 of the Tender Form (Second Sheet) above.

b. HUF:

- i. A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.
- ii. All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

c. Partnership Firm:

All documents as mentioned in para 18 of the Tender Form (Second Sheet).

d. Joint Venture (JV): All documents as mentioned in para 17 of the Tender Form (Second Sheet).

e. Company registered under Companies Act 2013:

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

- ii) A copy of Certificate of Incorporation
- iii) A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
- iv) All other documents in terms Para 10 of the Tender Form (Second Sheet) above.

f. LLP (Limited Liability Partnership):

- i) A copy of LLP Agreement
- ii) A copy of Certificate of Incorporation
- iii) A copy of Power of Attorney/Authorization issued by the LLP in favour of the individual to sign the tender on behalf of the LLP and create liability against the LLP.
- iv) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- v) All other documents in terms of Para 10 of the Tender Form (Second Sheet).

g. Registered Society & Registered Trust:

- i) A copy of Certificate of Registration
- ii) A copy of Memorandum of Association of Society/Trust Deed
- iii) A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.
- v) A copy of Rules & Regulations of the Society
- vi) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

B If it is NOT mentioned in the submitted tender that tender is being submitted on behalf of a Sole Proprietorship firm / Partnership firm / Joint Venture / Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.

C After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm /Partnership Firm / Registered Company/ Registered Trust / Registered Society / HUF/LLP etc. shall be neither asked nor considered, if submitted. Further, no Suo moto cognizance of any document available in public domain (i.e., on internet etc.) or in Railway's record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.

D A tender from JV shall be considered only where permissible as per the tender conditions.

E The Railway will not be bound by any change of power of attorney or in the composition of the firm made subsequent to the submission of tender. Railways may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.

12.0 Power of Attorney

The tenderer whether sole proprietor / a company or a partnership firm / joint venture (JV) / registered society / registered trust / HUF / LLP etc if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorising him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement except in case where such specific person is authorised for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association /Board resolution, failing which tender shall be summarily rejected.

A separate power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether she/he/they be partner(s) of the firm or any other person, shall be submitted after award of work, specifically authorising her/him/them to deal with all other contractual activities subsequent to signing of agreement, if required.

Note: A Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is

being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Apostille certificate.

13.0 EMPLOYMENT, PARTNERSHIP, SHARE etc. of Retired Railway Employee:

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 authorised by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.

iv) In case, upon successful award of contract, should a tenderer depute for execution of the works under or

b. 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 authorised 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 16.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.

14.0 Errors, Omission & Discrepancies:

The contractor(s) shall not take any advantage of any mis-interpretation of the conditions due to typing or any other error and if in doubt, shall bring it to the notice of the Engineer, without delay. In case of any contradiction only the printed rules, and books should be followed and no claim for the mis-interpretation shall be entertained.

15.0 Acceptance / Rejection of Tender(s):

1. The authority competent for the acceptance of this tender does not bind himself to accept the lowest or any other tender nor does he undertake to assign reasons for declining to consider any particular tender or tenders. No tenderer(s)/ tenderer(s) shall demand any explanation of

the cause of rejection of her/his/their tender. No correspondence will be entertained with the tenderer(s)/tenderer(s) in respect of the rejection of any or all tenders.

2. The tender containing erase and/or alterations of the tender documents are liable to be rejected. Any corrections made by the tenderer(s) in his/their entries must be attested.
3. If a tenderer(s) deliberately gives/tenders wrong information in her/his/their tender or creates circumstances for the acceptance of his/their tender, the Railway reserves the right to reject such tender at any stage.
4. If a tenderer(s) expires after the submission of his tender or after the acceptance of his tender, the Railways shall deem such tender as cancelled. If a partner of the firm expires after the submission of their tender or after the acceptance of their tender the Railway shall deem such tender as cancelled unless the firm retains its character.

16.0 Local Conditions:

1. It will be imperative on each tenderer(s) to fully acquaint himself with all the local conditions and factors which would have any effect on the performance of the contract and cost of the stores. The purchaser shall not be entertaining any request for clarifications from the tenderer(s) regarding such local conditions. No request for the change of price or time schedule of delivery of stores shall be entertained after the offer is accepted by the purchaser on account of any local condition or factor.
2. In the event of the tenderer(s) desiring to have a field survey before furnishing his quotations, he may apply to Railway for permission in this regard. Such permission will be given in writing by the Railways but the expenses in this regard will be borne by the tenderer(s) completely.
3. The intending tenderer is advised to study the tender papers carefully. Any submission of a quotation by the tenderer(s) shall be deemed to have been done after a careful study and examination of these documents with full understanding of the implication thereof. These conditions and specifications shall be deemed to have been accepted unless otherwise, specifically commented upon by the tenderer(s) in his quotation. Failure to adhere to anyone or all these instructions may render his offer liable to be ignored without any reference.
4. Should a tenderer(s) find discrepancies in, or omission from the drawing or any of the tender papers or he has any doubt to their meaning, he should at once notify the Railway who may send a written clarification to all tenderer(s).
5. Before submitting tender(s) the tenderer(s) is advised to inspect the proposed site of work and fully acquaint himself/themselves with the site conditions, working hours, type of land, trees or shrubs that he/ they will have to cut, stacking space for materials, approach roads, pathways available etc. and all relevant items connected with the execution of the work. No claim shall be entertained at a later stage by the Railway on such grounds from the contractor(s).

17.0 Drawing(s) For the Work:

Drawing(s) for the work can be seen in the office of the Dy. Chief Signal & Telecommunication Engineer/Works Western Railway, at any working day during office hours. The drawings are tentative and Railway reserves the right to make changes in plans if considered necessary and no compensation in any form will be admissible on this account. The contractor(s) will have to execute the work as per final plans at the rates quoted by him/them.

18.0 Execution of Contract Agreement:

The successful tenderer(s) shall be required to execute a contract agreement (hereinafter called CA) with the Railway for carrying out the work according to condition of Tender & Contract, Special Condition of Tender & Contract, Specification of Tender, "General Conditions of Contract", edition-2022 with latest amendments of W. Railway (which shall also be applicable in this work, although meant for use in connection with Civil Engineering Works) and Schedule of Work after depositing the required Performance Guarantee Bond (PGB) as detailed under Special Conditions of Tender & Contract. The Tenderer shall execute the contract documents agreement within seven days of notice from Railways that the Contract Agreement is ready.

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 organisation (in terms of labour and supervisors), plant and machinery that he intends to utilise (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 endeavour to fulfil 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.

19.0 NEGOTIATION WITH TENDERER(S):

The Railway reserves the right to hold negotiations with L-1 tenderer, who should be the *lowest, valid, eligible and technically acceptable* tenderer considered for award of contract directly if the rates were not unreasonably high.

20.0 ADDRESS FOR COMMUNICATION:

Tenderer (s) shall indicate his fully communicable postal address, Mobile Number, email id, Whats App Number, telephone numbers, and fax numbers. Any communication sent to the tenderer(s) at his said address, shall be deemed to have reached timely, notwithstanding the fact that the communication could not reach the tenderer(s) at all or in time because of any inaccuracy or defect in the said address. Any change thereof shall be advised to the Railway promptly. All notices, communications, reference and complaints made by the Railway or the Engineer or the Engineer's Representative or the Contractor inter-se concerning the works shall be in writing or email on registered email IDs and no notice, communication, reference or complaint not in writing or through e-mail, shall be recognized.

21.0 MOBILISATION ADVANCE: Mobilisation Advance is applicable as per para 46.(4) (a). (Applicable for tender more than 20 Cr.)

22.0 PRICE VARIATION: Price Variation is not applicable in this tender and even in the extended period.

23.0 JOINT VENTURE :- (Not Applicable) Joint Venture is permissible under this Tender. Different documents required to be submitted by JV partners may be studied in great detail given in GCC. Some documents need to be given by Each member of the JV.

24.0 E-Reverse Auction: Applicable only for tender costing more than 50 Cr. (**NA for this case**)

Electronic Reverse Auction (e-RA)

- i) The process of e-RA will be followed for works tenders Valued more than Rs. 50 Cr.
- ii) Technical Bid and Initial Price offer.
 - a) Bidders shall be simultaneously required to electronically submit a Technical commercial Bid and Initial Price offer. Offers found eligible (for award contract/meeting eligibility criteria shall be categorised as Qualified for Award Contract for the purpose of e-RA.
 - b) Offers not complying with essential technical & commercial requirements of tender shall be declared as Ineligible for the award of contract.
 - c) Initial price offer of only those bidders categorised as Qualified for award of contract shall be opened and tabulated by the system separately.
- iii) Financial Bid:
 - a) Financial Bid shall comprise of Final Price Offer obtained through Reverse Auction. Following conditions and procedure shall be followed in selection of bidder..... Conduct of Reverse Auction.

Selection of bidders for Reverse for the award of Contract in work tenders:

Name of tenderers qualified for award of contract	Name of tenderers to be selected for Reverse Auction	Remarks
< 3	NIL*	The bids disallowed from participating in Reverse Auction shall be highest bidder(s) in the tabulation of initial Price Offer. In case the highest bidders quote the same rate, the initial Price Offer received last, as per time log of IREPS, shall be removed first, on the principle of last in first out, the IREPS system itself
3 to 6	3	
More than 6	50% of bidders Qualified for award of contract (round off to next higher integer)	

*If the number of bidders qualified for the Award of contract is less than 3, RA shall not be done and tender may be decided on the basis of Initial Price Offer(s).

- b) During the Reverse Auction process, bidders shall not be allowed to bid a rate higher than the lowest Initial Price Offer.
- iv) After obtaining the final bids of Reverse Auction, tenders shall be finalised as per the existing policy.
- v) Date and time of start of e-RA will be communicated to qualified tenderers after evaluation of the Technical Bid.
- vi) Initial e-RA period: 06 (six) Hrs (e-RA will be opened for this duration)
- vii) 30(thirty) min (In case any offer is received in the time period equal to auto extension period from the time of last bid. There shall be no upper limit of the number of auto extensions. When no offer is received in the last auto extension period, e-RA shall be closed).
- viii) Minimum decrement (%): 0.1 (Zero point one) %
- ix) After submission of Initial Price Bid, tenderers will not be allowed to receive the taxes and other levies.
- x) During the auction period, identities of the participating tenderer will be kept hidden.
- xi) Minimum admissible bid value will be the last bid value minus minimum decrement as specified above. Starting point for reverse auction shall be the lowest Initial Price Bid of the tenderer eligible for award of contract.
- xii) After close of e-RA, tabulation of last (minimum) bids received from all the tenderers will be generated and made visible to Railways and participating tenderers.
Bidders are not allowed to withdraw their last offer.
- xiii) L-1 will be defined as the lowest bid obtained after the closure of R.A. session.
- xiv) Bidders may refer to the User Manual for contractors for Two stage Reverse Auction (Works Module), provided in the learning centre of IREPS website in case of any difficulty.

25. Procurement of price sensitive equipments : NA

Schedule for Supply & installation of cost sensitive items is separate and Upper limit for quoting rates on this schedule will be 15% from LAR. Bidder may quote the rate within this limit. In case it is found at the stage of finance Bid evaluation that rates for these items schedule is more than permissible limit, Bid will be considered nonresponsive, and offer will be summarily rejected.

Bidder shall give statement either in covering letter or in summary statement of bid that quoted rates for this schedule are within permissible limit.

In case it is found at the stage of finance Bid evaluation that rates for these items schedule is more than permissible limit, Bid will be considered not responsive, and offer will be rejected summarily. Further, it will be treated as false information and will be dealt as per GCC/certificate of bidder for debaring in repeat tender.

CHAPTER- III
{SPECIAL CONDITIONS OF TENDER AND CONTRACT}

1.0 GENERAL:

- 1.1 The Special Conditions of Tender and Contract, along with the Technical Specifications and the Schedule of Works of this contract in addition to the General Condition of the Contract, 2022 with latest amendments shall also be applicable for this contract. Indian Railway Code for the Engineering Department with up to date corrections, Standard Specifications for materials and works and the Indian Railway Signal / Telecommunication Manual shall govern the work to be executed.
- 1.2 Where there is any conflict between the Special conditions of Tender & Contract and Specifications on one hand and General Conditions of Contract, 2022 on the other hand, the former shall prevail.
- 1.3 Any special conditions stated by the tenderer(s) in the covering letter submitted along with the tender shall be deemed to be the part of the contract to such extent only as have explicitly been accepted by the Railways, and incorporated in the contract agreement.
- 1.4 General details of site, works, scope of work, definition of similar works, etc. have been compiled as **Appendix 2, Annexure-1**.

2.0 Scope of The Work:

The scope of the work broadly includes supply of materials and execution of the work as described in details in the Schedule of Work, drawings and technical specifications of the tender, unless deviations if any, specifically approved by the Railway. **(Pl refer Appendix 2, Annexure 1)**

3.0 Programme of Works:

- 3.1 **Completion Period:** The contractor shall have necessary resources to execute the work so that the entire work must be completed within a period as specified in NIT header from the date of issue of Letter of Acceptance of the tender. The Progress of Work shall commensurate with Target set by Zonal Railways/Railway Board. The Contractor has to perform accordingly with required resources to execute the work in time. Penalty may be invoked, if the Progress required is not met in time.
- 3.2 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 organisation (in terms of labour and supervisors), plant and machinery that he intends to utilise (from time to time) for execution of the work within the 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 endeavour to fulfil 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.
- 3.3 The arrangement or the approval of the programme by the Engineer shall not relieve the contractor of any of his responsibilities to complete the various sections of the work.
- 3.4 If the work does not commence within specified date of starting or if at the subsequent time the rate of execution falls below the specific programme as mentioned above, the Railway Administration will have the power to determine the end of the contract at any stage without incurring any liability on the part of the Railway Administration for any sort of compensation for the money invested by the contractor the loss incurred by him / them, due to such termination of the contract. In all cases of incomplete work, either by termination of contract by the Railway Administration under consideration stated above or due to failure on the part of the contractor to complete the work within stipulated date of completion of the Agreement, the Railway shall be entitled to take the action for rescinding the contract in terms of Clause 62 of GCC-2022 with latest amendments.
- 3.5 The contractor shall be held responsible for the execution of the work according to the Programme given above for the execution of the work in full compliance of the approved SIP, PD & RCC and also the various clauses of the technical supplements, Technical specifications,

instruction and drawings available separately. Failure to comply with any of these will be dealt with as per provision laid down in General Conditions of Contract 2022.

- 3.6 The contractor on his part will have to employ labour in full strength commensurate with the working area available. He will also arrange matching materials and equipment to complete the job most expeditiously so as to ensure that the work is completed in phases within the stipulated period.
- 3.7 No facility whatsoever, e.g. provisions of approach road and provision of temporary level crossing etc. will be provided by the Railway for carting materials. Approach roads within the Railway limits can be used carting materials.
- 3.8 The contractor shall collect the materials and shall commence the work on receipt of Letter of Acceptance of Tender.
- 3.9 The contractor shall have to procure all the requisite tools for execution of the work before the actual commencement of the work and the contractor shall satisfy the Engineer-in-charge that the tools so procured are of good quality.
- 3.10 Supervising personnel as deemed necessary shall be posted at the site of work by Railway and such personnel will give demarcation for installation of various Signal and/or Telecom equipment and the contractor shall then carry out the work as per approved plans and specification etc.
- 3.11 The contractor shall give at least seven days' notice to the Engineer-in-charge regarding commencement of the work, so that he can arrange supervisory staff in time. The Contractor shall complete the work in a reasonable time as allowed without causing hindrance and disturbance to train working.
- 3.12 The successful tenderer(s) will however have no claim or right in the execution of any work which in the opinion of Engineer should be carried out departmentally or otherwise and the Railway reserves the right at any time to keep back from the contract and carry out the work or any portion of the work through any other agency, it may think necessary, without assigning any reason. No claim for compensation / loss or whatsoever on this account will be entertained by the Railway.
- 3.13 No work on working installations shall be undertaken without the specific permission of the Railway representative and without the presence of Railway representative at the site of the work
- 3.14 The contractor shall be responsible for safe custody of all newly installed equipment including Railway materials, if any, till such time installation is completed in all respects and is taken over by the Railway.
- 3.15 The work during execution shall be subjected to checks and tests at all stages as prescribed in Technical Specification. The tests shall be carried out by the engineer-in-charge or his authorised representative. After taking the test a list of discrepancies / deficiencies, if any, shall be given to the contractor. The contractor shall be liable to remedy such discrepancies/ deficiencies as discovered during these tests and make good at his own cost, within a period of 30 (Thirty) days from the date of testing.
- 3.16 The contractor shall have to arrange adequate tools and measuring equipment for execution of the work at his own cost.
- 3.17 If at any time, any materials or tools which the contractor would normally have to arrange for himself for executing the work is supplied by the Railway either at the contractor's request suo-moto in order to prevent possible delay in the execution of the work due to contractor's inability to make adequate arrangements for the supply thereof or otherwise, such materials or tools may be made available to the contractor from the Railway stores if available at the discretion of engineer-in- charge.
- 3.18 In case of loss or damage caused to materials and/or tools supplied as mentioned above recovery shall be made from the contractor in terms of clause No. 11.1 of CHAPTER III OF SECTION I of tender document.
- 3.19 If the materials or tools however, not available in Railway stock or Railway decides not to supply the same, whatsoever be the reason, the Railway shall not be bound to arrange for the supply nor will this fact be accepted as an excuse for delay in the execution of the work.
- 3.20 NA.
- 3.21 While executing the work any increase of quantity upto 25% shall in no degree affect the validity of the contract and shall be performed by the contractor as provided therein and be subject to the same conditions, stipulations and obligations originally included and approved for in

specification and drawings and the amount to be paid thereof shall be calculated in accordance with the accepted rates of the schedule.

- a. For completion of the work if any necessity arises for execution of excess quantity of any item (work as well as supply) beyond 25% of the quantity provided in the schedule of work, the contractor shall notify the engineer-in-charge at least 7 (Seven) days in advance. The Railway shall have the option to execute such extra work / supply by any other means and the contractor shall have no claim for loss or damage that may result from such procedure.
- b. The rates for such items increasing beyond 25% shall be decided in terms of GCC, 2022 (along with all correction slips).

3.22 Commissioning Tests:

After execution of all the items of the work as per schedule of the work the contractor will offer the entire work for commissioning tests with at least 15 (fifteen) days advance intimation to the Engineer-in-charge.

In case of any faults detected during the said test, the contractor shall be responsible for localization of fault(s) and rectify of those at his own cost and then re-offer for testing, till the entire work is finally cleared for acceptance by the Engineer-in-charge.

Any special type of Measuring Instruments and accessories required for Commissioning Testing of the installations are to be arranged and brought at site by the contractor at his cost

4.0 Non-Interlocked working/Disconnection:

4.1 NON-INTERLOCKED WORKING -

The mandatory requirement for deployment of technical staff by contractor during NI period should be typically as mentioned below:

- a. Relay Room: Two wiremen/technicians or as per engineer in-charge along with a supervisor should be available in the relay room for carrying out testing, wiring during commissioning in each distributed relay room.
- b. In Panel/SM room: Two wiremen/technicians or as per engineer in-charge should be available in the SM's office for testing the panel and block wiring etc. exclusively. They will work under the supervision of the relay room supervisor.
- c. Outdoor Room: Sufficient staff with supervisor to look after the outdoor activities. The strength of staff as mentioned above is the bare minimum required for small 3 or 4-line stations. Proportionately, more staff should be deputed whenever required as per direction given by Engineer In charge.
- d. The strength of staff as mentioned above is the bare minimum required for small 3-line stations. Proportionately, more staff should be deputed whenever required.
- e. The deployed Technical staff from contractors must be trained in railway signalling system and safety in General from Railway signalling Training institute, with valid certificate. **In case the person is not found trained, He will be sent to SBI/STTC for training immediately at the cost of the contractor.**

4.2 DISCONNECTION WORKING –

The Instant Work also includes establishment of new communication between adjacent stations.

(a) Block Section - Working on Quad/OFC Cable in Block Section between Station “A” and “B” there should be a good jointer available in Block section for jointing along with the necessary help for doing the job to the satisfaction of supervisor In-charge.

(b) At Station – One no. of Technical Person to be placed at each Station “A” and Station “B” during disconnection for any kind of technical support during disconnection/reconnection. Same should be competent for Quad/OFC parameter measurement.

5.0 COMPLETION & COMMISSIONING AND CLOSURE OF THE WORK:

5.1

- i. The work shall not be considered to have been completed in accordance with the terms of contract until the engineer in-charge shall have issued certificate in writing to this effect. No approvals of material or workmanship or approval of part of the work during the program of execution shall bind the engineer in-charge of in any way prevent him from even rejecting the work which is claimed to be completed and to suspend the issue of his certificate of completion until such alterations and modifications of reconstruction have been effected at the cost of the contractors as shall enable him to certified that the work has been completed to his satisfaction.
- ii) After the work is completed, the contractors shall give notice of such completion to the engineer in-charge and within 30 days of receipt of such notice the engineer in-charge/ site-engineer nominated by engineer-in-charge shall inspect the work and if there is no defect in the works shall furnish the contractor with a certificate indicating the date of completion. However if there are any defects which is in the opinion of engineer in-charge are rectifiable he shall inform the contractors the defects noticed. The contractor after rectification of such defects shall notify the engineer in-charge and then the engineer in-charge shall inspect the work and issue the necessary completion certificate within three days if the defects are rectified to his satisfaction and if not be shall inform the contractor indicating defects yet to be rectified. The time cycle as above shall continue

5.2 Work Closure:-

- A) **Work closure without AMC schedule:-** Refer to GCC code 51 (1).
- B) **Work Closure with AMC Schedule of specific equipment:-**

If the AMC of EI or (any other specific equipment) is the part of the original work/tender, it will be executed by the Open Line division under the following conditions:

Schedule of AMC- Schedule will be separate for AMC part. AMC condition shall be clearly defined including cost, time, periodicity, availability of staff, penalties etc.

Date of Commencement of AMC: The AMC will commence based on the expiry of warranty periods.

Bank Guarantee (BG): A separate Bank Guarantee will be obtained for the AMC for the 5% value of AMC schedule cost for validity of complete AMC period.

Agreement Execution: The AMC agreement will be executed between the Sr. Divisional Signal & Telecom Engineer (Sr. DSTE) and the Contractor and will be called as subsidiary AMC contract agreement.

Warranty Period for specific equipment (EI):

a. Multiple Stations:-For works involving EI multiple stations for completion period more than one year :

- i. The warranty period for the first station shall be two years or work completion period whichever is less after commissioning of station.
- ii. The warranty period for the last station shall be one year or work completion period whichever is less after commissioning of station.

b. If all stations are completed within a year of contract then the warranty period shall be one year from the commissioning of the last station.

c. Single Station: work involve single station

- If the scope includes only a single station, the warranty period will be one year from its commissioning.

Note:- For other specific equipment- Warranty period may be defined separately.

Handover of AMC: The AMC portion shall be handed over to the Sr.DSTE after the completion of warranty period and handed over to Sr DSTE within one month, through separate subsidiary contract agreement of AMC.

Closure of Work/Final Bill: The work shall be closed after handing over the AMC portion to the Open Line division. In case, AMC part was not agreed to execute by open line, contract can be close without operating this item.

6.0 Extension (s) to Completion period:

I. Time is the essence of the contract. Extension of time for the completion of the work shall be governed by Clause No. 17 of the General Condition of Contract with latest amendments edition and the contractor shall be responsible for requesting such extension in terms thereof.

The contractor will have to complete the work, within specified period from the date of issue of the letter of acceptance of this tender, unless any extension to the date of completion is granted subsequently as per General Condition of Contract 2022 with latest amendments edition (GCC) vide clause no. 17, 17A(i) (ii) (iii).

II. Extension under Clause No. 17(B) provides recovery of liquidated damages from the contractor. If the extension period is granted due to contractor's delay, clause No. 17(B) of GCC will be implemented.

7.0 Time Limitation:

I. Subject to any requirement in the contract as to execution of any portion or portions of the work before completion of the whole, the contractor shall fully and finally complete the whole of the work comprised in the contract by the date entered in the contract, provided that if any modifications have been ordered which, in the opinion of the Railway engineer have materially increased the magnitude of the work, then such extension of the contract date of completion may be granted as shall appear to the Railway Engineer to be reasonable in the circumstances, provided moreover that the contractor shall be responsible for requesting such extension of the date as he may consider necessary as soon as cause thereof shall arise and in any case not less than one month before expiry of the original date fixed for completion of the work.

II. In all cases where extension of the contract date of completion is required the contractor shall have to make normal request in writing to the Engineer-in-charge of the work who shall then promptly forward such request to the competent authority with his clear and complete comments, recommendation and any other information as necessary for obtaining final decision by the competent authority.

8.0 Inspection of Works:

Field Book and Order Book in terms of Paras 1122E and 1123E respectively of the Engineering Code shall be maintained at the site of the work by Railway wherein instructions regarding the working etc. shall be recorded by the Engineer or his executive subordinates. It is expected of the contractor or his representative at the site to note such instructions whenever asked upon to do so and take action accordingly.

The contractor shall maintain accurate records, plans and charts showing the dates and progress of all main operations and the Engineer shall have access to this information at all times. Records of tests made shall be handed over to the Engineer's representative after carrying out the tests. The following registers will be maintained at site, by the Railway's representative.

1. **Site Order Register** - All instructions issued by the engineer or the supervisor to the contractor or his representative as the case may be, shall be entered. The contractor(s) or his/their representative at the site shall acknowledge such instructions whatever asked upon to do and take action accordingly. The contractor shall promptly acknowledge orders given therein by the Engineer or his representative or his superior officers and comply with them. The compliance shall be reported by the Contractor to the Engineer in good time so that it can be checked.
2. **Field Book** - In the Field Book, the date of inspection and particulars of any special features, incorrect practice(s) and deficiencies observed in the work being executed and/or materials supplied by the contractor shall be recorded by the Engineer or his executive subordinates. It will be the responsibility of the contractor to rectify the deficiencies observed (if any) at

his own cost and also to prevent any recurrence. Complaints, deficiencies if any, pointed out by the contractor or his representative shall also be recorded in this book.

3. **Hindrance Register** - A hindrance register should be maintained by the contractor to record various hindrances encountered during execution. The hindrances are to be noted on a day to day basis with date of occurrence and removal. Disputes, if any, should be included in the program status report and discussed with the contractor in weekly/monthly/steering committee meetings. Record of hindrances can be used to seek contractual extension of dates for milestones, consequent compensation for delays as well as raise attention for early removal of hindrance.

All registers at item (1) to (3) mentioned as above will be maintained by the representative of the contractor and signed by the representative of the engineer. Any other registers considered necessary by the Engineer, shall be maintained at site in which the representative of the Engineer and the contractor will have to sign. The registers, proforma charts, etc. will be the property of the Railway. Registers as mentioned above will have to be maintained depending on the scope of the work as prescribed by Engineer's/representative at site.

9.0 Inspection of Trenches, Chases And Fillings:

Details can be seen in tender schedule specifications.

10.0 Representation on Works:

- a) The contractor shall when he is not personally present on the site of the work, place and keep a responsible agent at the works during working hours who shall on receiving reasonable notice, present himself to the Engineer and orders given by the Engineer or the Engineer's representative to the agent shall be deemed to have the same force as if they had been given to the contractor. Before absenting himself, the contractor shall furnish the name and address of his agent for the purpose of this clause. The Contractor shall place and keep on the works at all times efficient and competent staff to give necessary directions to his workmen and to see that they execute their works in sound and proper manner and shall employ only such supervisor, workmen and labourers in or about the execution of any of the works as are careful and skilled in their various trades.

The contractor shall at once remove from the work any agent, supervisors, workmen or labourer who shall be objected to by the Engineer and if and whenever required by the Engineer. He shall submit a correct return showing the names of all staff and workmen employed by him. 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 the proper completion of the works within the time prescribed, the contractor shall forthwith on receiving intimation to this effect take on the additional number of staff and labour 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-61 of the General Condition of contract 2022 with latest amendments edition.

The contractor(s) shall nominate in writing his representative(s) on the works who will be authorised to receive and acknowledge materials issued by the Railway and take all orders issued by the inspecting official of the Railway, as mentioned in clause No. 9.0 above before commencement of execution of work at site, with intimation to the engineer-in-charge well in advance. Contractor shall also ensure that at least one nominated representative remains available at site during execution of work.

Regarding representation on works and supervision, the provisions in clause 12 of General Condition of Contract and clause 24 of Standard Special Condition of contract shall be applicable respectively.

- b) **Night work:** The provision in clause 23 of General Condition of Contract shall be noted regarding

execution of work between sunset and sunrise. If the contractor is, however, satisfied that the work is not likely to be completed in time except by resorting to night work, by special order the contractor would be requested to carry out the work even at night, without conferring any right on the contractor for any extra payment for introducing night work. In the event of night working, the contractor will make necessary adequate lighting arrangements for smooth execution of the work. If the contractor works round the clock on all days including Sundays and holidays, the Railway shall make arrangements for the supervision accordingly.

11.0 MATERIALS (Supply, Transportation, Inspection, Handling, return & Safe Custody):

Material Consignee : SSE/Tele/Cable-1/Ratlam

Work Supervising In charge : Concerned SSE/Tele

Engineer In charge : ADSTE/RTM or DSTE/ Special Works/RATLAM

However Railway reserves full right to change consignee (stores), supervisor site in-charge and officer- in-charge whenever need arises.

- (i) Supply of some items have to be supplied as per IRS/RDSO specification. In such cases, material has to be supplied from RDSO approved vendors only. However, for items for which vendors have not been approved by RDSO, make and Technical specification of equipment has to be approved by Engineer In-charge before procurement of items.
- (ii) For all other supply items which are to be supplied as per non IRS/RDSO specification costing more than 1% of tendered cost, make and supplier name has to be approved by Engineer In Charge if they are not already mentioned in tendering stage or in schedule or LOA.
- (iii) All the materials, except mentioned otherwise, are to be drawn by the contractor or his authorised representative from the Store depot of the **Consignee**, as per instruction of the Engineer-in-charge of the work, by placing requisitions as and when required supported by Indemnity Bond to the approximate value of materials in the requisition. Railway will supply required quantity of materials, if felt necessary for completion of the work. All of these materials are to be transported to the site of the work by the contractor as per the details given in the tender schedule. The Indemnity Bond shall not be released till such time the materials for which the INDEMNITY BOND is furnished are installed and handed over with full account to the Railway by the contractor.

I. I) MATERIAL HANDLING

a) The materials as detailed in Schedule shall be brought by the contractor to the site of work after offering the same in the office of **Consignee** for inspection and record. The contractor shall have such materials by authorised representative of Engineer-in-charge before being used for the work. He will also produce necessary inspection certificates to prove that the materials have already been passed by RDSO/RITES/CONSIGNEE where required. The materials have to be submitted to the office of **Consignee** along with the challan of the firm who has supplied the material and will be taken into the account of the Supervisor-in-charge and then shall be issued to the contractor, supported by Indemnity Bond; equal to the value of payment claimed by the contractor for materials supplied.

b) The contractor shall be liable to render full accountability for the materials issued by the Railway. If the quantity of the Railway materials is consumed in excess or wasted or damaged or lost or otherwise not satisfactorily accounted for, recovery shall be made from the contractor at twice the assessed rate of materials, prevailing at the time of last issue of the materials, if necessary by encashing the Indemnity Bond. The assessed rate will be calculated by escalating the W. Railway's last purchase rate at the rate of 12% (Twelve percent) cumulative per year or part thereof. Materials consumed in excess or wasted or damaged or lost or unsatisfactorily accounted for shall be similarly charged to the contractor at the above rate.

c) RETURN OF RLY MATERIALS:

The contractor has to return at his cost any cut pieces of wires / cables etc. that may be left out and any surplus materials from the work and other packing materials that might have been handed over to him. These shall be handed over to **Consignee**. The contractor shall take proper written

acknowledgement from the representative of the Engineer-in-charge for all the materials returned by him.

- II. The Signalling and Telecom materials for which RDSO approved/Recommended List firms exist should be procured from approved/Recommended List firms only. No materials are to be procured from firms which are banned by Railway Board/RDSO.

12.0 Inspection of Materials:

- I. In addition to what is indicated in the GCC of W. Railway, the Contractor shall also adhere to the following:
 - a) All Materials supplied are to be inspected by the respective Inspection Authorities. As a General rule, items supplied as per RDSO specification are to be inspected by RDSO/RITES if the value of the item is more than 5 lakhs. Items supplied as per IS & other specifications to be inspected by RITES/Consignee depending upon value of item.
 - b) Inspection Charges for RDSO and RITES shall be borne by Railway, subject to the provisions herein contained.
 - c) The cost of all Tests and/or/Analysis effected at the Manufacturers or Contractors premises shall be borne by Contractor. Tests parameters as given in technical specifications/RDSO specifications, which are not possible to test at factory/OEM's premises/Indian representative premises, necessary test reports of type tests/routine tests reports need to be submitted to the satisfaction of Engineer in-charge.
 - d) The materials put up for Inspection shall be of the same type nature as specified in the Schedule and Specification. Any variation shall require prior approval of the Railway.
 - e) The expenses of travel, boarding etc. for Railway Engineer's representative incurred inwards Inspection shall be borne by Railway.
 - f) After inspection the contractor shall produce the materials along with Inspection Certificate, to **Consignee** for acceptance.
 - g) If any material is found by the Engineer-in-charge to be not as per the specification or not in proper condition the same is to be replaced by the contractor within 15 (Fifteen) days free of cost. For this the Engineer-in-charge's decision is final and binding on the contractor.
 - h) All the materials inspected and passed shall be marked suitably by the inspecting official and are to be kept under contractor's custody which will be used for execution only in presence of Railway supervisor at site. However, Railway reserves the right to reject any material, if found spoiled / damaged during execution, for which the contractor shall replace at his cost.
 - i) Any material rejected by the inspecting official due to not being as per the specification or not in proper condition, the same is to be removed by the contractor within 7 (Seven) days at his cost. For this the decision of the inspecting official shall be final and binding on the contractor.
 - j) The Engineer's representative has all the powers to inspect the materials at any stage and reject defective or inferior Work or Material. The contractor shall carry out such tests as may be required in the opinion of the Engineer at his cost.
 - k) Any material can be installed only after inspection and acceptance by the Railway's Representative.
 - l) Contractor may be called on to pay all expenses incurred by Railway in respect of work or material found to be defective or of Inferior Quality or otherwise unacceptable.
 - m) Contractor shall be responsible for checking the materials before taking delivery from Railway Stores that all the materials given to him are in good condition. Any replacement required for defective/broken parts have to be requisitioned and obtained from the depot of the Subordinate in-charge of stores after returning the defective broken equipment provided the Railway Engineer is satisfied that such breakage/defects etc. is not due to the negligence etc. of the contractor or his representatives. He must also ensure that the materials supplied by him are also in good condition and if any defect /discrepancy noticed in the course of inspection of the Engineer or his authorised representative will have to be rectified/replaced at his own cost.
 - n) The materials issued by the Railway shall be used solely and economically for the purpose of the works covered under this contract only. The materials shall be used in such quantities and manner as are indicated in schedule or as approved by the Engineer-in-charge of the works whose decision

thereon shall be final. Wastage or damage to materials shall not be caused by the contractor in any manner.

- o) The contractor shall be liable to render full account for the materials issued by the Railway. The contractor has to return to the **Consignee** Store Depot cut pieces of wires / cables that may be left out and surplus materials, if any, from the work and other packing materials that might have been handed over to him and shall take proper written acknowledgement from the Engineer's representative for all the materials returned by him.
- p) A joint statement of materials issued, used and material returned shall be made by the Contractor and Engineer's representative. Such Joint Material Statement shall be checked and endorsed by the Site Engineer.
- q) If any quantity of the Railway materials consumed in excess or washed or damaged or lost or otherwise not satisfactorily accounted for, recovery shall be made from the contractor at twice the market rate of materials prevailing at the last issue of the materials.
- r) If the materials, tools as however not available in the Railway stock, or the Railway decided not to supply the same, whatever be the reason, the Railway shall not be bound to arrange for the supply nor will this fact be accepted as an excuse for delay in the execution of the work.
- s) The site supervisor of the work and the contractor shall make out a list jointly signed for the materials, if expected to be released from a station and then after collection of the released materials by the contractor, the same shall be transported and handed over to **Consignee**
- t) Stores Depot was directed by **Consignee** after verifying the released materials with the list jointly prepared by Inspector-in- charge & the Contractor and acknowledged the receipt.

13.0 Safe Working Methods:

- a) The Contractor shall at all times adopt such safe measures of working and will ensure safety of train traffic, structures, equipment and labour.
- b) Fluorescent jackets, Shoes and protective Gears to work in the RE area must be provided by the contractor to his labour / staff working on the track, failing which they will not be allowed to work near the track. Contractor will be solely responsible for delay in work, if work is stopped by the Railway due to such circumstances.
- c) Trenching for laying cable across track/ road and laying of cable across track/road shall be done only in presence of Railway's representative. It shall be ensured by the contractor that digging of trenches, for cable laying, and pits for foundations do not cause any unsafe condition to the running of trains.
- d) No work on a working installation such as, points, signals, track circuits, level crossing gates, STMs, MUXs, cabin level frame, bridges, yards, etc. shall be undertaken without specific permission of the Railway's representative and in the absence of Railway's representative at the site of work.
- e) The contractor shall take all precautionary measures in order to ensure protection of his own personal moving about all working on the Railway premises and shall have to conform to the rules and regulations of the WESTERN RAILWAY. As and when, while the work under the contract is in progress, there is likely to be any danger to the persons employed by the contractor due to running traffic or while working on Railway premises, the contractor shall apply in writing to the Railway to provide flagmen and look out-man for protection. The Railway will however, decide as to whether it is necessary to post such flagmen and look out-man for various types of works and also the number of such men required to protect the contractor's staff working at site. The flagmen and look out-man will be Railway servants and no expenses on this account will be recovered from the contractor.

- f) The contractor should abide by all the Railway regulations and also ensure that the same are followed by his representatives, servants or Sub-contractor or workmen. He is, therefore, bound under this clause to give notice to them about the provision of this clause and the consequent liabilities of the contractor under the agreement.
- g) Within the station, especially on the passenger platform, the contractor shall ensure sufficient free space for movement of passenger traffic. He must cover the excavations carried out in such areas with a view to avoid any accidents.
- h) The work must be carried out most carefully in such a way that they do not hinder the Railway operation except as agreed to by the Railway.
- i) The contractor's employees and workers shall not for any reason operate any appliance or installations of the Railway concerning the safety of train movements, but they should whenever necessarily notify the qualified Railway staff who will then take necessary steps. Special precautions are to be taken for installation of point machines. If required, the spacing of sleeper in connection with installation of point machines has to be done by the contractor.
- j) The contractor shall abide by the Indian Electricity Act and the Indian Electricity Rules as amended from time to time.
- k) Suitable ladders for climbing the posts and slings for supporting men on the post shall be used. Ropes if required shall be used for erection of the Poles. The size of the rope shall be adequate. The contractor shall take necessary precautions for working near the power lines. If at any time the Railway finds the safety arrangement is inadequate or insufficient, the contractor shall take immediate corrective action as directed by the Railways representative at site. Any direction in the matter shall in no way absolve the contractor of his sole responsibility to adopt a safe working method.
- l) Necessary personal safety equipment as considered adequate by the Engineer-in-charge should be kept available for the use of the persons employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned.
- m) No electrical apparatus which is liable to be a source of danger used by the operator shall remain electrically charged.
- n) Suitable face masks should be supplied by the contractor for use by the workers when paint is applied in the form of spray.
- o) Steps taken in order to avoid damages to Railway Installations:
- p) The contractor shall see that no damage is caused to Railway Signalling and transmission wires, cables, station installations, communications lines, electric devices, trains, tracks, any kind of fencing as well as any rolling stock and in general to all Railway installations and equipment. If any damage is caused to or suffered by any Railway property, by or as a consequence of the acts or unlawful omissions of the contractor, its employees and workmen or other persons connected with it, the necessary repairs or replacement shall be effected by the Railways at the risk and cost of the contractor. The said expenses shall be recovered from the money due and payable to the contractor or by the other appropriate process.
- q) Contractor's liability costs, damages etc:
- r) All costs, damages and expenses which the Railway may incur or suffer and which are recoverable from the contractor under the terms of this contract of the relevant law may at the discretion of the Railways, be recovered by deducting the requisite amounts from any money due and payable or refund to the contractor on any account whatsoever or by legal proceeding. The Railway also reserves the right and shall be entitled to retain payments due to the contractor under this contract and to set off the same against all claims whether arising out of this contract or out of any other

transaction whatsoever against the contractor, in exercising this right the Railway shall not act unreasonably.

- s) In the event of any breach of the aforesaid conditions, the contractor shall in addition to throwing himself open to action for contravention of the terms of the agreement and or for criminal breach of trust, be liable to account to Government for all money, advantages or profits resulting on which in the usual course would have resulted by reason of such breach.
- t) No vehicle will normally be permitted to play adjacent to the running lines. The contractor will be responsible for the safety of hired trucks and men etc. working at the site. He will also be responsible for any damage caused to the Railway property, staff and passengers' vehicles having been allowed to ply on the Bank, in case of an accident of any nature, the contractor will be indemnified for any losses caused by him as a result of the accident.
- u) Electric Supply: The contractor(s) should make his/their own arrangement for arranging electric supply, as may be required for work. The Railway may however assist in recommending his application to the electricity authority for the power supply. Contractor may make use of Railways electrical supply for indoor works such as for lighting, soldering, minor drilling works etc. free of cost at RBG rooms and Location Huts.
- v) Passes and Identity Cards: No Railway free passes will be issued to the contractor or his workmen for travel by train. However, identification letters may be issued to individuals employed for the work, on written demand from the contractors.

14.0 Rates for Items:

- i) The estimated rates, quantities & amount in Rupees for each of the items of the Tender Schedules along with total Estimated Cost are given in the Tender Document. The Tenderer(s) shall not quote against the individual items of Schedules. They shall only quote as one single percentage above or below or at par to the total cost applicable for each Schedules in the nominated space provided under IREPS Website. The rate so quoted should be written both in figure & words.
- ii) The rate quoted by the contractor in the schedule shall be inclusive of all taxes and charges for labour, transportation, plants and equipment, tools, fuel and consumable (if any) etc. However, 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 and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid. 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.
- iii) No separate Discount shall be given separately except at the designated place in IREPS website.
- iv) No price escalation of the rate(s) shall ordinarily apply under this contract as detailed in Clause No. 31.0 of Special Conditions of Tender & Contract.
- v) Arrangement for permit and licence for materials will not be made by the Railway or any assistance given. The contractor(s) will have to make his/their arrangements. Also no import licence shall be arranged by the Railway for this work.
- vi) "ROAD PERMIT" for transporting the materials from manufacturer's premises to go-down/site of work will not be provided by the Railway nor any assistance given. The contractor will have to make his / their own arrangement for ROAD PERMIT.

vii) The rate quoted by the contractor shall be the cost of complete work and shall include the cost of all labour and materials including transport, loading, unloading as well as sheds, construction plants, scaffolding and for which no separate payment is made to him on satisfactory completion of the work shall remain the property of the contractor.

viii) The contractor shall entirely be responsible for ensuring safety of his labour, vehicles, construction plants and equipment while working, no extra payment shall be allowed to the contractor for any safety precautions to be observed during the execution of the work. The cost of such precautions shall be deemed to have been included in the rates for all the items of the schedule.

ix) It shall be clearly understood that the rates to be quoted shall include all wastages and wash away either due to rains or storm or floods or other causes whatsoever. The rate shall also include the cost that may be necessary or stacking the materials at site of work.

x) The quoted rates shall be deemed to include charges for all site facilities for labour that are considered necessary for execution of the work. Subject to availability of land the Railway may provide free site for labour camp, construction of yard etc. close to site of work.

xi) No assurance can be given regarding the vulnerability of Railway land given for use to the contractor flooding during high floods. The Railway undertakes no responsibility or liability in this regard.

xii) **Site facilities:** The rates should be deemed to include charges for any and all site facilities that are considered necessary for the execution of the work unless otherwise indicated in the contract. In this connection, specific attention is drawn to stipulations in clause 1(1) of the general condition of the contract.

15.0 QUANTITIES IN SCHEDULE AND THEIR VARIATIONS:

- I. The quantities specified in the schedule of works enclosed herewith are approximate and meant to give the tenderer(s)/s an idea of the quantum of work involved. The Railway reserved the right to increase or decrease the quantities against various items and add/or delete from the items upto 25% of the quantities or even more as per the actual requirement at site. The successful tenderer(s) will have to execute all items required for the successful completion of the work at the quoted rates. The Engineer on behalf of the Railway is authorised to order in writing to enlarge, extend, diminish or reduce the works or make any alterations in the design, character, position of site, quantities, dimensions or in the method of their execution or in the combination and use of materials for execution thereof or to order any additional works to be done or any works not be done. The contractor shall be bound to carry the work.
- II. The following procedures shall be adopted for dealing with variation in quantities during execution of work/contract:
Individual NS items (i.e. Non-Schedule items as per Tender Schedule) in the contract shall be operated with variation of plus or minus 25% and payment would be made as per agreement rate. For this, no finance concurrence would be required.
In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered as unavoidable, the same shall be 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: -
 1. Unless otherwise specified in the special conditions of the contract, the accepted variation in quantity of each individual item of the contract would be upto 25% of the quantity originally contracted, except in case of foundation work (in which no variation limit shall apply). However, the rates for the increased quantities shall be as per sub- para (iii) below.
 2. The Contractor shall be bound to carry out the work at the agreed rates and shall not be entitled to any claim or any compensation whatsoever upto the limit of 25% variation in quantity of individual items of works.

3. In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, then same shall be executed at following rates
4. 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 that particular tender;
5. 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 in that particular tender;
6. Variation in quantities of individual items beyond 150% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
7. **Variation to quantities of Minor Value Item:**

The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1 % of the total original contract value.

- (i) Quantities operated upto and including 100% of the agreement quantity of the concerned minor value item, shall be paid at the rate awarded for that item in that particular tender;
- (ii) Quantities operated in excess of 100% but upto 200% of the agreement quantity of the concerned minor value item, shall be paid at 98% of the rate awarded for that item in that particular tender;
- (iii) Variation in quantities of individual minor value items beyond 200% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- (iv) In case of earthwork items, the variation limit of 25% shall apply to the gross quantity of earthwork items and variation in the quantities of individual classifications of soil shall not be subject to this limit.
- (v) As far as Standard Schedule of Rates (SSOR) items are concerned, the variation limit of 25% would apply to the value of SSOR schedule(s) as a whole and not on 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).
- (vi) For the tenders accepted at Zonal Railways Level, variations in the quantities will be approved by the authority in whose powers the revised value of the agreement lies.

The aspect of vitiation of tender with respect to variation in quantities should be checked and avoided. In case of vitiation of the tender (both increase as well as decrease of value of contract agreement), sanction of the competent authority as per single tender should be obtained.

In the event of any reduction in the quantity to be supplied or work to be executed for any reasons whatsoever the contractor shall not be entitled to any compensation but shall be paid only for the actual amount of work done or quantity of supply made in accordance with the accepted rate of the schedule. Supply of materials and works not covered by the schedule of work, but necessary for completion of the work as per approved plan, will be executed by the contractor, for which contractor will quote separately.

16.0 MEASUREMENTS & PAYMENT FOR WORKS:

- i) In terms of clause No. 45 of General Condition of Contract measurements of the work in progress shall be taken and recorded in the prescribed official Measurement Book from time to time and at such intervals as in the opinion of the engineer-in-charge shall be proper having regard to the progress of the work. The contractor shall be present at the site and shall sign the results of the measurements (which shall also be signed by the engineer-in-charge or his authorised

representative) recorded in the aforesaid measurement book as an acknowledgement of his acceptance of the accuracy of the measurements.

ii) Under the Contract all bills would be passed through eMB only.

iii) The Contractor shall be entitled to be paid from time to time by way of “On Account Payment” as per Clause 46 of General Condition of Contract, at the rate in the accepted schedule of rates only for the items of the schedule of works except for supply of materials as in the opinion of the Engineer-in-charge he has executed in terms of the contract.

I. For Schedules:

A. For Item including Supply only.

a) 80% payment will be made on supply of the materials. Further 10% payment will be made on installation of the materials at site and the balance 10% will be paid after successful commissioning of equipment or all balance payment will be made after commissioning of the complete system.

b) *100% will be paid for spares & for other items, which are not required to be erected by the contractor on receipt of the equipment and no loss certificate by consignee.*

B. For Item including Supply and Execution/Installation

70% payment will be made on supply of the materials. Further 20% payment will be made on installation of the materials at site and the balance 10% will be paid after successful commissioning of the complete system.

C. For Items including execution/installation only

90% payment will be made on completion of the Installation works and Balance 10% payment will be made on successful commissioning of the complete system.

II. The contractor shall be paid the final payment in terms of the clause No. 51 of the General Condition of Contract.

III. Implementation of outstation payment in Railway through RTGS / NEFT: Unless otherwise specified payments to the Contractor will be transferred electronically to his bank account. The tenderer (s) should submit their bank details.

D. The balance payment may be released against Bank Guarantee of an equal amount on the discretion of the competent authority, if commissioning is held up on Railway's account for a period of more than three months after the installation is tested by the contractor to the full satisfaction of Railways and kept ready for commissioning.

However, 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 and the Contractor thereupon properly pays such taxes/cess, the Contractor shall be reimbursed the amount so paid.

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.

17.0 DEDUCTION OF INCOME TAX:

The Railway shall at the time of arranging payment to the contractor be entitled to deduct Income Tax on the gross amount of each bill, at specified rate decided by the Railway Board from time to time (at present the rate is 2%). An Income Tax Deduction Certificate can be issued to the firm on demand and the final settlement of Income Tax should be made with concerned income tax authority.

18.0 GOODS & SERVICES TAX (GST):

- a. 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 rates he enters in the tender forms 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.
- b. (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 rates.
- c. 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.
- d. 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.
- e. When work is tendered for by a firm or company, the tender shall be signed by the individual legally authorised to enter into commitments on their behalf.
- f. The Railway 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.
- g. All the bidders / tenders should ensure that they are GST compliant and their quoted tax structure /rates are as per GST Law. Offer must be inclusive of Goods & Service Tax.
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 invoice s is sued by Contractor ;
No-filing 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 claim, legal action, proceedings, prosecution or inquiry by or against the Indian Railways 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.

19.0 Issue of work completion Certificate:

19.1Issue of work completion Certificate: As per para 5 above.

20.0 WARRANTY PERIOD/Defect Liability period:

- a. The contractor shall be bound to rectify free of cost at site any defects and/or shortcomings that may arise in the work executed for a period of 365 (Three hundred sixty five) days after completion and taking over of the installation by the Railway. The aforesaid maintenance period

of 365 days shall be reckoned from the date of taking over the work by the Railway, excluding day(s) that will lapse, from the date of sending the intimation by the Railway, to the Contractor (at his last known address) up to the date of completion of rectification. Should any dispute arise as to the correctness of the defects pointed out, the decision of Engineer-in-charge in this regard shall be final and binding. The necessary disconnection of working circuits /equipment (if any) for carrying out rectification shall be arranged by the Engineer-in-charge and such work shall be done only in presence of his authorised representative.

- i. After completion of such rectification works, all the circuits and equipment shall be tested and checked thoroughly by an authorised representative of the Engineer-in-charge before reintroduction of normal working.
- b. **Warranty for materials:** All the materials supplied under this contract shall be warranted for trouble free service for a period of 365 (three hundred sixty-five) days from the date of commissioning of work.
- c. **Removal of defective works:** If in the opinion of the Engineer, any of the works had been executed with improper materials or defective workmanship, the contractor when required by the Engineer, shall re-execute the same and substitute proper materials and workmanship forthwith at his own cost and in case of default of contract in so doing within a week, the Engineer shall have full power to employ other persons to execute the work and the cost thereof shall be borne by the contractor.

21.0 PROGRAMMING OF WORK TO AVOID INTERFERENCE WITH TRAIN MOVEMENTS:

The contractor will programme his work in such a manner so as not to interfere in the working and movement of trains. No extra payment shall be allowed on this account and for taking any precautions or wastage of Contractor Labour, Time etc. due to train working.

22.0 SITE CLEARANCE:

At the end of the work in each section the contractor shall as a part of his contractual obligation leave the area completely cleared of rubbish and obstructions of all kinds according to the instructions of the Railways representatives. Besides, he shall take execution of work to avoid the presence of loose earth and ballast on platforms, in drains, on the track formation and pathways in the vicinity. If within fortnight of completion of the particular item of site work, the refuge is not cleared, the Railway will arrange to get them removed at the cost of the contractor. However, before the Railway actually gets the site cleared, intimation in writing shall be sent to the contractor.

23.0 PROGRESS REPORTING:

There shall be a formal official meeting between Contractor and Engineer In-charge every 15 Days regarding the Work Progress. The contractor shall submit to the Railway at his own cost periodic progress reports at regular intervals regarding the state and progress of work. The details and proforma of the report will mutually be agreed after award of the contract. Such reports shall be for daily man power, equipment and plant deployment, weekly work progress and monthly progress review reports. All actions as directed by IR pursuant to such reports shall be promptly attended to.

24.0 PRESENCE OF SUPERVISORS AT SITE:

No work of wiring, commissioning / energisation of equipment, cable lying, jointing etc. should be carried out unless and until contractors technical supervisors are present at site.

25.0 TRAINING:

- i) The tenderer shall undertake to impart training to Railway staff either at site of installation or their factory premises in different aspects of equipment, its architecture, functioning and planning, management supervision, field installation supervision, commissioning, testing and maintenance both for H/W and S/W areas in order to transfer complete know how so as to impart full knowledge and confidence to independently execute successfully the erection and maintenance of the exchange. The training courses should include hands-on equipment, visits to installations apart from formal classes.

- ii) The OEM should train the Railway personnel to such level of proficiency that they may carry out changes in the OEM specialised system without the help of OEM.
- iii) Expenses on travel, accommodation and the incidental expenditure on training program for the Railway Staff will be borne by Railway.
- iv) The subjects of training, details of courses etc. should be furnished on demand of the Railway and it should be ensured that the trainees are given sufficient material for technical reference and guidance as well as for imparting complete know-how.
- v) In addition to the above, tenderer should also quote for fees leviable, if any, for the various courses man-week wise and course-wise so as to enable Railway to depute additional employees if considered necessary.
- vi) The complete documentation on the courses should be supplied to the trainees. Railway, however reserves the right to vary the number of personnel as well as course modules and training periods so considered necessary.
- vii) A CD/PEN DRIVE made with the specific intent of giving training on the theory and maintenance of equipment shall also be supplied.

26.0 FORCE MAJEURE:

- 26.1 If, at any time, during the continuance of the agreement, the performance in whole or in part by either party of any obligation under the agreement shall be prevented or delayed by reasons of any war, hostile acts of the enemy, civil commotion, sabotage, fires, floods, explosions, epidemics/pandemic, quarantine restrictions, strikes and lock-outs and any statute, statute rules, regulations, orders or requisitions issued by any Govt. Department or a competent authority or acts of God (hereinafter referred to as eventualities), then provided notice of the happening of any such eventuality is given by either party to the other within 30 days from the date of occurrence thereon, neither party shall, by reason of such eventualities be entitled to terminate this contract agreement nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance.
- 26.2 Performance of the contract agreement shall, however, be resumed as soon as practicable after such eventuality has come to an end or ceased to exist. Provided that, if performance in whole or part of any obligation under the contract agreement is delayed by means of any such eventuality for a period exceeding six months, either party may, at his option, terminate the contract agreement provided further that in the event of such prevention or delay as aforesaid, then, instead of exercising the option, both parties may consult with each other with a view to agreeing between them the action mutually to be taken in order to minimise the effects of such prevention or delay and continue the operation of this contract agreement.

27.0 PERFORMANCE GUARANTEE BOND:

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 22nd day after the date of issue of LOA. Further, if the 60th 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.
 - i. 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 the contract is

terminated, the 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.

- ii. 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 and performance guarantee as per clause 16(4)h of GCC 2022:-

- i) A deposit of Cash;
- ii) Irrevocable Bank Guarantee;
- iii) Insurance surety Bind as per Annexure-XVII of GCC 2022.

Note:-In case of extension of date of completion, selected bidder needs to submit extended insurance surety bond/fresh insurance surety bond/fresh performance security, in any form as given above, before expiry of existing insurance surety bond.

- 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 favour 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 (notwithstanding 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 the 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.
 - iii) The Contract being determined or rescinded under clause 62 of these conditions.
- 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:

Bid quoted in % of advertised cost	Additional Performance Guarantee (%)
Below 0-5% (inclusive)	NIL
Below 5%	5%

28.0 ENGAGEMENT OF QUALIFIED ENGINEER:

- i) The contractor shall also employ Qualified Graduate Engineer(s) or equivalent, or Qualified Diploma Holder Engineer(s), as prescribed in tender documents.
- ii) In case the contractor fails to employ the Engineer, as aforesaid in para (i), he shall be liable to pay liquidated damages at the rates, as prescribed in tender documents.
- iii) 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 the contract'.
- iv) Accordingly in terms of provision of clause (i) above, contractor shall also employ following qualified Engineers during the execution of allotted work
 - a) One qualified Graduate Engineer when the cost of work to be executed is Rs.200 lakh and above, and
 - b) One qualified Diploma Holder Engineer when the cost of work to be executed is more than Rs.25 lakh but less than Rs.200 lakh.
- v) Further, in case the contractor fails to employ the qualified Engineer, as aforesaid in para (iv) above, he in terms of provision of clause (ii) above, 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 [iv (i)] and [iv (ii)] above respectively.
 - a. The decision of the Engineer -in-charge as to the period of default and Amount shall be final and binding on the Contractor.**
- vi) The contractor during the entire course of the work shall abide by the Minimum Wages Act, 1948, Provisions of Apprentices Act, Provision of Payment of wages Act, Provision of Contract Labour Act, Provision of Workmen's Compensation Act, Provision of Mines Act and all Acts and Laws of the Land.
- vii) The contractor shall not employ men below the age of 18 years.
- viii) **The deployed Technical Supervisory staff must be trained in railway signalling system and safety in General from Railway signalling Training institute, with valid certificate. In case the person is not found trained, He will be sent to SBI/STTC for training immediately at the cost of the contractor.**

29.0 CONTRACT LABOUR ACT:

- a) The contractor shall observe all the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and Central Rules 1971 or any statutory modifications or re-engagements thereof for the time being in force and any rules and regulations made thereunder in respect of all the persons directly or through petty contractors or subcontractors employed by him under this contract and shall indemnify the Railway from and against any claims under the Contract Labour (Regulation and Abolition) Act 1970 and Central Rules 1971 or any further rules and regulations framed there under, by or on behalf of any person directly or through petty contractors or subcontractors employed by him or otherwise.
- b) The contractor shall obtain licence from the Licensing Officer specified in the Act, paying necessary licence fee as per section 12 of the Act, 1970 and Rules 26 of the Central Rules, 1971. In every case in which by virtue of section 20(2) and 21(4) of the Contract Labour (Regulation and Abolition) Act, 1970, the Railway is obliged to provide amenities or pay wages to Labour employed by the contractor in executing the work, the Railway will recover from the contractor the expenditure so incurred by the Railway or Wages so paid, and without prejudice to the right of the Railway under section 20(2) and 21(4) of the said Act, the Railway shall be at liberty to recover such amounts or part thereof by deducting it from the security deposit or from any sum due to the Railway by the contractor whether under this or any other contract/contracts.
- c) The attention of the tenderer is drawn to the Contract Labour (Regulation & Abolition) Act, 1970, Contract Labour (Regulation & Abolition) General Rules 1971, General Conditions

of Contract 2022 and Standard Special Conditions of Contract with latest edition. Successful tenderer(s) shall comply with the provision of the said Act and Rules, the Sr DSTE Co RTM being the principal employers under the said Act and Rules.

- d) The attention of the contractor is also drawn to the rules of the Inter State Migrant Workmen (Regulation of employment conditions of service) Central rules 1980. The successful tenderer(s) should comply with these rules as per the said Act/1079 (ACF No. 30 of 1979) with Central rules 1980.
- e) Provided that if any dispute arises as to the expenditure incurred by the Railway in the provision of amenities under the said Act, the decision of the Engineer thereon shall be final and binding.
- f) Building and Other Construction Workers Act, 1996 and: The salient features of the Act are as follows:-
- g) It applies to every establishment which employs, or had employed on any day of the preceding twelve months, ten or more building workers in any building or other construction work.
- h) The cess shall be levied and collected @ 1% of the cost of construction incurred by an employer.
- i) For the purpose of levy of cess, cost of construction shall include all expenditure incurred by an employer in connection with the building or other construction work but shall not include:
- j) cost of land; and
- k) any compensation paid or payable to a worker or his kin under the Workmen's Compensation Act, 1923.
- l) Every building worker who has been engaged in any building or other construction work for not less than 90 days during the preceding twelve months is required to be registered as a beneficiary under this Act.
- m) This will be applicable from the date of receipt of notice from the State Labour Commissioner/ Labour Department.
- n) The tenderer/contractor for carrying out any construction work in concern State must get themselves registered from the Registering Officer under Section-7 of the Building and Other Construction Workers Act, 1996 and rules made thereto by the concern State Government and submit certificate of Registration issued from the Registering Officer of the concern State Government (Labour Department). For enactment of this Act, the tenderer shall be required to pay cess @ 1% of cost of construction work to be deducted from each bill. Cost of material shall be outside the purview of cess, when supplied under a separate schedule item.
- o) Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website www.shramik-kalyan.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 the public domain. The Registration/updating of Portal shall be done as under:
- p) Contractor shall apply for onetime registration of his company/firm etc. in the Shramik-kalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- q) Contractor once approved by any Engineer, can create a password with login ID (PAN No.) for subsequent use of the portal for all LoAs issued in his favour.
- r) 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 the concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by the contractor within 7 days of receipt of such request.
- s) After approval of LoA by Engineer, contractor shall fill the salient details of contract labourers engaged in the contract and ensure updating of each wage payment to them on shramik kalyan portal on monthly basis.

- t) 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.
- u) 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 labourers 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."

30.0 BONDED LABOUR Act:

The tenderer shall note that the bonded labour system is completely done away with on the Indian Railways including contractor's establishment on the Railway.

31.0 INSURANCE & EPF (Employees Provident Fund):

The Contractor shall purchase "All Risk Insurance Policy" of "Man and materials including machinery" with beneficiary as WR. The "All Risk Insurance Policy" shall be operative from the Date of commencement of work for the duration i.e. "Period of Completion of Work"

32.0 MOBILISATION ADVANCE: Mobilization Advance is applicable as per para 46.(4) (a) of GCC. (For tender value more than 20 Cr.)

33.0 ASPECT OF VITIATION:

The contract shall not be vitiated by any inadvertent error of any kind in the surveys, information, specification drawing or schedule of quantities. The aspect of vitiating of tender with respect to variation in quantities should be checked and avoided. As a result of variations, a contract shall be considered "vitiating" only when, the following percentage variation in contract value between tenderers are noticed to have been exceeded.

SN	Value of Contract	Percentage difference between present Contractor and new L-1 as a result of variation. (percentage shall be calculated with base as the revised contract quantities multiplied by the rates of the present contractor)
1	Small value contracts (Tender Value less than Rs 50 lakh)	10
2	Other than small value contracts (Tender Value equal to or more Rs 50 lakh)	5

33.1 When the percentage difference between present Contractor and new L-1 is noticed as becoming beyond the values specified above, the following action shall be taken.

The Railway administration should immediately examine whether it is practicable to bring in a new agency to carry out the extra quantity of work keeping in view the progress of the work in accordance with the original contract and the nature and lay-out of the work. If it is found that there will be no serious practical difficulty in meeting the additional quantity of work done by another agency, then fresh tenders for the extra quantity may be invited, otherwise negotiating the rate with the existing contractor for arriving at a reasonable rate for the additional quantities of work, may be adopted.

33.2 The above shall be regulated as under:

- The case shall be decided by the tender accepting authority (competent for the revised quantity) and shall not be treated as a case of single tender.
- These instructions will be similarly applicable to earning contracts with H-1, H-2 substituted for L-1, L-2 and so on.

- c. Executives while executing the work shall make all efforts to ensure that no vitiation takes place in normal circumstances. Vitiating should be an exception rather than a routine affair. Efforts should be made to invite bids on the basis of percentage above/below/at par.
- d. Vitiating should always be computed with respect to the items, rates, quantities and conditions as available at the time of Tender Opening and subsequent changes/ additions by way of new items will not be counted for computing Vitiating. [Ref: RB letter No. 2017/Trans/01/Policy Dated 08.02.2018].

34.0 PRICE VARIATION CLAUSE: (not applicable)

- a) The Price quoted by the contractor and accepted by the Railway shall hold good till the completion of the work. The tenderer should quote a firm price without any price variation.
- b) Price Variation is not applicable in this tender, even in the extended period.
- c) Price quoted by the Tenderer shall be firm during the bidder's performance of the contract and not subject to variation on any account. Any bid submitted with an adjustable price quotation will be treated as Non- responsive and rejected.

35.0 SECURITY DEPOSIT:

[Also refer to Para 16 of GCC Part -II]

- a) The Security Deposit shall be returned to the contractor after successful completion of the work as certified by the competent authority and 1-year Warranty Period.
- b) The competent authority shall normally be the authority that is competent to sign the contract. If this competent authority is of the rank lower than JA grade, then a JA grade officer (concerned with the work) should issue the certificate.
- c) The certificate, inter alia, should mention that the work contract has been satisfactorily completed in all respects and maintenance period or guarantee period or warranty period, if any, is completed satisfactorily and no dues are to be paid / recovered from the contractor and final bill has been passed and no Audit Objection / Vigilance /CBI / SPE / Arbitration case is pending against the contract. And that all the contractual obligations have been fulfilled by the contractor to Railways against the contract concerned.
- d) Before releasing the Security Deposit and unconditional and unequivocal "No claim certificate" from the contractor concerned should be obtained. Railway shall not be liable to pay any kind of interest for the Bid Security and Security Deposit.

36.0 PERFORMANCE OF CONTRACTOR:

Performance of the contractor will be judged in respect of the following items each carrying 1(one) mark for satisfactory performance and 0(zero) mark for unsatisfactory performance.

- i) Deployment of skilled and unskilled persons before Non-Interlocking period. Where applicable.
- ii) Deployment of skilled and unskilled persons during Non-Interlocking period. Where applicable.
- iii) Deployment of supervisors.
- iv) Quality of work.
- v) Timely completion of the work.
- vi) Timely supply of critical items.
- vii) Timely compliance of deficiencies pointed out in joint inspection with open lines.
- viii) Timely submission of completion drawings.
- ix) Correctness of circuit diagrams and installations.
- x) Promptness in correspondence and Joint meeting called.

37.0 ARBITRATION:

Arbitration and settlement of disputes shall be governed vide clause No. 63,64.1 to 64.7 of General Conditions of Contract 2022 with latest amendments subject to any corrections made prior to the opening of this tender.

38.0 JURISDICTION OF COURT:

The courts of the place from where the acceptance of tender has been issued shall alone have jurisdiction to decide any dispute arising out of or in respect of the contract.

The successful tenderer(s) shall have to sign the contract agreement only at the office from where the acceptance letter has been issued.

39.0 LAWS GOVERNING THE CONTRACT:

This contract shall be governed by the Laws of India for the time being in force. Irrespective of place of working, the place of performance or place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of the tender has been issued.

40.0 ANNUAL MAINTENANCE CONTRACT: Not Applicable

41.0 SPECIAL CLAUSE:

Subject as otherwise provided in this contract all notice to be given on behalf of the President of India and all other action to be taken on his behalf may be given or taken on his behalf by the Dy.Chief Signal & Telecom Engineer Works Ratlam W. Railway.

42.0 PENALTY CLAUSE:

If in the opinion of Engineer-in-Charge,

1.The contractor is not able to follow or execute or comply any instructions by Engineer or Engineer-in-Charge or any of his nominated representative at site, intimated to the contractor or his authorised representative from time to time through letter or email or telephone or through any other mode of communication, within seven days from intimation of such instruction, OR

2.If progress of the work being executed by the Contractor is not satisfactory.

3.Penalty may be imposed on the contractor and recovered from running bills at the following rate:

- a. In case of first instance, Penalty of Rs. 500/- (Five hundred) per day will be imposed on the contractor after seven days from intimation of instruction till complete execution or compliance of the same.
- b. In case of second instance, Penalty of Rs. 1000/- (One Thousand) per day will be imposed on the contractor after seven days from intimation of instruction till complete execution or compliance of the same.
- c. In case of third or more instances, Penalty as may be deemed fit by Engineer or Engineer-in-Charge, will be imposed on the contractor.
- d. Imposition of any Penalty amount shall be intimated to the contractor and recovered from running bills.

43.0 LETTER OF CREDIT :

The option of payment through LC has been enabled for all tenders whose value is equal to or greater than Rs.10 Lacs. Hence Letter of Credit is applicable in this Tender which can be availed as per board's letter no. 2018/CE-I/CT/9 dated 04.06.2018.

44.0 Offloading of Works: For Offloading of Work please refer to 40A of GCC 2022 (along with all correction slips).

45.0Cable cut /theft cases: Contractor has the take utmost care during excavation and digging work to avoid any existing cable damage or cable cut .

(1) Any cable cut occurred during execution of contractor work penalty will be imposed for damage as per Telecom circular No. 17/2013 dated 24.06.2013 and Railway board letter no. 2021/Tele/5(2)/3-Part(1)(3425647) dated 12.06.2023.

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

Cable damaged	Penalty per location
Only Quad cable or Signalling cable	1.0 Lakh

Only OFC	1.25 Lakh
Both OFC & Quad	1.5 Lakh
Electrical Cable	1.0 Lakh

(3) Penalty should be levied on the contractor when they work without permission or resort to careless working without making arrangements for protecting cables and other utilities.

Cable cuts/theft after laying but before issue of provisional certificate have to be attended by Contractor and necessary payments of jointing and cable laying will be repaid.

Chapter –IV
GENERAL CONDITIONS OF CONTRACT

General Condition of Contract Issued by Railway Board (Not included, may be downloaded from Railway Website)

“General Conditions of Contract” (GCC) of Western Railway in addition to and/or in part supersession up to latest correction slips” will be applicable.

Booklet of General Conditions of Contract (GCC) Works Hand Book April 2022 edition/latest edition (**with latest amendments**), may be purchased by Tenderer(s) from Engineering Department of Western Railway at their own cost.

SECTION – II

Important circulars, Appendix & Annexures.

S N	Description	No/Link
1	GCC with correction slips	https://indianrailways.gov.in/railwayboard/view_section.jsp?lang=0&id=0,1,304,366,526,2624
2	Appendix 1&2 and the Annexures	Attachments2

SECTION - III

SCHEDULE FOR WORK

GIVEN ON IREPS WEBSITE AT DESIGNATED PLACE IN CONNECTION WITH THE
ABOVE TENDER NOTICE AND TENDER NO.

Section IV

Technical Specification

TECHNICAL REQUIREMENTS & SPECIFICATIONS FOR SIGNALING AND TELECOM ITEMS

(Work are to be executed as per the latest work policy of Western Railway no 03/2024 dated 15.04.2024)

All information available in this section is for general understanding. Railways have tried to give complete information but some vital parameters may not be available in below furnished information. Bidders are required to survey the site, visit the office to understand requirements of the project. All information provided in this section shall be cross verified from site before taking final decision by Bidder on any technical & operational matters related to Bid.

TECHNICAL REQUIREMENTS & SPECIFICATIONS

1. **DGPS Survey:-** Work shall be executed as per the schedule of material and work. All the work shall be executed as per Railway board policy / WR Policy and guideline and instruction of engineering incharge.
2. All type of signalling cable & telecom cable, OFC, 6 quad cable at Auto Relay hut, IBS, LC gates in block section and All type of signalling cable & telecom cable laid cable in block section are included in this survey work and preparing cable route plan. This also including survey of cable for auto signal & quad for MSDAC in block section.
3. The firm shall submit the route locator used for cable survey to Railway with data stored in these locators during survey.
4. **Project facilities (to be provided by tenderer without additional cost, before passing of 1st Running Bill)- (without any additional cost)-**

Sr. No.	Item description	Make/model	QTY
1.	Supply of all-in one PC (min core i5 processor, windows 11 1 TB SDD , 16 GB RAM and 27 inch screen) antivirus for 3 years with 3 year onsite extended warranty with all necessary software for cable route survey	HP/Dell/Lenovo	6

5. TECHNICAL REQUIREMENTS

Accuracy of Survey Data

All DGPS survey work shall be carried out using survey grade equipment. The positional accuracy achieved shall not be inferior to ± 10 cm in horizontal coordinates and ± 15 cm in vertical coordinates. Railway reserves the right to conduct random verification checks. In case the accuracy is found beyond permissible limits, the contractor shall re-survey the affected portion at his own cost without any extension of time. **Joint Enclosure pit, OHE mast, Axle counter, signal post DGPS location shall be within 30cm accuracy.**

Verification of Signal and Telecom Assets

The contractor shall physically identify and geo-reference all signal and telecom assets falling within the scope of work. Any omission noticed during verification shall be rectified by the contractor without any additional payment.

Ownership of Survey Data

All data generated during execution of the work including DGPS data, GIS database, AutoCAD drawings, drone imagery, videos, orthomosaic maps, KML/KMZ files, shapefiles, reports and route plans shall become the exclusive property of Western Railway. The contractor shall not share, publish, upload or disclose any information related to the work to any third party without prior written approval of Railway Administration.

Deployment of Qualified Survey Teams

Deployment of Dedicated Qualified Survey Personnel

Considering the wide geographical spread of Ratlam Division, the contractor shall deploy adequate number of qualified survey teams simultaneously in different sections of the division to ensure timely completion of the work.

Each survey team shall consist of at least:

- One Survey Engineer having minimum 3 years' experience in DGPS/GIS based surveying.
- One DGPS/Drone Operator holding valid certification/licence as applicable.
- One GIS/Data Processing Engineer.
- Required field assistants for route verification and asset tagging.

Before commencement of work, the contractor shall submit section-wise deployment plan indicating names, qualifications, experience, contact details and area of responsibility of each survey team for approval of Sr. DSTE/RTM.

No survey work shall be commenced without approval of the deployment plan.

Railway reserves the right to seek replacement of any deployed personnel found unsuitable, non-performing or lacking adequate technical competence. The contractor shall arrange suitable replacement within 7 days without any extra cost to Railway.

Withdrawal of approved key personnel during execution of work without prior approval of Railway shall be treated as deficiency in performance and may attract suitable action under the contract.

At any point of time, minimum **three independent survey teams** shall remain deployed simultaneously in different sections of Ratlam Division. Failure to maintain the minimum deployment shall be treated as slow progress of work and Railway may take action as per contract conditions.

Section-wise Responsibility and Approval

Nomination of Section-wise Team Leaders

The contractor shall nominate a dedicated Team Leader/Survey In-charge for each section/territory identified by Railway. The nominated person shall be responsible for planning, execution, coordination with field officials, data collection, verification and submission of survey outputs of the respective section.

The list of section-wise Team Leaders along with qualification, experience, mobile number and area of responsibility shall be submitted within 15 days of issue of LOA for approval of Sr. DSTE/RTM. No change in approved Team Leader shall be made without prior written approval of Railway Administration.

Mandatory Coordination with SSE/JE

Joint Verification with Railway Representative

Survey work shall be carried out in coordination with concerned SSE/JE (Tele). The contractor shall give minimum 3 working days advance intimation before commencement of survey in any section.

All signal and telecom assets shall be jointly verified with Railway representative before finalization of route plan.

Progressive Submission of Survey Data

The contractor shall not wait for completion of entire division before submission of survey outputs. Deliverables shall be submitted section-wise/station-wise as directed by Railway.

Survey data of each completed section shall be submitted within 15 days of completion of field survey of that section for scrutiny and approval.

GIS Database Acceptance Criteria

Survey work shall be considered complete only after:

1. Field verification of Signal and telecom assets.
2. Submission of DGPS coordinates.
3. Submission of GIS database.
4. Submission of AutoCAD drawings.
5. Submission of KML/KMZ files.
6. Submission of geo-tagged photographs.
7. Approval of data by nominated Railway officials.

Mere completion of field survey shall not constitute completion of work.

Penalty for Non-Deployment

If the contractor fails to maintain the approved number of survey teams or key personnel for more than 7 days without prior approval, Railway may impose a penalty of ₹10,000 per day per deficient team, subject to a maximum of 10% of contract value, without prejudice to other contractual remedies.

Drone Operation and Regulatory Compliance

All permissions, approvals, licenses, flight permissions, airspace clearances and statutory compliances required for drone operations shall be arranged by the contractor at his own cost.

The contractor shall comply with DGCA regulations, Drone Rules, 2021 and subsequent amendments.

Any delay arising due to non-availability of permissions shall not be considered as a valid ground for extension of completion period.

Submission of Raw Survey Data

Contractor shall submit complete raw DGPS observations, drone flight logs, ground control point data, photographs, videos and processed survey outputs.

Railway shall have unrestricted rights to use, modify, update and reproduce such data for future works.

Independent Verification by Railway

Railway reserves the right to verify survey data through independent checks at any location.

Minimum 5% of surveyed locations may be selected randomly for verification.

If deviation exceeds prescribed limits, the contractor shall re-survey the affected section at his own cost.

Responsibility for Missing Signal and Telecom Assets

Any Signal and telecom asset existing at site but omitted from the submitted survey database shall be added by the contractor without any additional payment.

Repeated omission of telecom assets shall be treated as poor workmanship and may attract penalty as decided by Engineer-in-Charge.

Confidentiality of Network Data

Cable alignments, coordinates, GIS database, route plans, drone imagery, videos and related information shall be treated as confidential.

The contractor shall not upload, publish, circulate, share or use the data for any purpose other than execution of this contract.

Any breach of confidentiality may lead to termination of contract, forfeiture of Performance Guarantee and legal action under applicable laws.

Payment Milestones

GIS Data Compatibility

GIS database shall be compatible with commonly used GIS platforms including ArcGIS and QGIS. Data shall be supplied in SHP, KML/KMZ, CSV and other formats as directed by Railway.

Knowledge Transfer and Training

Contractor shall conduct at least two training sessions for nominated Railway officials covering:

- GIS database usage

- Coordinate system
 - Asset search and retrieval
 - Future updation methodology
- No separate payment shall be made for such training.

Warranty of Survey Data

Contractor shall remain responsible for correctness of survey data for a period of 12 months from date of acceptance.

Any discrepancy noticed during execution of future works based on submitted survey data shall be corrected by the contractor without any additional cost.

Final Deliverables

Contractor shall submit:

1. DGPS Coordinates Register.
2. GIS Asset Database.
3. AutoCAD Drawings (.dwg).
4. KML/KMZ Files.
5. Shape Files (.shp).
6. Geo-tagged Photographs.
7. Drone Videos.
8. Orthomosaic Maps.
9. Route Index Diagrams.
10. Section-wise Completion Reports.
11. Soft copy in external hard disk/SSD supplied by contractor.

Note:

The following procedures shall be adopted on field for making accurate Cable route plans. DGPS survey shall be carried out using high precision Base and Rover combination.

For the following procedure must be followed:

OFC cables:

1. DGPS location shall be marked after tracing the OFC armor with the help of a reliable and precise Cable route locator.
2. For OFC route tracing, Cable armor shall be excavated at the nearest joint. The armor shall be available at both ends between which the OFC is being traced. The continuity of the armor shall be ensured before starting with cable route tracing.
3. The transmitter end of the Cable Route tracer shall be connected with the armor at one end. At the other end, the armor shall be grounded. A significant current flow of approx 50mA through the transmitter must be ensured before continuing with the tracing.
4. The tracer shall be operated at a relatively low frequency not more than 10 kHz.
5. The joint enclosure shall be completely excavated to measure the loop lengths on both sides of the joint.
6. DGPS location of the OFC cable shall be marked at every 10m and wherever there is route diversion.
7. DGPS location of joint enclosure must be saved along with the attributes of loop lengths on sides of the joint.
8. Once the DGPS survey has been done, the cable along with joint enclosures shall be shown on a drone survey map, marking distance from the nearest track centre and distance from the boundary. OHE mast numbers shall also be visible in the cable route map for relative referencing. Nearest Signal post shall also be visible.
9. The CRP must show the Latitude, Longitude, Elevation and depth of utility at points 25m apart or wherever there is a route diversion.

Signalling cables/6 Quad/telecom cable:

DGPS location shall be marked after tracing a *spare copper conductor* with the help of a reliable and precise Cable route locator.

1. For signalling cable route tracing, a spare copper conductor shall be isolated from both ends of the cable. The continuity of the conductor shall be ensured before starting with cable route tracing.
2. The transmitter end of the Cable Route tracer shall be connected with the conductor at one end. At the other end, the conductor shall be grounded. A significant current flow of approx 50mA through the transmitter must be ensured before continuing with the tracing.
3. The tracer shall be operated at a relatively low frequency not more than 10 kHz.
4. DGPS location of the traced conductor shall be marked at every 10m and wherever there is route diversion.
5. DGPS location of location boxes, point machines, signal post, Axle counters must be saved along with the attributes of the cable.
6. Once the DGPS survey has been done, the cable along with important assets as required by division shall be shown on a drone survey map, marking distance from the nearest track centre and distance from the boundary. OHE mast numbers shall also be visible in the cable route map for relative referencing. Nearest Signal post shall also be visible.
7. The CRP must show the Latitude, Longitude, Elevation and depth of utility at points 25m apart or wherever there is a route diversion.

Note:

1. The marking of assets should contain values such as Chainage in meters (as per Rly standards) ahead and behind Reference OHE Mast numbers.
2. For Underground Cable position details: A) Track to cable and cable to boundary inter distance and B) height difference values ref. MSL Datum, should be provided, C) The intervals between measured points from track in vertical should be as per requirement specified.
3. Supply of GIS based Cable Monitoring & Management System Software with web and mobile interface to manage entire route of Cable network (i.e., of Signal & Telecom)
4. Final requirement of plan will be as decided by Engineer-in-charge.

Output of KML/KMZ file after DGPS survey:

1. The KML/KMZ file shall have data for assets in layers. The layers can be as below:
 - A. OFC main cable
 - B. Signalling main cable
 - C. Tail Cable
 - (i) Gear wise. ex: 46T, S-45, Pt 102, etc.
 - D. Assets
 - (i) Signals
 - (ii) Location Boxes
 - (iii) Point Machines
 - (iv) Axle counters
 - E. OHE Mast Numbers
 - (i) UP Main Line
 - (ii) N Main Line
 - (iii) Loop line, any other requirement of division.
 - F. Boundary Wall
 - (i) East Boundary wall
 - (ii) West Boundary Wall
 - G. Service Buildings
 - (i) Relay Room
 - (ii) OC Room
 - (iii) OFC hut
 - (iv) LC Gate

(v) SM Room, any other requirement of division.

Sample Outputs of DGPS survey

1. Report Formats

1.1 Ground Control Point Report

Sr	Point ID	Latitude	Longitude	Elevation	Horizontal Accuracy	Vertical Accuracy	Distance from last GCP
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1.2 Joint Enclosure Pit Report

Annexure for Pit Locations

Sr	Pit ID	Number of OFC cables	Type of OFC cables	Latitude	Longitude	Elevation
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Annexure for Cable Configuration (For each cable in pit)

Sr	Pit ID	Drum ID	Cable ID	Pit In Reading	Enclosure IN Reading	Enclosure Out Reading	Pit Out Reading	Loop Length
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1.3 DGPS Point Report

Sr	Point ID	Section	Nearest Mast no. (Preceding and next mast)	Latitude	Longitude	Elevation	Depth
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1.4 Verification Report

Sr	Depth as per DGPS survey report	Depth as per Trial Pit	Section	Nearest Mast no. (Preceding and next mast)	Nearest Mast no. (Preceding and next mast) as per DGPS survey	Date
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Some example format are shown below for reference & these listed point also be consider while conducting DGPS Survey.

1. Railway boundary to be shown.
2. Signalling gears & tail cable to be shown like OHE pole.
3. Cable colour to be matched with Legend colour i.e. light & dark green used.
4. On top left & right side nearest adjacent station name with distance to be mention, In top center station name also required.
5. In Soft copy and hard copy of cable route must be sharp & visible.

Divisional Railway Manager
(S&T)
Ratlam-457001,
For and on behalf of President
of India

END OF TENDER DOCUMENT