

SOUTHERN RAILWAY
TIRUCHIRAPPALLI
PROJECT ORGANIZATION
REVISED TENDER DOCUMENT

NAME OF WORK: Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.

E-Tender Notice No: T-SG-PROJ-2025-04 Dated. 31.10.2025

Estimated Cost of the Work	Rs.45,26,74,944.72
Cost for S & T Portion	Rs.38,41,15,614.47
Cost for Engineering Portion	Rs.4,72,92,453.25
Cost for Electrical/General Portion	Rs.2,12,66,877
Cost of Tender Document	NIL
Cost of EMD/Bid Security	Rs.24,13,400/-
Pre –bid Conference	10.11.2025 @11.00hrs
Venue	Office of Chief Signal and Telecommunication Engineer, 3rd floor, MMC building, Chennai 600003
Validity of Offer	90 Days from date of tender opening
Completion Period	18(Eighteen) Months
Last Date & Time of On line submission (closing) of Tender document	05.12.2025 before 15.00 hrs
Date and time of opening of Technical Bid (Packet –I)	05.12.2025 after 15.00 hrs
Bid capacity	As per IR GCC -2022 and advance correction slip No.1 to 10, Bid capacity will be assessed for qualifying in the Technical Bid. Necessary supporting documents to be enclosed in IREPS

**Office of Deputy Chief Signal & Telecommunication Engineer, Project-TRICHY, No.1,
Venkatesan Road, Opp to Prabhu Nursing Home,Ponnagar,Trichy-620001**

Signature of Tenderer & Seal

PACKET- I
TECHNICAL BID DOCUMENT
(TWO PACKET SYSTEM)

INDEX

Chapter No.	Item	Page No.
Chapter 1	Tender Notice	10
Chapter 2	Special Conditions of Contract	
2.1	General Instructions	13
2.2	Rules & General Information to Tenderer	14
2.3	Name of Work	17
2.4	Brief Scope of Work	17
2.4.1	Contractor's Scope of work	22
2.4.2	Work to be done by Railways	23
2.5	Qualifying & Eligibility Criteria	24
2.5.1	Similar Nature of Work for all component	24
2.5.2	Technical Eligibility Criteria	25
2.5.3	Financial Eligibility Criteria	28
2.5.4	Sub- section clause	29
2.5.5	Submission of Undertaking	30
2.5.6	Bid capacity	31
2.6	Guidelines for Participation of Joint Venture Contractors	31
2.7	Bid Security (EMD)	36
2.8	Study of Local Conditions	39
2.9	Clarification required by Tenderer	40

2.9.1	Pre-Bid Conference	40
2.10	Submission of Technical Bid (Packet-I)	41
2.11	Submission of Financial Bid Packet-II	45
2.12	Validity of offer	45
2.13	Completion Period	45
2.14	Opening of Tenders	46
2.15	Right of Railways to deal with Tenders	47
2.16	Acceptance of Tender	47
2.17	Signing of Agreement	47
2.18	Commencement of Work	48
2.19	Consignee	48
2.20	Contractor's Office and Stores Depot	48
2.21	Changes in Address	48
2.22	Security Deposit	49
2.23	Refund Of Security Deposit	50
2.24	Performance Guarantee	50
2.25	Programme of Work Execution	52
2.26	Inspection of Material	54
2.27	Inspection of Charges	56
2.28	Materials and Workmanship	56
2.29	Stores – Receipt & Accountal	57

2.30	Loading/Unloading and Transportation of Material	57
2.31	Security of Material	58
2.32	Return of Surplus Stores	58
2.33	Return of Released Stores	58
2.34	Packing & Forwarding	58
2.35	Freight and Insurance	59
2.36	Consignee's Right of Rejection	59
2.37	Consequences of Rejection (Rejected Stores)	60
2.38	Execution of Works	60
2.39	Inspection of Works	66
2.40	Progress Reporting	67
2.41	Clearance of Site	67
2.42	Completion of Works	68
2.43	Warranty	69
2.43.1	Comprehensive Annual Maintenance Contract (CAMC)	71
2.43.2	Training	72
2.44	Variation in Contract Quantities	72
2.45	Price Variation Clause	74
2.46	Right of Railways to Keep Back from the Contract any Portion of Work	75
2.47	Approval and Measurement of Work	75
2.48	Extension of Completion Period	76

2.49	Loss Sustained due to default and Delay	77
2.50	Contractor's Liabilities for Cost and Damages	77
2.51	System of Quoting Rates	77
2.52	Terms of Payment	80
2.53	Final Payment	83
2.54	Post Payment Audit	84
2.55	Mode of Payment to Contractor	84
2.56	Final Settlement	86
2.57	Deduction from On Account Bills	86
2.58	Deduction of Taxes and penalties	86
2.59	Insurance	87
2.60	Rates During Negotiation	88
2.61	Vitiation	88
2.62	Labour Camps	88
2.63	Payment of Wages	89
2.64	Assignment or subletting of contract	89
2.65	Determination of Contract	92
2.66	Settlement of Disputes	92
2.67	Force Majeure	92
2.68	Local content/ Public Procurement (Preference to Make in India), Order 2017	93
2.69	Police verification of contractual staff	94

2.70	Penalty for Damages / cut of UG cables	94
Chapter - 3	Forms	
Form No.1A	Format for Technical Credentials (for completed similar work)	97
Form No.1B	Format for Technical Credentials (for substantially completed similar work)	98
Form No.2	Financial Eligibility Criteria & Annual Turnover	99
Form No.3	Statement of Deviations	100
Form No.4	Proforma for Bank Guarantee Bond	101
Form No.5	Proforma for Indemnity Bond	104
Form No.6	Receipt Certificate (For Supply Only)	106
Form No.7	Requisition – Cum – Receipt for the Material	107
Form No.8	List of Works completed & Works in hand	108
Form No.9	Format for a copy of Certificate to be Uploaded by Tenderer	109
Form No.9 A	Format for not blacklisted / not debarred	111
Form No.10	Tender Form First Sheet	112
Form No 11	Tender Form Second Sheet	115
Form No 12	Declaration regarding Sole Proprietor/ Partner/ JV etc.	133
Form No 13	Vendor Mandate form	134
Form No 14	Proforma for Memorandum of Understanding	135
Chapter – 3A	Annexures	
Annexure 1	Instructions for Submitting the Tenders as Joint	138

	Venture Contractors	
Annexure 2	Proforma for NEFT Mandate Form	143
Annexure 3	EMD/Bid security	144
Annexure 4	Insurance Surety Bond for Performance Security	147
Annexure 5	Bid Capacity	150
Annexure 6	Checklist to the tenderer	152
Chapter 4	Schedule of Works & Supplies (For Technical Bid Reference)	
	Instructions for quoting the rates in Financial Bid(Packet -II)	156
Chapter 4A	Detailed Guidelines for Schedule of Works & Supplies - Signalling Work	
	Inspection of scheduled Equipment / Materials	159
	S&T Technical specifications	163
Chapter 4B	Detailed Guidelines for Schedule of Works & Supplies - Engineering works	186
Chapter 4C	Detailed Guidelines for Schedule of Works & Supplies - Electrical works	199
Chapter 5	Comprehensive Annual Maintenance Contract -S&T contract conditions	226
	Documents uploaded in IREPS separately	239

CHAPTER-1

TENDER NOTICE

SOUTHERN RAILWAY**TENDER NOTICE****E-Tender Notice No: T-SG-PROJ-2025-04 Dated.31.10.2025**

Office of Deputy Chief Signal & Telecommunication Engineer, Project-TRICHY,
No.1, Venkatesan Road, Opp to Prabhu Nursing Home, Ponnagar, Trichy-620001.

- 1.0** Deputy Chief Signal & Telecommunication Engineer/Project, Southern Railway, Trichy-1 for and on behalf of 'President of India' invites OPEN E-Tender in a TWO packet from the competent, experienced & established contractors having sufficient experience in similar work and satisfying minimum eligibility criteria on the prescribed form for the under noted work:

Name of the work	Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division
Estimated Cost of the Work	Rs.45,26,74,944.72
Cost for S & T Portion	Rs.38,41,15,614.47
Cost for Engineering Portion	Rs.4,72,92,453.25
Cost for Electrical/General Portion	Rs.2,12,66,877
Cost of Tender Document	NIL
Cost of EMD/Bid Security	Rs.24,13,400/-
Completion period	18 months
Pre –bid Conference	10.11.2025 @11.00hrs
Venue	Office of Chief Signal and Telecommunication Engineer, 3rd floor, MMC building, Chennai 600003
Validity of Offer	90 Days from date of tender opening
Website Particulars for bid submission	a) Bids are to be submitted online only. b) Tenderers must register on the Indian Railways E-Procurement System (IREPS) site i.e., www.ireps.gov.in for participating in the E-tender system. Necessary changes, corrigendum/ Addendum if required, would be posted on this site only. c) Bidders will be able to submit their original/ revised bids up to closing date & time only. d) Manual bids/ offers are not allowed

	against this tender. Any manual offer received shall be ignored.
Last Date & Time for submission of Tender	05.12.2025 before 15.00 hrs
Date and time of opening of Technical Bid (Packet –I)	05.12.2025 after 15.00 hrs
Participation of Joint Venture	Allowed for this tender as per Railway Board Guidelines
Bid Capacity	As per IR GCC-2022, and advance Correction Slip No.1 to 10, Bid capacity will be assessed for qualifying in the Technical Bid. Necessary supporting documents to be enclosed in IREPS.

Further particulars can be obtained from Indian Railways Website www.ireps.gov.in. Tenderers who wish to participate in tenders invited on www.ireps.gov.in have to register on the website mandatorily. Please refer to the website for more details. Tenderers can submit their EMD/Bid Security through e - payment gateway or shall upload as Bank Guarantee bond in IREPS website. Other than above means will not be accepted as EMD/Bid Security for tenders invited on IREPS (E-Tender portal).

Deputy Chief Signal & Telecommunication Engineer, Project,
Trichy-01
For & on behalf of the President of India

END OF CHAPTER –1

CHAPTER -2

SPECIAL CONDITIONS OF CONTRACT

CHAPTER - 2

SPECIAL CONDITIONS OF CONTRACT

2.1 GENERAL INSTRUCTIONS:

1. This Chapter shall be read in conjunction with Indian Railways Standard General Conditions of Contract (GCC) 2022 and advance correction slip No.1 to 10 and SOR 2022 which shall be subject to modifications, additions or supersession by these Special Conditions of Contract (SCC) and/or specifications/conditions, if any, which is part of this Tender Document.
2. The regulations for tenders and contracts shall be read in conjunction with the General Conditions of Contract which are referred to therein and wherever there is a conflict between the Special condition with GCC and SCC of S&T SOR 2022, then SCC of this contract prevails.
3. It may be noted that the “General Conditions of Contract – April 2022” together with its correction slips is attached to the tender form.
4. Any deviations from these Special Conditions of Contract, Technical Requirement & Specifications, Schedule of Material & Supplies and/or any condition of tender document, if any, stated by the tenderer in his tender or subsequently introduced by the Railway shall be a part of the Contract only to such extent as have been explicitly accepted by the Railway and incorporated in the contract. Details shall be given in **Form No. 3** (in Forms and Annexures part of chapter 3).
5. All offers are required to be submitted online on www.ireps.gov.in before the last date and time indicated in the Tender Notice.
6. Manual offers are not allowed for this tender. If any manual tenders are received the same shall be ignored.
7. Provisions of Make in India Policy 2017 issued by Govt of India as amended from time to time shall be followed for consideration of tenders.
8. Any additional information regarding the tender, if required by the tenderer may be obtained from the Office of Dy.CSTE/Project/TPJ,Venkatesan Road, Trichy-01, during office hours.

2.2 RULES & GENERAL INFORMATION TO TENDERER:

1. Non- transferable tender documents may be downloaded by registered bidder from www.ireps.gov.in. Bids are to be submitted online before the expiry of time and date of tender opening. Payment regarding the cost of EMD/Bid Security shall be through e payment gateway or shall submit as Bank Guarantee bond only in IREPS website. The notice header can be seen at www.ireps.gov.in. **FDRs are not acceptable against EMD/Bid Security for this tender.**
2. Tenderer(s) are advised to refer, the “User Manual for Contractors” available in ‘Learning Centre’ tab in left navigation block on home page of E-Tendering portal www.ireps.gov.in for detailed instructions on submitting EMD/Tender cost/Bids online.
3. Permitting downloading of tender documents by Railway is a facility for convenience of Tenderer(s). In case, a tender document is not uploaded on a website or download failure or incomplete document downloaded, Railway shall not be responsible in any way. Railway shall not be responsible for any direct/indirect loss of business/Profit resulting from inability to use this facility.
4. Tender document is not transferable and the cost of the tender form is Zero; hence tenderers have the facility to download to enable more participation.
5. The tenderer shall maintain the integrity of the downloaded tender document and shall not make any change/alteration/deletion/tampering, whatsoever, in the downloaded documents. If the tenderer(s) deliberately give(s) wrong information in his/their tender, create(s) circumstances for the acceptance of his/their tender, Railway reserves the right to reject such tender at any stage. The tenderer’s offer shall be rejected and full earnest money/Bid security shall be forfeited, in case it is detected after submission of offer, that they have made any modification in downloaded documents. In case such modification is noticed after award of contract, Railway is liable to terminate the contract on Contractor’s default. In addition, Railway reserves the right to take action against the Contractor as deemed fit, which may include banning of business dealings with the Contractor and the Contractor is also liable to be prosecuted as per the law. In case of any dispute over the discrepancy noted in tender document submitted by Tenderer, the master document kept with Railway shall prevail and decision of Railway thereon shall be final and binding on the tenderer/contractor. The declaration in Form- **9** shall be given by the Tenderers while submitting the tender. [Refer Forms & Annexures of Chapter-3 of Tender Document]
6. The tenderer(s) shall keep himself updated about any modification in E-tender notice and E-tender document issued by Railway through newspapers, websites or any other means and shall act accordingly. Tenderers are advised to download the tender documents well in advance and submit the tender before the stipulated date and time. It is the responsibility of the tenderer to check any correction or any modifications

published subsequently in IREPS Web site and the same shall be taken into account while submitting the tender. The Tenderers shall download corrigendum (if any), and upload it with the main tender document with his/her digital signature. Tender documents not accompanied by published corrigendum(s) are liable to be rejected.

7. The tender shall be signed by individual or individuals legally authorised to enter into commitments on behalf of the tenderer. Any individual(s) signing the tender documents or other documents connected therewith should specify whether he is signing:
 - a. As a sole proprietor of the Contractor or attorney of the sole proprietor.
 - b. As a partner or partners of the Contractor.
 - c. As a Director, Manager or Secretary or official with Power of
 - d. Attorney as per memorandum/article of association in a Limited Company.
 - e. Individual(s) signing the tender documents must state that he/she is authorised to sign the same and submit documentary proof for the same.
8. Every tenderer shall state in the tender his postal address fully and clearly. Any communication sent in time to the tenderer by post at the said address shall be deemed to have reached the tenderer duly and in time. He shall also give telephone and fax numbers for communication. Important documents shall be sent by registered post.
9. Incomplete and conditional tenders will generally not be considered and are liable to be rejected. Railway reserves the right to reject any special conditions stipulated by the tenderer as considered unacceptable to the Railway. If any deviations from the General conditions of Contract /Special Conditions of Contract/ Technical Specifications & Requirements/Schedule of works & Supplies are proposed by the tenderer, they should be mentioned on statement of deviation in **Form No.3** (in Forms & Annexures part of Chapter - 3) and not elsewhere in the tender document. If the tender has no exceptions, the **Statement of Deviations** shall be submitted with a 'NIL' statement. If the tenderer does not include this with the tender it shall be conclusive evidence that all conditions of contract are entirely acceptable to the Tenderer. All the relevant documents shall be uploaded along with the tender form as per the terms and conditions of the tender.
10. Tenderer without submitting requisite earnest money through online shall not be able to participate in the E-tendering process.
11. All the relevant documents shall be uploaded along with tender form as per terms And condition of tender.

12. All supporting documents to the offers shall be either type written/printed or written neatly in indelible ink in English and scanned with sufficient resolution for uploading on E-tendering portal such that clear hard copy can be taken for the same. Each page of the offer must be numbered consecutively, should bear the tender number and each page of the tender document including technical brochures, manuals etc., should be signed by the tenderer & should bear the seal of the Contractor. A reference to the total No. of pages comprising the offer must be made at the top right hand corner of the first page. Photocopies of all the certificates etc., submitted by tenderer should be attested by tenderer as true copies, unless required to be attested by Notary public by other conditions of tender. No scribbling is permissible in the tender documents. Tenders containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer(s) in his/their entries must be attested by him/them.
13. **Errors, Omission & Discrepancies (in the tender document):**
 - a. The contractor(s) shall not take any advantage of any misinterpretation of the conditions due to typing or any other error and if in doubt shall bring it to the notice of the tender inviting authority, without delay. In case of any contradiction, only the printed rules and books should be followed and no claim for the misinterpretation shall be entertained.
 - b. If a tenderer finds discrepancies in, or omission from the drawing or any of the tender document or he has any doubt to their meaning, he should at once notify Dy.CSTE/Project/TPJ,Venkatesan Road, Trichy-01 who may send a written clarification to all Tenderers or upload the Amendment & Corrigendum in www.ireps.gov.in as required.
14. After opening of the tender, any document/credential pertaining to the technical & financial eligibility and constitution of the Contractor will neither be asked nor be entertained/considered under any circumstance & nor claim nor representation whatever in this regard, from the tenderer shall be entertained.
15. Clarification of Bids: To assist in the examination, evaluation & comparison and pre-qualification of the Tender, the Railway may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Railway shall not be entertained or considered. The Railway request for clarification and the response of the bidder in this regard shall be in writing. However, if a Bidder does not provide clarification of its bid by the date and time communicated in the Railway request for clarification, the bid shall be evaluated as per the documents submitted along with the bid.
16. The comparative tabulation of bids received against the open E-tender will be available online to participating Contractors immediately after opening of the Bid by

Railway. However, a tenderer or his authorized representative may attend the opening in the office of Deputy Chief Signal & Telecommunication Engineer, Project, Southern Railway, Trichy-01.

17. Date of inviting tender shall be the date of publishing tender notice on IREPS website.

2.3 NAME OF THE WORK:

Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.

2.4 BRIEF SCOPE OF WORK:

The scope of this work is broadly for the Provision of Interlocking arrangements at 39 Nos of non-interlocked LCs across Madurai division. This includes Indoor and Outdoor signalling works, construction of LC huts as per the approved drawings enclosed along with the tender documents and as per the markings given by the authorised railway personnel, provision of electrical wiring through conduits, fans, tube lights, exhaust fans etc in the huts as mentioned in the respective tender schedule and/or technical specifications in chapter 4A, B & C.

Scope of Signalling Works:

- I. Installation, testing and commissioning of Electrically Operated Lifting Barrier (EOLB), Emergency Sliding Booms (ESB) along with its resting posts, Control Panel for operating the lifting barriers, provision of Panel enclosure for the Control panel as per the drawing enclosed, dismantling and releasing of the previously existing manual lever structures, signalling structures etc.
- II. Supply and Installation/Replacement of existing signalling gears such as Signals, Location Boxes, DC Track circuits including signalling/Telecom/Power cables, as per the approved SIP and/or site requirement and /or as instructed by the SSE/Signal undersigned for the work, Location box foundation, Matching of new cables in existing location boxes and other miscellaneous works.
- III. Supply and Provision of RCC Cable ducts and GI Pipes where ever required, excavation of cable trenches of appropriate depth, laying of Signalling/Power/Quad & OFC cables in RCC ducts, refilling trenches, concreting, HDD boring and Horizontal drilling where ever required.
- IV. Splicing and Termination of OFC cables in Stations & LC Huts.

- v. Power Supply arrangements and Provision of Surge Protection devices with suitable Earthing arrangements as per latest RDSO specifications (No.RDSO/SPN/215/2018 ver 2.0 or latest).
- vi. Supply and Erection of FTOT/CT Rack. Supply, Installation, Testing and Commissioning of RTU and its Networking at 39 LC gates.
- vii. Supply of Test and Measuring Instruments.
- viii. Carrying out Comprehensive AMC for Five years on completion of the warranty period.
- ix. Releasing of existing mechanically operated equipment like Winch keys, Levers, Rods, and other misc. items and obsolete signalling items .
- x. Supply and provision of RCC cable route markers, Electronic Cable Route Markers and GIS mapping of entire cable route including Track crossings, Culvert/Girder Bridges and uploading the same to the Railnet S&T/SR Website.
- xi. Supply and Provision of Earthing arrangements as per RDSO STS/E/TAN/3006 Ver. 3.1 For protecting the devices in the system.
- xii. Supply, Installation, testing and commissioning of Integrated Power Supply and other Power supply equipment as required upon duly complying with the pre commissioning checklist.
- xiii. Carrying out alterations to existing EI Stations to suit as per approved Signalling Plan & Table of Control which includes FAT, SAT, Correspondence tests and commissioning.
- xiv. Carrying out alterations to existing RRI Stations to suit as per approved Signalling Plan & Table of Control which includes Correspondence tests and commissioning. Carrying out Site survey at all subject locations, LCs, Stations etc. for preparation of SIP,
- xv. Supply and Provision of LED aspects as per RDSO/SPN/199/2025 Rev. 1.2, Amt .1. Or latest.
- xvi. The trench work is to be executed as per the instructions of the Site incharge/Consignee duly adhering to the Railway Board's Telecom Circular No. 09/2023 dated 12.06.2023 related to Joint Procedure Order for undertaking digging work in the vicinity of underground signaling, electrical & Telecommunication cables uploaded along with tender document in the ireps site.

The List of 39 LC's are mentioned below:

Sl.No.	LC No.	At KM	Section	Block Section
1	9	10/800-900	MDU-ILA	MDU-MNM
2	12	15/700-800	ILA-TVN	
3	16	21/900-22/000	TVN-TPC	
4	25	35/200-300	TPC-MNM	
5	27	37/200-300	TPC-MNM	
6	28	37/500-600	TPC-MNM	
7	1	557/300-400	MNM-KMBK	MNM-VPT
8	43	50/700-800	SMD-ASD	TEN-SCT
9	47	53/300-400	SMD-ASD	
10	51	57/100-200	SMD-ASD	
11	53	58/700-800	SMD-ASD	
12	55	59/800-900	SMD-ASD	
13	56	60/500-600	SMD-ASD	
14	61	65/700-800	ASD-KKY	TEN-SCT
15	71	76/700-800	ASD-KKY	
16	73C	80/500-600	KKY-PCM	
17	74	82/100-200	KKY-PCM	
18	76	84/900-85/000	KKY-PCM	
19	77	85/900-86/000	KKY-PCM	
20	79	87/500-600	KKY-PCM	TEN-TSI
21	80	88/400-500	KKY-PCM	
22	81	88/900-89/000	KKY-PCM	
23	86	95/900-96/000	PCM-TSI	

24	27A	31/200-300	SVV-NZT	TEN-TCN
25	434	573/100-200	SVKS-SVPR	VPT-SCT
26	410	544/400-500	VPT-SVKS	VPT-SCT
27	417	550/800-900	VPT-SVKS	
28	425	560/800-900	VPT-SVKS	
29	428	565/100-200	SVKS-SVPR	
30	480	630/100-200	SKNL-PBKS	
31	492	647/800-900	KDNL-TSI	
32	497	652/800-900	KDNL-TSI	
33	456	605/800-900	RJPM-SNKL	VPT-SCT
34	462	612/500-600	RJPM-SNKL	
35	451	598/700-800	RJPM-SNKL	
36	493	649/000-100	KDNL-TSI	
37	500	657/900-658/000	KDNL-TSI	
38	505	665/100-200	TSI-SCT	
39	510	671/200-300	SCT-BJM	SCT-PUU

ENGINEERING WORK:

- I. Construction of LC location huts/station service buildings as per enclosed drawings (SK/02/2019 and CE 612).
- II. Supplying with all fittings and fastenings, and complete fixing in position ventilator with glass louvers similar to (SK/02/2019 and CE 612). Frames made of teak wood.V of reqd. size with all lead and lift etc., complete and as directed by the Engineer-in-charge.
- III. Supplying reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete - High yield strength deformed bars.
- IV. The cement used shall be any of the following, with the prior approval of the Engineer:
 - a. 43 Grade Ordinary Portland cement conforming to IS:8112;

- b. 53 Grade Ordinary Portland cement conforming to IS: 12269
 - c. Rapid hardening Ordinary Portland cement conforming to IS: 8041;
 - d. High strength Portland Cement conforming to IRS: T:40;
 - e. Portland slag cement conforming to IS: 455
 - f. Portland pozzolana cement conforming to IS:1489
 - g. Sulphate resistance cement conforming to IS: 12330
- v. The reinforcement shall be any of the following with the prior approval of Engineer:
- a. Grade I mild steel and medium tensile steel bars conforming to IS: 432 (Part I);
 - b. High strength deformed steel bars conforming to IS: 1786;
 - c. Thermo mechanically treated (TMT) bars satisfying requirements of IS: 1786;
 - d. Rolled steel made from structural steel conforming to IS: 2062 Gr A and Gr B.
- VI. The scope of nominated LC huts as per the list below shall be pre stressed precast RCC structures of approved design and sourced from a reputed company that has constructed precast RCC buildings of cumulative floor area not less than 2, 00,000 sq. feet in the government and/or corporate sector before the closing date of the tender.
- The precast manufacturer shall have their own manufacturing facility with valid ISO certification before the tender closing date.
 - A survey shall be carried out at each LC hut location to assess the Highest Flood Level (HFL), and the report shall be submitted to the Authority Engineer. The floor level of the hut shall not be less than 1000 mm or not less than 300 mm above the HFL, whichever is higher.
 - The LC hut shall be provided with a railing on the side facing the track. The grade slab shall be constructed either with precast panels or in situ concrete, and it shall be properly integrated with the wall panels to prevent shrinkage. Fixtures required for the installation of equipment shall be integrated into the wall panels and floor during the casting stage itself.
 - Entry into the LC hut shall be provided with steps as well as a ramp. Windows and doors shall be made with unbreakable materials.
 - Concreting shall be done with a 1:4:6 concrete mix for a width of 1500 mm and thickness of 250 mm from the foundation of the LC hut on all four sides, duly levelling and ramming the earth.

The tentative LC huts to be constructed with pre cast RCC structures are as follows:

Sl.No	LC NUMBER	KM	BLOCK SECTION	REMARKS
1	9	10/800-900	MDU-ILA	Pre-Cast
2	12	15/700-800	ILA-TVN	Pre-Cast
3	16	21/900-22/000	TVN-TPC	Pre-Cast
4	25	35/200-300	TPC-MNM	Pre-Cast
5	27	37/200-300	TPC-MNM	Pre-Cast
6	28	37/500-600	TPC-MNM	Pre-Cast
7	1	557/300-400	MNM-KMBK	Pre-Cast

- The above-mentioned LCs are tentatively nominated for Pre-Cast Huts. They may be changed as per the directive of the executive based on site conditions.
- Any other connected works which are necessary

Scope of Electrical/General works:

- a) Concealed Electrical wiring at the HUT Buildings as mentioned in the drawings and as directed by the Railway Engineer.
- b) Supply and installation of all Electrical Fittings (Lights, Fans, Exhaust Fans, AC etc.,) as mentioned in the schedules.
- c) Any other connected works which are necessary.

2.4.1 CONTRACTOR'S SCOPE OF WORK:

- i) The contractor has to make all supplies as per the schedule of works except the items mentioned under the heading "Works to be done by Railways" in the tender document under Para 2.4.2
- ii) The contractor shall be responsible for employing qualified personnel for supervision and execution of work as per GCC Clause No 26.
- iii) The contractor shall be responsible for supplying equipment/materials as per technical specifications & Requirements in line with Tender schedules.
- iv) The contractor shall be responsible for properly executing work according to Tender schedules, Indian Railways Signal Engineering Manual, Indian Railways Permanent Way Manual -2024 & Electrical Manual General Conditions of Contract and Special Conditions of Contract provisions.

- v) Lifting of materials/cables from designated stores/workshops to the site. Stacking the materials received and providing security arrangements to avoid any damage/loss of materials.
- vi) The contractor shall be responsible for the Supply of Technical documents for the equipment offered by him.
- vii) Arranging the OEM Engineers for proper technical guidance during the work when needed.
- viii) Supply, Installation, Testing and Commissioning of EOLB & ESB, EOLB Operating Panel, LC Gate Panel, IPS, RTU, ELD, Earthing arrangements & Power supply equipment as per latest specifications and guidelines.
- ix) Wiring and cabling power supply & other modules, fuses and relay rack, surge protection devices etc,
- x) Preparation and submission of Survey documents, Station & LC Gate Signalling Plan, LC gate Panel Diagram, Cable Core plan, Cable Route Plan, Station and Gate Working Rules as per requirements, TSSA Documents, PCSTE/GM/CRS Sanction Documentations, NI Plans/Drawings.
- xi) Submission of As-made and other documents as directed by engineer-in-charge.
- xii) The contractor shall be responsible for the warranty of the assets supplied and installed by him for a period of ONE Year from the date of issue of completion certificate by the competent authority.
- xiii) The contractor shall comply with the Precommissioning checklist and provide OEM Certificate for all earthing and bonding installations provided for the work and Warranty for special earth (RDSO/SPN/197/2016 or latest) for 5 years.
- xiv) Comprehensive AMC will be for 5 Years
- xv) Design & construction of LC huts as per the layout plan attached as Annexures with tender document and construction as per the approved drawings at the specified location along with supply of all electrical fittings & carrying out necessary electrical wiring with all the related works as per approved designs and drawings.

2.4.2 WORK TO BE DONE BY THE RAILWAYS:

Following works shall be done by Railways:

1. Supply of Approved Signal Interlocking plan and circuits for the Gates/Stations, and approved TOC for the EI stations.
2. Supply of unregulated 230V AC.

3. Supervision of testing and commissioning of installation/equipment. This activity shall be done once the tenderer has completed the installation and offers it to Railways for their testing, verification and validation. For any installation activities like drilling, soldering, etc., the contractor shall arrange the necessary electric power supply.
4. Supervising the entire project execution being carried out by the contractor.
5. Making personnel available for operation of equipment after commissioning.

2.5 QUALIFYING & ELIGIBILITY CRITERIA:

2.5.1 SIMILAR NATURE OF WORK:

Department	Amount of work involved	% of Amount
Signal & Telecom	38,41,15,614.47	84.85
Engineering	4,72,92,453.25	10.44
Electrical/General	2,12,66,877	4.69
Grand total	45,26,74,944.72	

From the above table, it is evident that the S&T component constitutes a major portion of the work. The tenderer must possess eligibility for all components, as the value of each individual component exceeds ₹50 lakhs, as detailed below.

Single Similar nature of work of S&T Component:

“Any Signalling Interlocking works involving Electronic Interlocking or RRI or PI or IBS or IBH or LC gate or yard modification or UFSBI or Track circuit (AFTC or DCTC) or axle counter (SSDAC or MSDAC or HA-SSDAC) or Automatic signalling. vide PCSTE Lr.No.458861/SG.191/Similar nature of work dt:11.05.2016”

Single Similar nature of work of Engg. Component:

“Any civil engineering work except track work/transportation” Ref: PCE Ltr.No.W.496/P/O/SNW dated 11.06.2025 vide S.No.1 under E-Building and other Civil works.

Single Similar nature of work of Electrical component:

“Works involving wiring/lighting with 240 Volt, 1 phase and 415 Volt,3 Phase system with control gear and protection arrangements in residential buildings or service buildings or railway stations/yards or colony/ highway lightings.” Ref: CEGE Letter no. E.252/I/8/G dated: 21/03/2025

2.5.2 TECHNICAL ELIGIBILITY CRITERIA:

1. In case of tenders for composite works (e.g., works involving more than one distinct component, such as S&T works, Civil Engineering works, Electrical works etc., and in the case of major bridges- substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any of the following categories of works during the last 07 (SEVEN) years, ending the last day of the month previous to the one in which the tender is invited.

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

(OR)

Two Similar works costing not less than the amount equal to 40% of the advertised tender value of each component of tender.

(OR)

Three Similar works costing not less than the amount equal to 30% of the advertised tender value of each component of tender.

NOTE:

Separate completed works of minimum required values shall also be considered for fulfilment of technical eligibility criteria for different components.

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.
3. To evaluate the technical eligibility of the tenderer, only components of S&T as in the tender document for evaluation of technical eligibility, shall be considered. The scope of work covered in ENGG & Elect/Gen components shall be either executed by tenderer himself or 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.
4. A formal agreement duly notarised, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the ENGG,& Elect/Gen components 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 fulfill technical eligibility criteria as follows:

The subcontractor shall have successfully completed at least one work similar to work as defined in clause 2.5.1 of the tender document for the respective component

proposed for subcontract, costing not less than 35% value of work to be subletted, in last 5 years, ending last day of month previous to the one in which tender is invited through a works contract.

The subject tender consists of S&T and other associated schedules (Engineering and Electrical Portions) therefore for satisfying eligibility criteria for the subject tender, it is proposed to compare the contribution of S&T and other than S&T schedules which are detailed below:

For subletting of work costing upto 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.

5. Work experience certificate from a Private individual 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 Crores 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 opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public Listed company to issue such certificates.
6. 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.

The tenderer shall submit a certificate to this effect in the format given in **Form No.1A for physically completed works and in Form No 1B for substantially completed works** (in Forms & Annexures part of Chapter - 3) of the tender document. Certificates to be duly certified by minimum JAG Officer.

NOTE:

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 organization 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. In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.
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. If a bidder has successfully completed work as a subcontractor and the work experience certificate has been issued for such work to the sub-contractor by a Govt. Organization or public listed company as defined in a note for item 10.1 part I of GCC, the same shall be considered to fulfil credentials.
8. In the case of a 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 a newly formed partnership firm. For example, partner A had a 30% share in the previous entity, and his share in the present partnership firm is 20%. Therefore, in the present tender under consideration, the credentials of partner A will be considered to the extent of 0.3×0.2 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 a partnership firm(s), etc.
9. In the case of an existing partnership firm, if anyone or more partners quit the partnership firm, the credentials of the 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 of 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 a partnership firm(s), etc.

10. In case of existing partnership firm if any new partner(s) joins the firm, without any modification 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.
11. 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 partnership firm of A&B partners.
12. 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.
13. If the percentage share among partners of a partnership firm is changed, but the partners remain the same. In that case, the firm's credentials before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, if a partner of a partnership firm retires without taking away any credentials from the Contractor, the credentials of the partnership Contractor shall remain the same as it is without any change in their value.
14. n) 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 another partnership firm "AX" earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
15. In case a tenderer is LLP, the credentials of the tenderer shall be worked out on the above lines similar to a partnership firm.
16. In case company A is merged with company B, then company B would also get company A's credentials.

2.5.3 FINANCIAL ELIGIBILITY CRITERIA:

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

V= Advertised value of the tender in crores of Rupees

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

The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years, as per the audited balance sheet. However, in case 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 **Form No.2**, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

2.5.4 SUB-SECTION CLAUSE:-

Sub section clause is applicable for all the following 4 tenders i.e. Two in TPJ division & Two in MDU divisions as per the R.B ltr No.2018/CE-I/CT/AP/2 DT: 17.04.2018

S. No.	Name of the tender	Tender notice no
1	Provision of interlocking arrangement at 53 Nos of non interlocked gates in the MV-TJ, TJ-TVR-KIK, TVR-TTP-KKDI, NMJ-MQ, NGT-VLNK, VM-PDY, VM-MV, VM-KPD, & SNDI-MTUR sections over TPJ division.	T-SG-PROJ-2025-01 DT: 31.10.2025
2	Provision of interlocking arrangement at 47 Nos of non interlocked gates in the VM-PDY, VRI-CUPJ, VM-KPD, VM-CUPJ-MV, & TJ-TVR-KIK sections over TPJ division	T-SG-PROJ-2025-02 DT: 31.10.2025
3	Provision of interlocking arrangement at 44Nos of non interlocked gates in the DG-POY and TPJ-KKDI-MNM-RMM sections over MDU division.	T-SG-PROJ-2025-03 DT: 31.10.2025
4	Provision of interlocking arrangement at 39 Nos of non interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.	T-SG-PROJ-2025-04 DT: 31.10.2025

The conditions are as below: -

- a. In view of the sub-sectioning, if an eligible Tenderer/Contractor becomes L-1 only in one tender, the tender will be awarded to the lowest eligible Tenderer/Contractor.

OR

If the Tenderer/Contractor becomes L-1 in more than one tender for above mentioned Tender Notice, then evaluation of Tenderer/Contractor for his/its eligibility for award of

all such tenders shall be done, duly considering the work experience (i.e., 30% percent for three similar works (or) 40% for two similar works (or) 60% for one similar work) of combined value of such tenders, Financial capability and bid capacity of combined value of such tenders, in which the Tenderer/Contractor is L-1.

- b. In case the Tenderer is lowest in more than one tender under consideration, however, falls short of above sub-sectioning eligibility criteria, then the Tenderer will be considered for awarding any of the work(s) at the sole discretion of the Railways. The decision of the Railway will be final and binding on the Tenderer.

2.5.5 SUBMISSION OF UNDERTAKING:

The tenderer shall necessarily satisfy the Eligibility conditions listed below:

- a. Tenderer has to submit the undertaking that MSDAC, IPS, RTU & AFDAS shall be procured from RDSO approved sources and installation, testing and commissioning shall also be done from the same source including after sales support required during the warranty period.
- b. After the award of contract, Tenderer shall get MoU with RDSO approved source covering supply of MSDAC, IPS, RTU & AFDAS, and the Installation, Testing, and commissioning by the same RDSO approved source including after sales support required during the warranty period before supply of equipment is undertaken. Further, the tenderer shall ensure that. In the MoU, Original Equipment Manufacturer shall:
 - i. Offer technical support for supply, installation, and commissioning of the equipment.
 - ii. Undertake verification and certification of pre-commissioning checklist as per RDSO guidelines.
 - iii. Sign on the Application for Technical System approval by RDSO to ensure that the installation is as per the RDSO stipulations.
 - iv. Impart training to Railway officials at their factory premises and at site.
 - v. Offer Warranty for equipment as per the condition laid in the tender document and RDSO specification for a period of one year from the date of commissioning. Guarantee to supply spares for a minimum period of 7 years after the expiry of the warranty period.
 - vi. Support Railways for entering CAMC/ARC if any on a later date after the expiry of warranty period.

Note:

Unconditional LOA shall be issued by Railway subject to production of MoU as per Para 2.5.5 (b) above.

2.5.6 BID CAPACITY

The tender/technical bid will be evaluated based on the bid capacity formula detailed as per Annexure 5.

A & B values in BID CAPACITY formula should be duly verified by a Chartered Accountant. In case, the tenderer/s failed to submit the above statement along with the offer, their/his offer shall be considered as incomplete and will be rejected summarily.

2.6 GUIDELINES FOR PARTICIPATION OF JOINT VENTURE Contractors:

1. Separate identity/name shall be given to the Joint Venture Contractor.
2. The number of members in a JV Contractor shall not be more than THREE if the work involves only one department (say Civil or S&T or Electrical) and shall not be more than five, if the work involves more than one Department.
3. A member of a JV firm shall not be permitted to participate either in individual capacity or as a member of another JV Contractor in the same tender.
4. The tender form shall be purchased and submitted only in the name of the JV Contractor and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent members or any person authorized by JV through Power of Attorney to submit tender.
5. EMD/Bid Security shall be deposited by JV or authorized person of JV through E-payment gateway or Bank Guarantee Bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV.
6. One of the members of the JV Contractor shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV Contractor. The other members shall have a share of not less than 20% each in case of JV Contractors with up to three members. In case of JV Contractors with foreign member (s), the lead member has to be an Indian Contractor with a minimum share of 51%.
7. A copy of Memorandum of Understanding (MOU) duly executed by the JV members on stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV Contractor, their share and responsibility in the JV etc., particularly with reference to financial, technical and other obligations, shall be furnished in the MOU. The MOU format for this purpose is enclosed as **Annexure 1** (in Forms & Annexure part of chapter 3).

8. Once the tender is submitted, the MOU shall not be modified/alterd/ terminated during the validity of the tender. In case the tenderer fails to observe / comply with this stipulation, the full EMD/Bid Security shall be forfeited. In case of a successful tenderer, the validity of this MOU shall be extended till the currency of the contract expires.
9. Approval for change of constitution of JV shall be at the sole discretion of the Railways. The constitution of the JV shall not normally be allowed to be modified after submission of the tender bid by the JV, except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. However, the Lead Member should continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.
10. Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.
11. On award of contract to a JV, a single performance guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance etc., shall be accepted only in the name of the JV Contractor and no splitting of guarantee amongst the members of the JV Contractor shall be permitted.
12. On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, shall form a legal entity if not already formed, which shall have the same shareholding pattern, as was declared in the MOU/JV agreement submitted along with the tender. The entity shall be got registered before the Registrar of the companies under "The Companies Act-2013" (in case JV entity is to be registered as Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Contractor) or under "The LLP Act 2008" (in case JV entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to Railways before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, the contract is liable to be terminated.
13. This JV agreement shall be submitted by the JV Contractor to the Railways before signing the contract agreement for the work. This agreement should invariably be made on the basis of agreed terms and conditions as made in the MOU. In case the tenderer fails to observe/comply with this stipulation, the full EMD/Bid Security shall be forfeited and other penal actions due shall be taken against partners of the JV and the

JV. This joint venture entity so registered, in the registered documents, shall have, inter-alia, the following clauses:

- **Joint and several liabilities:** The members of the JV entity to which the contract is awarded shall be jointly and severally liable to the Railway for execution of the project in accordance with General and special conditions of the contract. The members of the JV entity shall also be liable jointly and severally for the loss, damages caused to the Railways during the course of execution of the contract or due to non-execution of the contract or part thereof.
 - **Duration of the Joint Venture Registered Entity:** It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance/warranty period after the work is completed.
 - **Governing laws:** The Joint Venture Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.
14. **Authorised Member:** Joint Venture members in the JV MOU shall authorise one of the members on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorised member of the JV.
15. No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the Railways in respect of the said tender/contract.
16. Documents to be submitted/uploaded by the JV along with the tender:
- 16.1 In case one or more of the members of the JV is/are partnership Contractor(s), the following documents shall be submitted:
- A notarized copy of the Partnership Deed, or a copy of the Partnership deed registered with the Registrar.
 - A copy of consent of all the partners or individuals authorised by the partnership Contractor, to enter into the Joint Venture Agreement on a stamp paper.
 - A notarized or registered copy of Power of Attorney (duly registered as per prevailing law) in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership Contractor and create liability against the Contractor.
 - An undertaking by all partners of the partnership Contractor 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 Contractor/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

16.2 In case one or more members is/are proprietary Contractor or HUF, the following documents shall be enclosed:

- A copy of notarized affidavit on Stamp paper declaring that his concern is a Proprietary Concern and he is sole proprietor of the Concern OR he/she is in position of "KARTA" of Hindu Undivided Family (HUF) and he/she has the authority, power and consent given by other partners to act on behalf of HUF.

16.3 In case one or more members of the JV is/are companies, the following documents shall be submitted:

- A copy of the resolution of the Directors of the Company, permitting the company to enter into a JV agreement.
- A Copy of Memorandum and Articles of Association of the Company.
- A copy of Certificate of Incorporation.
- A copy of Authorization/ Copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender, sign MOU/JV agreement on behalf of the company and create liability against the company.

16.4 In case one or more members of the JV is/are LLP Contractor/s, the following documents shall be submitted:

- A copy of the LLP Agreement.
- A copy of Certificate of Incorporation of LLP
- A copy of resolution passed by partners of LLP Contractor, permitting the Contractor to enter into a JV agreement
- A copy of Authorization /copy of Power of Attorney issued by the LLP Contractor (backed by resolution passed by the Partners) in favour of the individual, to sign the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP.
- 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 Contractor/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.

- 16.5 In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:

A copy of Certificate of Registration

- A copy of Memorandum of Association of Society/Trust Deed
- A copy of Rules & Regulations of the Society
- A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.

17. All the members of the JV shall certify that they are not black listed or debarred by Railways or any other Ministry/Department/PSU (Public Sector Undertaking) of the Govt. of India/State Govt. from participation in tenders/contract on the date of opening of bids either in their individual capacity as members of the JV in which they were/are members.

2.6.1 PROSPECTIVE JOINT VENTURE Contractor SHALL SATISFY THE MINIMUM ELIGIBILITY CRITERIA AS GIVEN BELOW:

2.6.1.1 Technical Eligibility Criteria – (in conjunction with Para 2.5.2 above)

The technical eligibility for major component of work as per para 2.5.2 above, shall be satisfied by either the JV in its own name & style' or 'Lead member of the JV' and technical eligibility for other component(s) of work as per para 2.5.2 above, shall be satisfied by either the 'JV in its own name & style' or 'any member of the JV'.

Each other (non-lead) member(s) of JV, who is/are not satisfying the technical eligibility for any component of the work as per para 2.5.2 above, shall have technical capacity of minimum 10% of the cost of any component of work mentioned in technical eligibility criteria. i.e., each other (nonlead) member of must have satisfactorily completed or substantially completed during the last 07(seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum- of 10% cost of any component of work mentioned in technical eligibility criteria.

Note:

- The Major component of the work for this purpose shall be the component of work having highest value. In cases where the value of two or more components of work is the same, any one work can be classified as a major component of work.

- Value of completed work done by a member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned technical eligibility criteria in the tender under consideration.
- Details of Similar Works executed shall be given in the format given in **Form No. 1A** (in Forms & Annexures Part of Chapter-3).

2.6.1.2 Financial Eligibility Criteria - (in conjunction with Para 2.5.3 above):

The JV shall satisfy the requirement of "Financial Eligibility" mentioned at Para 2.5.3 above.

Note:

- a. The Financial capacity of the Lead partner of JV shall not be less than 51% of the financial eligibility criteria mentioned in Para 2.5.3 above.
- b. The arithmetic sum of individual "Financial Capacity" of all the members shall be taken as JV's "Financial Capacity" to satisfy the requirement.
- c. Contractual payment received by a member in an earlier JV shall be reckoned only to the concerned member's share in that JV for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in tender under consideration.
- d. Details shall be given in the format given in **Form No.2** (In Forms & Annexure part of chapter 3).
- e. Separate forms should be used for each JV member as required and then consolidated as per format in **Form No.2** (In Forms & Annexure part of chapter 3).

2.7 Earnest Money Deposit / Bid Security:

1. (a) The tenderer shall be required to submit the EMD/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 EMD/Bid Security shall be as under:

Value of the Work	EMD/Bid Security
For works estimated to cost up to ₹ 1 crore	2% of the estimated cost of the work
For works estimated to cost more than ₹ 1 crore	₹ 2 lakh plus ½% (half percent) of the excess of the estimated cost of work beyond ₹ 1 crore subject to a maximum of ₹ 1 crore

Note:

- i. The EMD/Bid Security shall be rounded off to the nearest ₹100. This EMD/Bid Security shall be applicable for all modes of tendering.
 - ii. Any Firm recognized by the Department of Industrial Policy and Promotion (DIPP) as 'Start-ups' shall be exempted from payment of EMD/Bid Security detailed above.
 - iii. Labour Cooperative Societies shall submit only 50% of above EMD/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 EMD/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 EMD/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 EMD/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 3 and shall be valid for a period of 90 days beyond the bid validity period.
 3. **In case, submission of EMD/Bid Security in the form of Bank Guarantee, following shall be ensured:**
 - i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
 - ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before closing date for submission of bids.(i.e. excluding the last date of submission of bids)
 - iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non submission of original Bank Guarantee within the specified period shall lead to summarily rejection of bid.

- iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.
- v. The details of the BG, physically submitted, should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected.
- vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification “**Bid for the Name of Work**” 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.
 - a) For the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the tender conditions.
 - b) 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 EMD/Bid Security mentioned above shall be forfeited by the Railway.

Note:

- i) If the tenderer withdraws his offer within the validity date of his offer, the full EMD/Bid Security shall be forfeited.

- 1. The EMD/Bid Security will not be accepted in cash, FDR (Fixed Deposit Receipt), or banker's cheques/Demand Drafts.
- 2. The tenderer shall not submit any bids online unless the tenderer has deposited requisite EMD/Bid Security online / submitted as Bank Guarantee bond on the E-Tendering portal of Indian Railways www.ireps.gov.in.
- 3. No interest shall be payable on EMD/Bid Security by Railways.
- 4. No previous EMD/Bid Security or Security Deposit, etc., submitted earlier in connection with any tender (s), will be adjusted towards the present, nor will any such request or correspondence be entertained.

5. Any Contractor recognized by the Department of Industrial Policy and Promotion (DIPP) as 'Start-ups' shall be exempted from payment of EMD/Bid Security
6. Labour Co-operative Societies shall deposit only 50% of the above EMD/Bid Security deposit detailed above.
7. If the tender is accepted, the amount of EMD/Bid Security will be retained and adjusted as part of the security deposit for the due and faithful fulfilment of the contract.
8. The deposit shall be forfeited without prejudice to any other right or remedies if the tenderer does not execute the contract agreement after acceptance of the tender within 7 (seven) days after receipt of notice issued by the railways that such documents are ready and or the tenderer does not commence the work within fifteen days from date of issue of the acceptance letter. dy.cste mail
9. If the 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 towards Full Security Deposit or the Part Security deposit equal to or more than EMD/Bid Security, the Railway shall return the EMD/Bid Security so retained to the Contractor.
10. The EMD/Bid Security of the unsuccessful tenderer(s) will, save as hereinbefore provided, be returned to the unsuccessful tenderer(s) within a reasonable time. Still, the Railway shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the stipulation to keep the offer open for the period specified in the tender document or to the EMD/Bid Security while in their possession nor be liable to pay interest thereon.

2.8 STUDY OF LOCAL CONDITIONS:

The intending bidders are advised to study the Tender Document, Technical specifications, Schedule of supplies and other instructions carefully. The tenderer shall inspect the proposed site of work and acquaint himself with the site conditions, working hours, layout of land, trees and shrubs that he will have to cut, type of strata likely to be met while excavation, stacking space for materials, approach roads, pathways available etc., and all relevant items connected with execution for the work. No claim shall be entertained for the contractors making his own arrangements for approach roads from outside Railway land and contractors will bear entire expenses such as road taxes, payment for right of way etc., to outsiders and for constructions of approach roads etc.,

It will be imperative for the tenderer to fully acquaint themselves with all the local conditions and other factors which would have any effect on the performance of the contract and cost of the stores. After the offer is accepted by the Indian Railway, no request for the change of rate or time schedule of delivery of stores/execution of work shall be entertained on account of any local condition or factors.

The tenderer may undertake study/survey of existing telecom systems, working of existing TDM/IP networks as per the practice of Railways and makes his own assessment of the work. In the event of the tenderer desiring to /have a field visit before furnishing his offer, he may apply to Dy.CSTE/Project//TPJ, Southern Railway, for permission in this regard. Such permission shall be granted by the Railway but the expenses in this regard shall be borne by the tenderer completely.

Any submission of an offer by the tenderer shall be deemed to have been done after a careful study and examination of this tender document and site conditions with full understanding of the implication thereof. It will be understood that the tenderer has/have got herself/himself/themselves clarified on all the points and interpretation by proper authorities of the Indian Railway Administration. These conditions and specifications shall be deemed to have been accepted unless otherwise, specifically commented upon by the Tenderer in his offer. Failure to adhere to anyone or all these instructions may render his offer liable to be ignored without any reference.

2.9 CLARIFICATION REQUIRED BY THE TENDERER:

Specifications, Drawings, Plans etc. related to the above subject work can be obtained from the office of Dy.Chief Signal Telecommunication Engineer/Project, Southern Railway, and Trichy-01.

If a Tenderer finds discrepancies in or omission from the drawing or any of the Tender document or should he be in doubt as to their meaning, he should at once notify the Railway i.e., authority inviting tenders by post or email to [**dycsteprotpj@gmail.com**](mailto:dycsteprotpj@gmail.com) who may send a written clarification to all Tenderer(s). Any clarification regarding discrepancies in the tender should be submitted in writing to Deputy Chief Signal Telecommunication Engineer/Project, Southern Railway, Trichy before participating in the tender.

2.9.1 PRE-BID CONFERENCE:

Pre-Bid Meeting or conference will be conducted, to brief prospective bidders before opening of bid. Pre-bid conference will be held on 10.11.2025 @ 11.00 hrs in the office of CSTE/Projects/MAS, 3rd Floor, MMC Building, Southern Railway, Chennai-3. A maximum of two representatives of prospective Bidders shall be allowed to participate in production of

authority letters from the Bidder. An online pre-bid meeting shall also be conducted upon request from prospective bidders submitted through email. The meeting link will be shared via email upon receipt of an official request.

During the Pre-Bid conference(s), the Bidders will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall endeavour to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

Clarifications provided during the conference will be documented and issued if considered necessary as an addendum/corrigendum to the special condition of contractor or revised tender document will be uploaded on the website www.ireps.gov.in. No clarifications will be entertained after the pre-bid conference. It is desirable but not mandatory on the part of the Tenderers to attend the pre-bid conference.

Remarks and explanations at the meeting will not qualify the terms of the tender or specifications. All attendees must be advised that unless the tender is amended in writing, it will remain unchanged, and that if an amendment or addendum is issued, normal procedures relating to the acknowledgment and receipt will apply.

2.10 SUBMISSION OF TECHNICAL BID (PACKET-1) INCLUDING DOCUMENTS REQUIRED:

The online Tender shall be accompanied by relevant documents of technical conditions and requirements mentioned in the tender document. Furthermore, all uploaded documents shall be digitally signed by the tenderer. Hence, the tenderer(s) must ensure that these documents are uploaded, duly signed digitally, with their offer.

The Tenderer shall be submitted with the following documents:

The online Tender shall be accompanied by relevant documents of technical conditions and requirements mentioned in the tender document. Furthermore, all uploaded documents shall be digitally signed by the tenderer. Hence, the tenderer(s) must ensure that these documents are uploaded, duly signed digitally, with their offer.

The Tenderer shall be submitted with the following documents:

- a) Offer letter complete along with tender document including tender forms (First sheet & Second sheet), complete tender document downloaded from the website including its addendums/corrigendum if any, duly signed digitally.
- b) The tenderer shall 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 / HUF etc. In addition, the tenderer(s) shall enclose the attested copies of the constitution of their concern and a copy of the PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as they may be legally competent to sign them on behalf of the firm, company, association, trust, or society, as the case may be. Refer to Para 14 of Tender Form Second Sheet [in Forms & Annexures of Chapter-3] regarding documents to be submitted by the tenderer.

- c) Requisite EMD/Bid Security shall be submitted online; otherwise, the tenderer shall not be able to participate in the E-tendering process. EMD/Bid Security shall only be submitted online through Net-Banking/Debit/Credit cards or payment gateway. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender. 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. 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 summarily rejection of bid.
- d) The documents required for ascertaining Technical & Financial capability as specified in Qualifying Criteria, i.e., Para 2.5 of Chapter-2 of this Tender document, shall be enclosed in the offer. In addition, the tenderer should upload, duly signed digitally, detailed documents to fulfil each condition stipulated above in the criteria.
- e) **Work experience certificate/Credential Certificate/Performance Certificate:** (In English or transcript in English with a copy of original document) describing work, the organization for whom executed approximate value of the contract at the time of award, date of award, and date of scheduled/actual completion of work. Date of actual start, the actual date of physical completion, and the final value of the contract regarding meeting Eligibility Criteria Para 2.5.2 for satisfactory and physical completion as per **Form No.1A** (in Forms & Annexures part of Chapter -3). The performance certificate (s) from user Railway (with contact details of FAX, phone, and E-Mail of issuing authority) satisfying the above conditions and satisfactory working of the system shall be furnished.

NOTE: The experience certificate should have been issued by an officer, not below JA grade

- f) The detailed list of year-wise contractual payments received in **Form No.2** (in Forms & Annexure part of Chapter 3) regarding meeting financial eligibility criteria i.e Para 2.5.3. The tenderers shall submit requisite information as per **Form No.2** (in Forms & Annexure part of Chapter 3), along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

Bid capacity: The details for Bid capacity as per Annexure 4 shall be submitted to the tenderer/bidder.

- g) **List of Works Completed/ List of works on hand:** The attested certificate from tenderer shall include description of work, an organization for whom executed approx. Value of contract at the time of award, date of award and date of scheduled completion of work, the actual date of physical completion, year-wise payments made, and total payment made up to the date of tender opening as per **Form No.8** (in Forms & Annexures part of Chapter-3). List of similar types of work completed and works on hand duly indicating the description of work, contract value, date of award of contract, and details of contractual amount received duly certified by tenderer in Form-8 (in Forms and Annexures Chapter-3).
- h) **Certification regarding employment of a retired Engineer of the Gazetted Rank** or any other Gazetted officer working before his retirement.
- i) The tenderer shall also enclose in their offer that they accept all the terms and conditions of Railways. Furthermore, the tenderer shall indicate paragraph by paragraph for each section and each clause and sub-clause of the entire tender document that complies in every respect with the requirements of each clause and sub-clause if not precisely how they differ from the requirements of the tender. In the latter case, the tenderer shall enclose a separate **-Statement of Deviations as per Form No.3** (in forms and annexure part of chapter 3) given, indicating only the deviations for any clause or sub-clause of GCC, Special Conditions of Contract, Specification and Schedule of Works and Supplies, etc., which they propose with 'detailed justifications for deviations proposed.' Railway reserves the right to accept or **reject** these deviations, and the Railway's decision thereon shall be final.
- If the tender has no exceptions, the **Statement of Deviations** shall submit a "NIL" statement. If the tenderer does not include this with the tender, it shall be conclusive evidence that all contract conditions are entirely acceptable to the Tenderer.
- j) List of Personnel, Organization available on hand and proposed to be engaged for the subject work. Similarly, a list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- k) The tenderer shall submit a copy of the certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with the bid are accurate and factual, in case of other than company/Proprietary firm, **Form No.9A** shall also be submitted by each member of a Partnership Firm /Joint venture (JV)/Hindu Undivided Family(HUF) /Limited Liability Partnership(LLP) etc. as the case may be. **Non-submission of certificate(s) by the bidder shall result in summarily rejection**

of his/their bid. In addition, it shall be mandatorily incumbent upon the tenderer to identify, state, and submit the supporting documents duly self-attested/ digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.

l) Provisions of Make in India Policy 2017 issued by Govt of India as amended from time to time shall be followed for consideration of tenders.

m)Any other information desired to be submitted by the tenderer as per the terms and conditions of tender.

Note:

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| a) | No scribbling is permissible in the tender documents. Tenders containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer in his entries must be self-attested. |
| b) | Tenderer must furnish duly filled – CHECK LIST given under Annexure 6 (in forms and Annexure part of Chapter-3) of the tender document along with all supportive documents. |
| c) | 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. However, 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. |
| d) | In case any information submitted by the tenderer is found to be false, forged, or incorrect during the process for evaluation of tenders, it shall lead to forfeiture of the tender EMD/Bid Security besides banning business for a period of upto Two years. |
| e) | 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. EMD/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 upto Two years |

2.11 SUBMISSION OF FINANCIAL BID (PACKET-II):

1. All rates must be submitted in the tab for financial offer only on the E-tendering portal. The financial bid will be opened subsequently (on a date which will be notified later) for the tenderer who fulfils the laid down technical and financial eligibility criteria. The offers which are found techno-commercially ineligible will be dismissed.
2. Rates of stores, materials and works are to be quoted according to the (online web portal) proforma of "Schedule of work and supplies" (Financial Bid). Rates in the offer should be in Indian Rupees only. Offers in foreign currency will not be accepted.
3. Tenderers are requested to quote the **single percentage at** schedule for the all schedules uploaded in IREPS.
4. The tenderer shall quote the complete rate for all items of works given in the schedule of works and supplies in the Financial Bid in IREPS portal only, to complete the entire scope of work and make the system completely functional. Offer received for only part of the schedule will not be considered and the bid shall be rejected.
5. **No Rates to be quoted/enclosed in Technical Bid document otherwise offer will not be considered for evaluation.**

2.12 VALIDITY OF OFFERS:

1. The tenderer shall keep the offer open for a minimum of **90 days** from the date of opening of tender. Within that period, the tenderer cannot withdraw her/his/their offer subject to the period being extended further if required by mutual agreement from time to time. Any contravention of the above condition will make the tenderer liable for forfeiture of his Bid Security.
2. It is understood that the tender document has been sold/issued to the Tenderer, and the Tenderer is/are permitted to tender in consideration of the stipulation on her/his/their part that after submitting her/his/their subject to the period being extended further he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to Railway. Should the Tenderer fail to observe or comply with the foregoing stipulation, the amount deposited as Bid Security for the due performance of the above stipulation shall be forfeited by the Railways

2.13 COMPLETION PERIOD:

1. The time schedule for the entire work is of utmost importance. The entire work must be fully executed within **18 Months** from the date of issue of Letter of Acceptance (LOA). The contractor shall depute an adequate number of competent Engineers/qualified staff to survey, install, test, and commission the equipment/system at the site.

2. Expected time schedule for supply, installation, and commissioning of the System shall be as follows:

Sl.No	Description of Supply & Execution of work	Time Schedule For Completion
I	Placement of orders for all the materials	Within 2 weeks after the issue of LOA
II	Submission of SIPs for scrutiny of HQ as directed by the executive	Within 2 months from the issue of LOA
III	Installation, Testing and Commissioning of 20% of total LCs covered under this tender as directed by the executive in charge	within 6 months from the issue of LOA
IV	Installation, Testing and Commissioning of 40% of total LCs covered under this tender as directed by the executive in charge	within 9 months from the issue of LOA
V	Installation, Testing and Commissioning of 60% of total LCs covered under this tender as directed by the executive in charge	within 12 months from the issue of LOA
VI	Installation, Testing and Commissioning of 80% of total LCs covered under this tender as directed by the executive in charge	within 15 months from the issue of LOA
VII	Completion of Installation & Testing for balance Level crossing gates	within 17 months from the issue of LOA
VIII	Completion of the whole Project including submission of As-made documents and final bill.	within 18 months from the issue of LOA

Note: Liquidated Damages (LD) for delays attributable to the Contractor in failing to meet the above specified timelines shall be imposed in accordance with Clause 17B of the Standard General Conditions of Contract during execution of the work. If the work is completed in all respects within the stipulated completion period of 18 months, any intermediate Liquidated Damages (LDs) imposed may be waived based on the request by the contractor by competent authority based on the merit of the case.

2.14 OPENING OF TENDERS

The tender will be opened online as per the stipulated date and time mentioned in the Tender Notice and Website in the office of Deputy Chief Signal & Telecommunication Engineer/Project, Southern Railway, Trichy-01, in the presence of Tenderer/representatives (whoever chooses to attend). In the event of the specified date of bid

opening being declared holiday for the Railway, the Bids shall be opened at the same time and location on the next working day. The tenderer/representatives, who are present during the opening of Bids, should sign a register as a token of their attendance.

2.15 RIGHT OF RAILWAYS TO DEAL WITH TENDERS:

The authority for the acceptance of the tender will rest with the Railway administration for and on behalf of the President of India, who shall not be bound to accept the lowest or any tender or assign any reason for declining to consider non-acceptance or rejection of a tender. However, Railway administration reserves the right to accept any tender in respect of the whole or any portion of the work specified in the tender document, reduce the scope of the work, or accept any tender for less than the tendered quantities without assigning any reason whatsoever.

Railway administration also reserves the right to cancel any or all tenders at any stage. Furthermore, the Railway reserves the right to accept or reject the deviations proposed by the tenderer, and Railway's decision thereon shall be final. The deviation quoted by the tenderer will become part of the Contract Agreement only to the extent to which they are mentioned explicitly as accepted in the Letter of Acceptance.

2.16 ACCEPTANCE OF TENDER:

A letter of acceptance (LOA) of the offer will be issued by the Railway Administration to the successful Tenderer that his offer has been accepted, on receipt of which he shall submit a Performance Bank Guarantee (PBG) bond of 5% of the cost of work and shall execute a formal Contract Agreement with the President of India acting through **Dy.CSTE/Project/TPJ, Ponnagar,Trichy-620001** or his authorized representative for carrying out the work according to the tender's terms and conditions, including "General Conditions of Contract" of Indian Railway and Special Conditions/Specifications of this tender. Upon issuing of LOA, the contract for the work shall be deemed to have been awarded to the tenderer, and accordingly, the completion period will be reckoned from the date of issue of LOA irrespective of the date of signing of contract agreement subsequently.

2.17 SIGNING OF AGREEMENT:

The tenderer(s) whose offer is accepted will be required to present herself/himself or her/his duly authorised representative in the office of Deputy Chief Signal & Telecommunication Engineer/Project, Southern Railway, Trichy-01 to execute the contract document within seven days of receipt of notice that the contract documents are ready. There would be no need to appear in person if agreement is signed digitally.

2.18 COMMENCEMENT OF WORK

The successful tenderer upon receipt of LOA shall commence the work by way of submitting a detailed time schedule in terms of Chapter 2 – Special Conditions of Contract, for completion of work within the stipulated completion period.

2.19 CONSIGNEE:

Consignee for the material supplied by the contractor shall be as follows:-

Signal and Telecom items along with all accessories shall be supplied to the Authorised representative of Dy.CSTE/Project/TPJ at the store of the nominated consignee i.e., CDMS/Project Stores/TPJ.

After supply of the material by the contractor, the same shall be issued to the contractor against Indemnity Bond (**FORM No.5**). The Contractor shall provide proper storage space ensuring protections from theft, fire and flooding. Contractor shall obtain authorisation of Railway before transporting the material to site of work. The Contractor shall submit monthly statements of material delivery/issues to the site, indicating dates and quantity of equipment received and issued every month along with an overall summary.

Any change/addition required in consignee, it shall be done after mutual consultation between contractor and Railway.

2.20 CONTRACTOR 'S OFFICE & STORES DEPOT

The contractor shall, within a month of issue of letter of acceptance (LOA) of tender, establish an office and store depot at a convenient place for receiving & storing equipment and materials and progressing field work expeditiously in consultation and with the approval of the Engineer-in-charge, where all correspondence should be sent. The **Contractor will intimate the office address along with Telephone/Fax, E-mail and name of Key-personnel responsible for execution of work.** Any communication sent to the contractor by post at his said address shall be deemed to have reached the contractor duly and in time. The critical document shall be sent by Registered post. **The Contractor shall arrange and maintain suitable storage facilities at strategic locations (at least at one location) within the sections covered under the subject work, to ensure proper receipt, handling, and safe custody of all materials.**

2.21 CHANGES IN ADDRESS:

Any change in the address of the contractor shall be forthwith intimated in writing to the Railway. The Railway will not be responsible for any loss/inconvenience suffered by the Contractor on account of his failure to comply with this.

2.22 SECURITY DEPOSIT:

The Security Deposit shall be 5% of the contract value. The EMD/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 Depositor the Part Security Deposit equal to or more than EMD/Bid Security, the Railway shall return the EMD/Bid Security, to the Contractor.

Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India or may be recovered at the rate of 6% of the bill amount till the total Security Deposit is recovered. Provided also that in case of defaulting Contractor, the Railway may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract.

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

Further, suppose Security Deposit has been submitted as Term Deposit Receipt/Bank Guarantee Bond in the total amount. In that case, the EMD/Bid Security deposited by the Contractor with his tender will be returned by the Railways.

Note:

1. After the work is physically completed as certified by the competent authority, Security Deposit recovered from the running bills of a Contractor can be returned to him, if he so desires, in lieu of Term Deposit Receipt/irrevocable Bank Guarantee for equivalent amount from Scheduled Bank, to be submitted by him.
2. Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or

more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

3. 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.
4. No interest shall be payable upon the EMD/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 GCC will be payable with interest accrued thereon.

2.23 REFUND OF SECURITY DEPOSIT:

Security Deposit mentioned in Para 2.22 above shall be returned to the Contractor after the following:

- a. Final Payment of the Contract as per GCC Clause 51.(1)AND
- b. Execution of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor AND
- c. Issue of Maintenance Certificate on expiry of the maintenance period as per GCC clause 50.(1)
- d. Before releasing of Security Deposit, the contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged as per police verification report in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at www.shramikkalyan.indianrailways.gov.in.

2.24 PERFORMANCE GUARANTEE:

The procedure for submission of 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 up to 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 the 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.

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. If the contract is terminated, Railway shall be entitled to forfeit EMD/Bid Security and other dues payable against that contract. Furthermore, suppose a tenderer has not submitted EMD/Bid Security on the strength of their registration as a Start-up recognized by the Department of Industrial Policy and Promotion (DIPP) under the Ministry of Commerce and Industry. In that case, DIPP shall be informed to this effect.

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

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

1. A deposit of Cash.
2. Irrevocable Bank Guarantee.
3. Insurance Surety Bond as per Annexure -4

Note: 1. The provision of insurance Surety Bond shall be for all contracts having DOC within 36 months only.

2. In case DOC extends beyond 36 months, fresh Insurance Surety Bond or any other form of Performance Guarantee prescribed in GCC for the balance amount shall be submitted by the agency, otherwise necessary action will be taken as per terms of Agreement.

4. Government Securities including State Loan Bonds at 5% below the market value.
5. Pay Orders and Demand Drafts tendered by any Scheduled Commercial Bank of India.
6. Guarantee Bonds executed or Deposits Receipts tendered by all Scheduled Banks.
7. Deposit in the Post Office Saving Bank.
8. Deposit in the National Savings Certificates.
9. Twelve years National Defence Certificates.
10. Ten years Defence Deposits.
11. National Defence Bonds and
12. Unit Trust of India Certificates at 5% below market value or at face value, whichever is less. Also, FDR in favour of FA&CAO/CN/MS (free from any encumbrance) may be accepted.

- c. The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued but before signing of the contract

agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.

- d. The value of PG to be submitted by the contractor is based on Original Contract value and shall not change due to subsequent variation(s) in the original contract value.
- e. The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- f. Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.
- g. The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
 - 1) 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.
 - 2) 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 the Engineer.
 - 3) The Contract being determined or rescinded under Clause 62 of these conditions

2.25 PROGRAMME OF WORK EXECUTION:

- 1. Time is the essence of this contract, and the time schedule shall be strictly adhered to. The entire work as per the Contract will have to be completed within **18 Months** from the Date of issue of letter of acceptance, on a progressive basis. The Tenderer shall be responsible for the progress of work on a progressive basis from the date of issue of the acceptance letter. Since the progress of the work is critically related to the supply of material by the contractor, **he shall be responsible for the supply of**

duly inspected Material on a progressive basis so that the work can be completed within the **stipulated period**.

2. The contractor shall employ an adequate number of supervisors, technicians, and supporting staff commensurate with the working area available. He will also arrange required materials and equipment to complete the job most expeditiously to ensure that the work is completed within the stipulated period and to the entire satisfaction of the Engineer in charge.
3. The Contractor is expected to have worked out a detailed program for execution of the work well before the issue of "Letter of Acceptance" by Railway and submit a Detailed Time and Activity Schedule within 15 days from issue of LOA, for the execution of work aiming at completing the entire work within the stipulated completion time. The Engineer-In-Charge shall thereafter approve this schedule.
4. Railway reserves the right to modify the schedule while approving the same as well as at any stage during execution if the situation so warrants. Once approved, in the event of any slippage from the time schedule, especially when resulting in time over-run of the work, the contractor shall submit a revised schedule duly justifying the circumstances without any delay. The Engineer-In-Charge shall approve the revised schedule only when considered justified in his opinion; otherwise, it may attract penal action on the contractor as per the provision of this contract.
5. The Contractor shall be held responsible for the execution of the work according to the Programme given for the execution of the work in full compliance with the approved documents, drawings, and various clauses of technical specification and requirement. Failure to comply with any of these will be dealt with as per provisions of GCC.
6. The contractor will program 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's labour, time, etc., due to train working.
7. No facility whatsoever, e.g., provisions of approach road and provision of the temporary level crossing, etc., shall be provided by the Railway for carting materials. However, approach roads within the Railway limits can be used for carrying materials.

Setting out of Works: The Contractor shall be responsible for the correct setting out of all works in relation to original points, lines and levels of reference at his cost. The Contractor shall execute the work true to alignment, grade, levels and

dimensions as shown in the drawing and as directed by the Engineer's representative and check these at frequent intervals. The Contractor shall provide all facilities like labour and instruments and shall cooperate with the Engineer's representative for checking of all alignment, grades, levels and dimensions. If, at any time, during the progress of the works any error appears or arises in any part of the work, the Contractor, on being required to do so by the Engineer's representative shall, at his own cost rectify such errors, to the satisfaction of the Engineer's representative.

Such checking shall not absolve the Contractor of his own responsibility of maintaining accuracy in the work. The Contractor shall carefully protect and preserve all benchmarks, sight rails, pegs and other things used in setting out the work.

2.26 INSPECTION OF MATERIAL:

Manufacture premises:

1. The Inspecting authority of the equipment/materials to be supplied against this contract shall be RDSO/RITES/Consignee, which is mentioned against each schedule of work/supplies (NIT uploaded separately in IREPS) in Chapter-4 & chapter 4A of this tender document. Generally, the equipment materials to be supplied against this work with IRS/RDSO design or specification and TEC specification will be inspected by RDSO. However, suppose for any reason, inspections of materials are not undertaken by RDSO, In that case, the inspection may be carried out by RITES, or a Railway representative specifically nominated by the Railway for the work.
2. Whenever materials are inspected by Authorized Representatives of the Railways/Consignee, the Tenderer will be required to furnish manufacturers/supplier's Guarantee Certificate and performance guarantee for such items. Standard RDSO Drawing referred to in this schedule & technical specification may be collected on payment from RDSO, Lucknow by contractor, if required.
3. The Contractor shall give sufficient time notice to RDSO/RITES/Railway's representative when the material is ready for testing/inspection. All facilities as may be necessary shall be provided for carrying out the tests.
4. Materials to be supplied by Contractor shall be of best quality and shall conform to the relevant specifications, Designs and Drawings. The materials shall be procured by the Contractor/s from manufacturers of repute or their authorized dealers as approved by the Engineer-in-Charge.

5. The Contractor/s may produce test certificates from the Manufacturer, wherever called for by the Engineer-in-charge and should be handed over to Railways.
6. The contractor should procure signalling/ telecom items which appear in the RDSO approved list normally from the Part-I suppliers. The contractor shall take prior approval of the Railways before placing orders on the Contractors. In case, there are no Contractors in Part-I list, Prior approval of Railways should be obtained before placing order on Part-II Contractors.
7. The items which are included in the list of RDSO approved suppliers (Electrical Signalling items, Telecom Equipments) shall be inspected by RDSO and Mechanical Signalling items shall be inspected by RITES except petty items which shall be inspected by representative of the Engineer-in-Charge. The DWC pipes and Earth Electrodes, shall be inspected by RITES. In case the value of Electrical sigg. Items are less than Rs.Five lakh or as per latest revised policy of the Railways, the inspection shall be carried out by RITES. In exceptional cases, the consignee inspection shall be carried out by an Officer nominated by the Engineer-in-charge of the work. Even in these cases, the materials shall be procured from RDSO approved sources.
8. The details of materials / items which are to be inspected by RDSO, RITES and consignees is described in Vol II Annexure-B1. The following critical items will continue to be inspected by RDSO irrespective of its value and the inspection charges levied by RDSO/RITES will have to be borne by the contractor at the rates specified from time to time. Signalling items other than those mentioned above will be inspected by RDSO provided the order value is more than Rs.Five Lakh mentioned vide Railway Board's letter No 2000/RS(G)/379/2 Dt.06.09.2017 or as per the latest policy of Railways
9. All materials that are not covered under specification, designs and drawings of RDSO, Railway Board, etc., will be procured by the Contractor from the manufacturers of repute/their authorized dealers, after the approval of the Engineer-in-charge.
10. Materials to be supplied by the contractor shall be put up for inspection of the Engineer or his representative for checking its quality/suitability before they are finally used/ installed by the Contractor and necessary inspection certificate to be obtained. The Contractor shall therefore arrange to get the material inspected in advance, preferably in bulk and not in piece-meal. The Contractor shall give the Railway 10(Ten) days' notice, when the materials are ready for inspection.
11. Third Party Inspection (TPI) to be carried out in case of RDSO/RITES is not inspecting as per the latest policy guidelines with approval of competent authority.

2.27 INSPECTION CHARGES:

Inspection charges, if any levied by RDSO/Inspecting Agency shall be borne by the contractor. Also, the tests/analysis required from outside agencies, if any, cost of such tests/analysis shall be borne by the contractor.

2.28 MATERIALS AND WORKMANSHIP:

1. Wherever RDSO specification is prescribed for any material in the tender, the same shall have to be procured from the RDSO approved/recommended Contractors only.
2. Any material to be used for this work shall not be procured from any sources banned for business dealing with Indian Railways under any circumstances.
3. If the total value of an item to be supplied as per RDSO/IRS specification is less than Rs. 5 Lakhs (Rupees Five Lakhs only), the same shall be inspected by Consignee subject to supplies being from sources approved by RDSO. However, certain specified items irrespective of value shall invariably be inspected by RDSO as per the extant policy of Indian Railways. [Railway Board Letter No: 2000/RS (G)/379/2 Dated 06.09.2017].
4. In case any modification is required by inspection agency from RDSO to RITES/Consignee or RITES to consignee, approval will be provided by the competent authority.
5. The material should be in properly packed condition, and the consignee reserves the right to reject the material even though it was passed by RDSO/nominated inspecting authority of Railways if it is received in damaged or defective condition.
6. All materials shall be procured from the reputed manufacturers or their authorized dealers. Such materials are to be approved by the purchaser's Engineer. The Contractor may be required to furnish the manufacturer's test certificate along with manufacturer's/supplier's guarantee certificate wherever called for by the Engineer. The Railway may also inspect the material again at the Consignee depot.
7. Materials shall be procured from RDSO approved vendors as per RDSO specifications if available.
8. In case materials are to be inspected by consignee, then materials shall be supplied from the Contractors approved by not below the rank of JAG.

9. All the materials and workmanship used in this work shall be of extremely good quality and high class in every respect and is expected to give trouble-free service.

2.29 STORES - RECEIPT & ACCOUNTAL:

1. Proper requisition and receipt exchange shall be done on a suitable Proforma as mentioned in **Form No .6 & 7** (in Forms & Annexures part of Chapter - 3) between the Contractor and the Railway's authorized representative.
2. The Contractor shall issue a receipt along with the demand slip for the materials required for the work and obtain a receipt when any material is returned to stores. These transactions shall be done with the consignee.
3. All stores drawn by the contractor shall be accounted for either as installed as per recorded site measurements or as surplus stores returned to the respective Consignee (Project's stores).
4. On submitting every "on account bill," the contractor has to submit a material statement duly signed by CDMS, Concerned SSE-Incharge, and contractor to the bill passing authority.

2.30 LOADING/UNLOADING & TRANSPORTATION OF MATERIAL:

1. The Contractor shall deliver the material at the Depot of respective Consignees. Material to be supplied by Railways for the execution of the work and the material delivered by the Contractor will be transported from the Consignee depot or any other nominated depot notified by Railway to site by the Contractor at his own cost. This includes loading and unloading materials at the consignee depot and site by the contractor.
2. Alternatively, suppose the worksite is ready, and work is in progress, physically. In that case, the materials can be brought to the site directly and supplied with prior approval of the Engineer incharge after appropriate accounting by the consignee. Empty cable drums and balance materials after completion of work, if any, should be returned at the nominated Depot i.e., CDMS/Stores/TPJ by the contractor at his own cost. The contractor will have to furnish an Indemnity Bond **Form No.5** (in part of Chapter-3) for the Security of the Railway material issued to him.
3. Indemnity Bond will be released after commissioning of work and when the contractor returns all balance material. The security of the material brought to the site of work will remain with the Contractor till commissioning.

4. The contractor shall bear the cost of transit insurance required as per rules.
5. The nominated depot from where Contractor has to collect the materials is from Perambur, Tiruchirappalli project stores and Workshop/PTJ. No payment will be made to the contractor for shifting materials from the nominated depot to the worksite.
6. The material issued to the contractor, if found defective/unserviceable after transporting at the site, shall be transported & handed over to the Consignee Depot by the contractor without any extra cost.

2.31 SECURITY OF MATERIAL:

Once the material is handed over to the contractor, the contractor shall be responsible for the security of material irrespective of the fact that the material is kept in Railway premises. The contractor shall make adequate arrangements at site as deemed necessary for guarding the same from the thefts or damage of any sort. In the event of any loss, the contractor shall be responsible to that effect and shall execute an indemnity bond for the materials (FORM No.5), which has been supplied by the Railway and will remain in his custody. The cost of stores lost/damaged shall be realized by the Railway out of any payments due to the contractor in this contract or from any other contract executed by Govt. of India.

2.32 RETURN OF SURPLUS STORES:

The Contractor shall return the stores at his own cost found to be surplus to Consignee. The contractor shall account for all material that is issued to him. A register shall be maintained at site which shall be signed by the Contractor as a token of receipt of material. All the issued material shall either be used in the installation or returned to Consignee.

2.33 RETURN OF RELEASED STORES:

Released material/equipment shall be returned and deposited to Consignee in systematic manner. Proper care of material shall be taken while releasing & transporting the stores.

2.34 PACKING AND FORWARDING:

1. Packing shall conform to Para 14 of RDSO Specification No RDSO/SPN/144/2006 Ver 2.
2. The contractor shall pack at his own cost the stores sufficiently and properly for transit by Rail/Road, Air, and/or Sea as provided in the contract to ensure their being free from loss or damage on arrival at their destination.

3. All containers (including packing cases, boxes, tins, drums, and wrappings) in which the contractor supplies the stores shall be considered as non-returnable and their cost as deemed to have been included in the contractor price.
4. Each packing delivered under the contract shall be marked by the contractor at his own expenses. Such marking shall be distinct (all previous irrelevant marking being carefully obliterated and shall clearly indicate the description and quantity of stores, the name and address of the Contractor with a distinctive number of marks sufficient for the purpose of identification). All marking shall be carried out with such material as may be found satisfactory by the inspecting officer as regard quickness of drying, fastness and indelibility. Materials and Equipment meant for each section shall be separately packed in separate boxes and marked with name of section, consignee and Railway.
5. The inspecting officer may reject the store if the stores are not packed and/or marked as aforesaid and in case where the packing materials are separately prescribed, if such materials are not in accordance with the term of contract such of the stores by the inspecting officer shall be binding on the contractor and he shall arrange for removal of such rejected store within 7 days.

2.35 FREIGHT AND INSURANCE:

The freight and insurance cost for the material to the site of work shall be borne by the contractor.

2.36 CONSIGNEE'S RIGHT OF REJECTION:

1. Notwithstanding any approval which the Inspecting Officer may have given in respect of the stores or any materials or the work or workmanship involved in the performance of the contract (whether with or without any test carried out by the Contractor or the Inspecting Officer) and notwithstanding delivery of the stores where so provided to the interim consignee, it shall be lawful for the consignee, on behalf of the purchaser, to reject the stores or any part, portion of consignment thereof within a reasonable time after actual delivery thereof to him at the place or destination specified in the contract if such stores or part, portion of consignment thereof is not in all respects in conformity with the terms and conditions of the contract whether on account of any loss, deterioration or damage before dispatch or delivery or during transit or otherwise howsoever.
2. The Railway shall have full right to reject any material that the Railway may consider to be defective or inferior in quality of material, workmanship, and design or otherwise, not in accordance with the specifications and drawings specified by the Railway and the Railway's decision shall be final, even though they might have been inspected by

RDSO/RITES. The contractor shall remove forthwith any such material rejected and replace them promptly at his own cost.

2.37 CONSEQUENCES OF REJECTION (Rejected stores):

When any store delivery at the depots is rejected, the contractor shall remove this within 7 days, from the date of rejection. Such rejected stores shall lie at the consignee's risk from the date of rejection. If the Contractor does not remove the stores within this period, the Railway or his nominee shall have the right to dispose of such stores, as though fit, at the contractor's risk and account. The Railway shall also be entitled to recover from the contractor, handling and ground rent/demurrage and any other charges for the period during which the rejected stores are not removed after the period aforementioned.

2.38 EXECUTION OF WORKS:

2.38.1 SPECIFICATIONS, DRAWINGS:

All the work shall be executed in strict conformity to the provisions of the contract document and according to detailed drawings, specifications and instructions as may be approved from time to time by Railway and OEM, based on detailed design and engineering carried out by the contractor in line with requirements as per contract document. The contractor shall be responsible for ensuring that the work throughout is executed in the most substantial, proper and workmanlike manner with the quality of material and workmanship in strict accordance with the specifications and as per sound industrial practices and to the entire satisfaction of the Railway. In case of any doubts regarding any particulars of construction and any ambiguities in the plans, the decision of the Railway's Engineer shall be final and binding on the contractor.

Specifications, drawings, requisites and requirements referred to in the body of this specification form an essential part thereof. The sources of the drawings & specifications referred to in this Tender, can be obtained from Engineer-in-charge.

Installation shall comply with the requirements to the following Indian Railways manuals/books and respective Zonal Railway practices in vogue-Indian Railways.

- a. Signal Engineering Manual (latest edition).
- b. Indian Railways Telecom Manual
- c. Indian Railways Engineering code
- d. Indian Railways P - Way Manual
- e. Indian Railways Works Manual
- f. Indian Railways AC traction Manual
- g. General & Subsidiary Rules of Indian Railway and Southern Railway

These books are available on the Indian Railways website and in the office of CSTE/Projects/MAS, Southern Railway.

2.38.2 SUPERVISION & LABOUR:

1. Tenderer shall keep sufficient and competent staff as per G.C.C. Clause No.26 at the work site. The work shall be carried out as per Railway's extant practice.
2. Qualified Engineers may be deployed for execution of the work as per GCC conditions. Their payments/salary should not be less than the minimum wage act.

Contract Value	Deployment of Qualified Engineers			Remarks
	S&T	Civil	Electrical	
More than 25 lakhs, but less than 200 lakhs	Four qualified Diploma Holder Engineer	Two qualified Diploma Holder Engineer	One qualified Diploma Holder Engineer	In case a contractor fails to employ a qualified engineer, he shall be liable to pay an amount of Rs.25, 000/- for each month or part thereof for the default period.

3. During the execution of the works, the contractor or his representative shall not leave the site where the works are being carried out. At the site of work, the contractor shall always make available one representative who shall be approved by the Railway Administration and who shall be invested with adequate powers by the Contractor so that orders or instruction given to the said representative by the Railway Administration in writing could be considered as duly given or conveyed to the Contractor himself. Representatives of the Railway will check up the work from time to time. Supervision and Erection of work will be done by the contractors with their own labour, till completion and testing of the work.
4. The field Supervisor shall receive instructions from the Engineer-in-charge of the work or his representative at site and comply with the instructions. The Contractor shall be responsible for the compliance of such instructions.
5. If the supervisor acting on behalf of the Contractor disregards the instructions of the Railway's supervisor/representative and does not execute the work to the satisfaction of this Railway supervisor, the Railway's Engineer, in consultation with superior will

have the authority to order stoppage of work and/or ask for the replacement of the supervisor, which it shall be binding on the contractor.

The contractor shall make his own arrangement for accommodation, for his staff during installation, testing & commissioning and till completion. Water for drinking purposes if available at the station location will be given. However, Railways take no guarantee for this facility.

6. Compliance of Labour Laws: To be complied as per GCC Clause 54, 55, 55-A, 55-B, 55-C, 55-D, 57 and 59(2).

7. 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.shramikkalyan.indianrailways.gov.in'. Contractor shall register his Contractor/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:

- a. Contractor shall apply for onetime registration of his company/Contractor etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. The engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- b. Contractor once approved by any Engineer, can create a password with login ID (PAN No.) for subsequent use of the portal for all LOAs issued in his favour.
- c. The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LOA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LOA for approval of the concerned engineer. The engineer shall update (if required) and approve the details of LOA filled by the contractor within 7 days of receipt of such request.
- d. 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 Shramikkalyan portal on monthly basis.
- e. It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.

2.38.3 SAFETY OF WORK, TRAINS & PERSONNEL:

1. The contractor should abide by all the Railway regulations and also ensure that the same are followed by his representatives, agents, servants or workmen. He is therefore

bound under these clauses to give notice to them about the provision of this clause and the consequent liability of the contractor under the agreement. The contractor shall conform to all the Railway Rules relating to safety of personnel and operation of signals and points. In the A.C. electrified areas the special precautions as laid down in AC Traction Manual shall be followed.

2. No petroleum spirit within the meaning of the Indian Petroleum Act shall be stored at site or adjacent land until the approval of the Railway and necessary license under the Act has been obtained by the contractor. The tenderer shall also ensure that approval of the Engineer has been obtained for storing any other inflammable material well in advance.
3. The contractor's employees and workers shall not for any reason operate any appliances or installations of the Railway concerning the safety of train movements, but they should whenever necessary notify the qualified Railway staff who will then take necessary steps. The contractor shall also be responsible for any damage that may be caused due to the carelessness of his workmen and will bear the consequences in this regard.
4. 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. The Contractor shall do no work that may interfere with traffic until protection has been provided by the Railway and under supervision of Railway's representative. When the work is required to be carried out on the track itself or as close to the track as may pose a hazard to rail traffic, the work shall be carried out under the supervision of an authorized Railway representative Junior Engineer/Senior Section Engineer (JE/SSE). Whenever trackside work is undertaken by the contractors, areas for unloading of bulk materials should be clearly demarcated and barricades provided if necessary with the consent of the (SSE/JE) Signal/Telecom, in-charge of the work. Suitable steps shall also be taken to prevent transport vehicles and such other machinery gaining access so near the track as to threaten the safety of running trains. That, whenever it becomes inescapable to allow transport vehicles or mobile machinery to operate in close proximity to the running lines the maximum moving dimensions for the said lines shall be adequately protected by fencing or such other suitable measures. No vehicle will normally be permitted to play adjacent to the running lines.
5. 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 travelling on the line on account of his truck/vehicles having been allowed to ply on the bank.

6. The contractor shall take all precautionary measures in order to ensure protection of his own personnel moving about or working on the Railway premises and shall have to conform to the Rules and Regulations of the Railway.
7. Suitable ladders for climbing the post and slings for supporting men on the post shall be used. Ropes as 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 arrangements are inadequate or insufficient, the contractor shall take immediate corrective action as directed by the Railway's representative at site. However, it is not obligatory on the part of the Railways to give such directions. The issue or non-issue of any direction in the matter by the Railway shall in no way absolve the contractor of his sole responsibility to adopt safe working methods. The stone-breakers, if employed, shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
8. Necessary personal safety equipment as considered adequate by the Engineer-in – Charge should be kept available by the contractor for the use of the persons employed on the site and maintained in condition suitable for immediate use and the contractor should take adequate steps, to ensure proper use of equipment by those concerned. When not in use, electrical apparatus shall be switched off. No paint containing lead or lead products shall be used except in the form of paste or ready mixed paints. Suitable face masks should be supplied by the contractor for use by the workers when paint is applied in the form of spray.
9. Within the station premises and especially on passenger platforms, the contractor shall ensure sufficient free space for movement of passenger traffic. He must cover and protect the excavations carried out in such areas with a view to avoid any accidents.
10. In case of an accident of any nature, the contractor will indemnify the Railway for any losses caused by him as a result of the accident.
11. The contractor will not be entitled to any compensation for any damage or loss sustained by him during execution of the work, for any idle labour transport or any loss or deterioration of the material or tools.
12. During testing and commissioning, signal aspects shall be displayed or changed and slot given to adjoining cabin/ground frame only as authorized by Railway. During testing and commissioning, point setting shall be changed only as authorized by the Railway. The contractor shall do no work that may interfere with traffic until protections have been provided by the Railway and under the supervision of Railway's representative. While testing and commissioning of the system, the contractor shall not work without authorization from the Railway's Engineer in-charge of the work.

13. The contractor shall also be responsible for any damage that he may cause due to the carelessness of his workmen and will bear the consequences in this regard.

2.38.4 EMERGENCY WORKS:

In the event of any accident or failure occurring in or about the work or arising out of or in connection with the construction, completion or maintenance of the works which in the opinion of the Engineer requires immediate attention, the Railway may bring its own workmen or other agency to execute or partly execute the necessary work or carry out repairs if the Engineer considers that the contractor(s) is/are not in a position to do so in time and charge the cost thereof to the contractor, as to be determined by the Railway.

2.38.5 NIGHT WORKS:

Notwithstanding the provision in the General Conditions of Contract, if the Engineer is satisfied that the work is not likely to be completed in time, except by resorting to night work, he may order the contractor(s) to carry out the works even at night without conferring any right on the contractor for claiming any extra payment for the same. The contractor at his own cost shall make all adequate lighting arrangements and shall take precautions to avoid any mishap during night.

2.38.6 Main Power Supply

Testing of installation/equipment shall be done under supervision of Railway officials or by Railway officials themselves, from the electric supply provided by the Railways. However, for any installation activity, like drilling, soldering etc., contractor, if so desired, to use tools / machines for prolonged duration, electric power supply (230V), if available, can be arranged by the Railways on usual payment, as per extant procedure. Non-availability of Mains Power will not be a reason for the slow progress of work. If Electric Supply is not available, the contractor shall make his own arrangement i.e., by providing suitable Generator set or any other means acceptable to Railways.

2.38.7 Obligation to carry out Engineer's Instructions:

The contractor shall also satisfy the Engineer that adequate provision has been made: - To carry out his instructions fully and with promptitude. To ensure that parts required to be inspected before use are not used before inspections; and to prevent rejected parts being used in error. Where parts rejected by the inspector have been rectified or altered, such parts shall be segregated for separate inspection and approval before being used in the work.

2.39 INSPECTION OF WORKS:

1. The Engineer or his representative may inspect and test the various portions of the work at all stages and shall have full power to reject all or any portion of the work that he may consider to be defective or inferior in quality of materials, workmanship of design in comparison to what is called for in the specification. In the event of rejection of any work already executed and not in accordance with specification as in this tender and/or as determined by the Engineer or which the Contractor has been apprised, the Contractor shall carry out alterations/replacements to such works to the satisfaction of the Engineer for which no additional expenses will be borne by the Railway.
2. The responsibility of providing facilities for inspection lies with the contractor. He shall be responsible for providing required facilities i.e. tools, equipment for inspection at the place of work, for which no additional payments shall be made. For the purpose of inspection, the contractor shall make a written request for inspection of sites to be done the next day.
3. The completed installation at all stages shall be subjected to checks and tests as decided by Railways and the contractor shall be liable to remedy such defects as discovered during these checks and tests and make good all deficiencies brought out. However, complete installation will be taken over finally on completion of the full system. It will be the responsibility of the contractor to rectify any discrepancy noticed within a reasonable period from the date the complete system is taken over. For the purpose of taking over, joint inspection will be carried out by a nominated representative of the Railway.
4. The contractor will be called upon to pay all the expenses incurred by the Railway in respect of any work found to be defective or of inferior quality, adulterated or otherwise unacceptable.
5. During the execution of the contract, samples may be taken for the purpose of test and/or analysis under the conditions laid down in specification, such samples to be prepared for testing and forwarded free of all cost to the Railway.
6. Before the cables are actually laid, the Railway's representative and the Engineer's representative shall jointly inspect the quality and depth of trenches, chases, quality of bricks and arrangements for tamped filling. The measurement of length for all these items, which is found to be suitable, will be recorded by the Engineer's representative who will permit the laying of cables after issuing the certificates that the above works have been done as per required Specifications.

7. SITE ORDER BOOK:

An Inspection Register/Site Order book shall be maintained at the site of work by the contractor, wherein the Engineer in-charge of the work or his executive subordinate shall record instructions regarding the working etc. It is expected that the Contractor or his representative at the site shall note such instructions whenever asked upon to do so and take action accordingly. His non-noting the logbook entries shall not be considered sufficient grounds for non-compliance of the instructions.

8. This register shall have made entries on a day-to-day basis regarding the progress of work. Records should also be kept with the joint signature of Railways & Contractors representative for all release material too. This should be produced during the inspection & check of the Railway engineer in charge or his authorised representative along with drawing showing new installation locations.

2.40 PROGRESS REPORTING:

1. The contractor shall submit to Railways at his own cost periodic progress reports at regular intervals regarding the state and progress of work. The details and pro-forma of the report will mutually be agreed after award of the Contract. Such reports shall be for weekly work progress (man power, equipment and work development) and monthly progress review reports. All actions as directed by Railway's representative to such reports shall be promptly attended to by Contractor.
2. The purchaser's engineer shall also conduct monthly meetings with the contractor to assess and review the programme of works. The action proposed to progress the work as planned, difficulties, assistance required etc. shall be clearly brought out and remedial action taken. The minutes of these meetings shall be jointly signed by the Railway and contractor.

2.41 CLEARANCE OF SITE:

2.41.1 Contractor at his own expenses clean the site, set out all works and provide all necessary labours, pits, string, steel to enable the Railways or any of his representatives to check all setting out and the contractor will correct all errors at his own expenses.

2.41.2 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 obstruction of all kinds according to the instructions of the Railway's 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 given to the Contractor.

2.41.3 Offloading of Part(s) of Work: At the final stage of completion/ commissioning of work, in case the contractor fails to complete the final part(s) of the work and the value of such part(s) of the work is limited to 5% of the original contract value, the Engineer may allow/decide for offloading of such part(s) of works, either after the Contractor's request in writing to do so or after serving a 14 (Fourteen) days suo-moto notice (as per annexure-VIIA of GCC), if the Engineer is of the opinion that :-

1. Such Offloading of works (up to 5% of original contract value) would enable success.
2. Termination/ Part termination of the contract at this stage is not be in the interest of the Railway/work;, and
3. The anticipated additional cost for execution of such works through other mode would not be substantial and can be recovered from the pending dues of the contractor; three years

The Contractor shall be informed, in due course, by the Engineer of the mode and cost of execution of such offloaded work through other agency (ies) (as per annexure- VIIB of GCC). The extra expenditure incurred in execution of the offloaded work, shall be recovered from subsequent Bill(s) or any other dues of the Contractor, but not exceeding the value of Performance Guarantee available in the contract. There shall be no other repercussion of such offloading on execution of the balance contract. The Contractor shall have no claim on account of above mentioned offloading of works.

2.42 COMPLETION OF WORKS:

As soon as, in the opinion of the Engineer, the work in a particular division has been completed (i.e., which will be considered as the date of commissioning of the complete system for that division), the Engineer shall issue a Completion Certificate for that division, duly indicating the date of completion. The warranty period for the work in respective division shall commence from the date of completion mentioned in the Completion Certificate.

The certificate of completion in respect of the works shall not absolve the contractor from his liability to make good any defects imperfections, shrinkages or faults which may appear during the period of maintenance specified in the tender arising in the opinion of the Engineer from materials or workmanship not in accordance with the drawings or specifications or instruction of the Engineer, which defects, imperfections, shrinkages or faults shall upon the direction in writing of the Engineer be amended and made good by the contractor at his own cost; and in case of default on the part of contractor, the Engineer may employ labour and materials or appoint another contractor to amend and make good such defects, imperfections, shrinkages and faults and all expenses consequent thereon

and incidental thereto shall be borne by the contractor and shall be recoverable from any moneys due to him under the contract.

2.43 WARRANTY:

The Contractor is responsible for Warranty of all the materials supplied and installed by him for a period of **One year** from date of issue of completion certificate, which will be considered as date of commissioning of complete system. The completion certificate will be issued by a JAG officer after obtaining a "No Due" certificate from SSE-Incharge stating that all works are completed in all respects. The following items shall have Warranty as specified below:

The contractor shall comply with the Precommissioning checklist and provide OEM Certificate for all earthing and bonding installations provided for the work and Warranty for special earth (RDSO/SPN/197/2016or latest) for 5 years.

Warranty of all the main LED signals is 60 months as per the clause 12 of RDSO specification RDSO/SPN/199/2025 Rev 1.2 dated 15.7.25.

Warranty for SMPS based IPS is Four (04) years from the date of supply as per clause 4.1 of RDSO/SPN/165/2023 Ver. 4.0 dated 20.06.2024

During the period of warranty contractor shall be responsible for:

- 1) The contractor shall guarantee that all material & equipment to be supplied and installed as per this contract shall be free from defect and fault in design, material, workmanship and manufacture and shall be of the highest grade and consistent with established and generally accepted standard for materials of the type ordered and in full conformity with the contract specification.
- 2) The contractor shall be responsible to the extent expressed in this clause for any defects that may develop under the conditions provided for by the contractor and under proper use, arising from faulty materials, design or workmanship on the plant or from faulty erection of the equipment under the supervision of the contractor, but not to do so by the purchaser who shall state in writing in what the portion is faulty.
- 3) The Contractor shall remain responsible to arrange replacement and for setting right at his own cost any equipment supplied by him which is of defective manufacture or defective design or defective material/component become unworkable due to any cause whatsoever. The decision to attend to any damage or defect in work shall be final and binding on the contractor.
- 4) If it becomes necessary for the contractor to replace or renew any defective portions of the system under this clause, the **provision of the above clauses shall apply to the**

replaced/renewed equipment for the period of six months from the date of such replacement or renewal or until date of warranty period whichever may be later. If any defect is not remedied within reasonable time, the Railway may proceed to do the work at contractor's risk and expenses, but without prejudice to any other rights, which the Railway may have against the contractor in respect of such defects.

- 5) If the replacement or renewals are of such a character as may affect the efficiency of the system, **the Railway shall have the right to give the contractor within one month from such replacement or renewal notice in writing that test on completion will be carried out at his cost.** Should such tests show that the plant sustains the guarantee in the contract; the cost of the tests shall be borne by the purchaser. Should the guarantees not be sustained, the cost of the tests shall be borne by the contractor.
- 6) Until the completion of work, the contractor shall have the right to entry with permission of Railways, at his own risk and representatives, whose names shall have previously been communicated, in writing, to the Railways at all reasonable working hours upon all necessary parts of the works for the purpose of inspecting the working and the records of the plant and taking notes there from and if he desires at his own risk and expense, making any tests, subject to the approval of the purchaser which shall not be unreasonably withheld.
- 7) All inspections, replacement or renewals carried out by the Contractor during the maintenance period shall be subject to the same condition of the contract.
- 8) All replacement and repairs and design changes that the Railway shall call upon the contractor **to deliver or perform under this warranty period shall be delivered and performed by the contractor within one month**, promptly and satisfactorily.
- 9) The decision of the Railway in regard to contractor's liability and the amount, if any, payable under this warranty shall be final and conclusive.
- 10) During failure analysis/debugging, if any design deficiency is pointed out by the Railway, the contractor shall rectify it at his own cost.
- 11) The field equipment will be replaced with the spare parts and failed parts must be repaired and sent within one month.

Note: The first line of maintenance/failure attendance will be done by the railway. If the above time of rectification is not complied with due to a failure not caused by the railway, then the applicable money will be deducted from the S.D amount. The decision to deduct

money from the S.D against non-compliance at the time of rectification will be decided by the engineer in-charge depending upon the merit of the case. The engineer in-charge's decision in this regard will be final.

2.43.1 Comprehensive Annual Maintenance Contract:

1. The tenderer shall quote for FIVE years comprehensive Annual Maintenance Contract (CAMC) for EOLB and ESB of LC Gates. The cost shall be quoted including spare parts to be utilized during the maintenance period and the engineers' visits as per requirement duly taking care of the existing GST Act. No separate charges shall be paid for engineers' visits for attending to faults and repairs or towards the supply of spare parts. The quoted CAMC cost for the entire Five-year period shall be considered to determine the standing of each offer. Tenderer must enter CAMC rates for FIVE years against Schedule-C in IREPS. The tender will be summarily rejected if the CAMC rates are not uploaded or partially uploaded in the IREPS.
2. For normal day-to-day maintenance and diagnosis to the extent possible by the Railway, the supplier shall provide the necessary guideline.
3. Manpower deployment and Spare deployment have to be ensured as per Division requirements.
4. This maintenance contract can be extended beyond Five years at mutually agreed terms and conditions if required by the Railways.
5. All the spares required during CAMC, minimum inventory of the population are detailed in chapter 5.
6. Comprehensive AMC shall include Preventive maintenance, Proactive maintenance, Breakdown maintenance, and Predictive maintenance of both software and hardware of the EI equipment installed under this tender.
7. "In case of failure to comply with the above regarding the first preventive maintenance, the necessary penalty clause may also be clearly stated in the tender condition."
8. The scope of the Comprehensive AMC covers:
 - a. Maintenance and upkeep of all EOLB,SLB and its accessories of subject LC gates.
 - b. Attending to Breakdowns
 - c. Periodical Preventive Maintenance (Monthly)
 - d. Repair/ replacement of defective components / subsystems/part of EOLB & SLB of respective LC gates.
9. The terms and conditions of CAMC are enclosed separately as Chapter-5 to this tender document.

2.43.2 Training:

1. The tenderer shall undertake to impart training to Railway staff on MSDAC, IPS, AFDAS & RTU either at site of installation or their factory premises/ at an reputed institution 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 commissioning of System. The training courses should include hands-on equipment, visits to installations apart from formal classes.
2. The OEM should train the Railway personnel to such level of proficiency that they may carry out changes in Servers/Consoles or other OEM specialized systems without the help of OEM.
3. The training course to be conducted at the manufacturing facilities shall be designed to train the trainees in all aspects of System engineering, equipment operation, installation and functional details, theory of operation of equipment, troubleshooting and familiarization with the equipment at card and component level.
4. All equipment used for training shall be identical to those quoted and supplied for site installation in hardware and software versions.
5. Expenses on travel (Mode-Train) for the Railway Staff will be borne by Railway.
6. 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.
7. 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.
8. CD/DVD/USB storage made with the specific intent of giving training on the theory and maintenance of equipment shall also be supplied by the contractor.
9. Training of personnel on-site/at OEM/OEM authorized training partner premises, during the installation, maintenance and supervision period. **Minimum 5 Man-weeks training to be provided on MSDAC, IPS, AFDAS & RTU.** Man-Week i.e. One week training for one personnel or as desired by the Railway.

2.44 VARIATION IN CONTRACT QUANTITIES:

In addition to Clause 42 of GCC. The procedure detailed below shall be adopted for dealing with variations in quantities during execution of works contracts.

Individual Items in the contract shall be operated with quantity variation of plus or minus 25%, and payment would be made as per the agreement rate. In case an increase in the quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, then the same shall be executed at the following rates.

- a. 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 up to the limit of 25% variation in quantity of individual items of works.
- b. Quantities operated in excess of 125%, but up to 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.
- c. Quantities operated in excess of 140%, but up to 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.
- d. Variation in quantities of individual items beyond 150% will be avoided and permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- e. 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). For this purpose, a minor value item is defined as an item whose original agreement value is less than 1 % of the total original contract value.

- i. Quantities operated up to 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 permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- f. No variation limit shall apply in the case of foundation work, and the Contractor shall carry out the work at agreed rates irrespective of any variation.
 - g. As far as Standard SOR items are concerned, the variation limit of 25% would apply to the value of the SOR schedule(s) as a whole and not on individual SOR items. However, in the case of NS items, the limit of 25% would apply on the individual items irrespective of quoting the rate (single percentage rate or individual item rate).

- h. Execution of quantities beyond 150% of the overall agreement value should not be permitted and, if found necessary, should be only by negotiating with a contractor, with the prior personal concurrence of Principal FA&CAO/FA&CAO(C) and approval of General Manager
- i. In cases where the decrease is involved during execution of the contract:
 - a. The contract signing authority can decrease the quantities of items up to 25% of the individual item.
 - b. For a decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than the rank of S.A. Grade may be taken after obtaining “No Claim Certificate” from the contractor and with finance concurrence.

Note:

- 1) In case of need for the introduction of any new items (New NS Items) not covered in the schedule of quantities and rates to provide for any additional activity not covered in the original scope of contract shall be done at the rates, terms, and conditions mutually decided between Railway and contractor. The assessment of rates for extra item(s) shall be arrived at based on the prevailing market rates of labour, machinery & materials and by taking guidance from the following documents in order of priority:
 - i) S&T SOR from Different Zonal Railways if available
 - ii) Market Analysis
- 2) In case there is a need for introducing SOR items that are originally not available in the tender and further required being included as per site conditions. Then the rate for such New SOR items shall be applicable at the same originally accepted percentage by the contractor and Railways.

2.45 PRICE VARIATION CLAUSE:

Price Variation Clause (PVC) shall be applicable for this tender as per the GCC 2022 and with latest amendments. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments. Under clause 46A of GCC 2022(i.e., shall be excluded from the gross value of the work for the purpose of price variation):

- a. Materials supplied by Railway to the Contractors, either free or at fixed rate.

- b. Any extra item(s) included in subsequent variation falling outside the purview of the Bill(s) of Quantities of tender, under clause 39. (1)(b) Of these Standard General Conditions of Contract, unless applicability of PVC and 'Base Month' has been specially agreed, while fixing the rates of such extra item(s).

NOTE: The percentage of various components relevant to this work shall be determined during the operation of the Price Variation Clause (PVC), subject to vetting by the Finance Department. This shall apply to all items/Bills of Quantities specified in the tender document. The final percentages shall be fixed in accordance with the tables and classifications stipulated in the General Conditions of Contract (GCC).

2.46 RIGHT OF RAILWAYS TO KEEP BACK FROM THE CONTRACT ANY PORTION OF WORK:

The successful tenderer will, however, have no claim or right in the execution of work which in the opinion of the Engineer should be carried out departmentally or otherwise, and the Railway reserves the right to keep back from the contract and carry out the work or any portion of work through any other agency, it may think without assigning any reason, any time after the acceptance of the tender. Therefore, no claim for compensation/loss or whatsoever on this account will be entertained by the Railway. In case if tender is accepted in part by Railway administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.

2.47 APPROVAL AND MEASUREMENT OF WORK: (Measurement of Works by Railway only)

1. The contractor shall obtain written approval of the Railway supervisor after completion of the various sub-items of each work mentioned in the schedule. The contractor should ensure that correct measurements have been made for such work which are not possible to measure subsequently and shall remain hidden. E.g. Measurement of cable trench before laying of cables and back filling.
2. The contractor shall sign the measurement book as a token of acceptance of the measurement entered by the supervisor in-charge of the work.
3. **MEANING AND INTERPRETATION BY RAILWAY TO BE FINAL:** All measurements, method of measurement, meaning and intent of specifications and interpretation of Special Conditions of Contract, given and made by the Railways or by the Railway's Engineer shall be final and binding and shall be considered "excepted matter" (matters not arbitral) in terms of conditions laid down in the General Conditions of Contract.

4. The date and time on which 'on account' or 'final' measurements are to be made shall be communicated to the Contractor who shall be present at the site and shall sign the results of the measurements (which shall also be signed by the Engineer or the Engineer's representative) recorded in the official measurements book as an acknowledgement of his acceptance of the accuracy of the measurements. Failing the Contractor's attendance, the work may be measured up in his absence and such measurements shall, notwithstanding such absence, be binding upon the Contractor whether or not he shall have signed the measurement books provided always that any objection made by him to measurement shall be duly investigated and considered in the manner set out below:
 - a) It shall be open to the Contractor to take specific objection to any recorded measurements or Classification on any ground within seven days of the date of such measurements. Any re-measurement taken by the Engineer or the Engineer's representative in the presence of the Contractor or in his absence after due notice has been given to him in consequence of objection made by the Contractor shall be final and binding on the Contractor and no claim whatsoever shall thereafter be entertained regarding the accuracy and Classification of the measurements.
 - b) If an objection raised by the Contractor is found by the Engineer to be incorrect the Contractor shall be liable to pay the actual expenses incurred in measurements.

2.48 EXTENSION OF COMPLETION PERIOD:

Extension to the contract will be granted by Railways as per Clause of GCC 17-A, B & C including its correction slips.

Note: In case Extension for Delay is due to Railways i.e., Clause 17A, then Railways may grant such extension or extensions of the completion date as may be considered reasonable. The Contractor shall indicate the period for which the work is likely to be delayed and shall seek extension of time as may be considered necessary under clause 17A (i) or/and 17A (ii) or/ and 17A (iii) above, as soon as the cause thereof shall arise and, in any case, not less than 15 days before the expiry of the date fixed for completion of the works. The Engineer shall consider the same and shall grant and communicate such extension of time as in his opinion is reasonable having regard to the nature and period of delay and the type and quantum of work affected thereby. No other compensation shall be payable for works carried forward to the extended period of time; the same rates, terms and conditions of contract being applicable, as if such extended period of time was originally provided in the original contract itself. The non-submission of request for extension or submission of request within less than 15 days before the expiry of the date fixed for completion of the works, shall make him ineligible for extension under these sub clauses, subject to final decision of Engineer.

Bonus for Early Completion of work: value more than Rs.50 crore and original period of completion 18 months or more, when there is no reduction in original scope of work by more than 10%, and no extension granted on either railway or Contractor's account, Contractor shall be entitled for a bonus of 1% for each 30 days early completion of work. The period of less than 30 days shall be ignored while working out the bonus. The maximum bonus shall be limited to 5% of original contract value. Bonus the completion date shall be reckoned as the date of issuance of completion certificate by Engineer. (Not applicable since the published tender value is less than 50Cr.)

2.49 LOSS SUSTAINED DUE TO DEFAULT AND DELAY:

In the event of any loss to the Railways on account of execution and/or delay in completion of the work or any part thereof by agencies engaged by the contractor, the contractor shall be liable to reimburse the loss to purchaser without prejudice to the other rights and remedies of the purchaser, and the reimbursement in full or in part as the case may be, shall be met, at the option of the purchaser from out of all or any of the following sources viz:

- i) Any amount due and payable to the contractor by the purchaser on any account whatsoever;
- ii) The Contractor's security deposit in hands of the purchaser as far as available, and any other assets whatsoever of the contractor;

In the event of reimbursement from out of sources (i) and/or (ii) above mentioned, the Railway shall have the right of appropriation suo-moto.

2.50 CONTRACTOR'S LIABILITIES FOR COST AND DAMAGES

Withholding and lien regarding sums claimed will be applicable as per GCC 2022 Clause 52 & 52-A along with its latest correction slips.

2.51 SYSTEM OF QUOTING RATES:

The Tender consists of Seven Schedules i.e.

Schedules	System of Quoting Rates
Schedule-A (S & T SOR)	Single Percentage at schedule
Schedule-B (S&T NS ITEMS)	Single Percentage at schedule
Schedule-C(CAMC)	Single Percentage at schedule
Schedule-D1(Engineering DSR-2021)	Single Percentage at schedule
Schedule-D2(Engineering DSR-2021)	Single Percentage at schedule
Schedule-D3(Engg NS Items)	Single Percentage at schedule

Schedule-E1(Electrical-NS Items)	Single Percentage at schedule
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The prices quoted by the Tenderer shall include the prices of materials including all incidental charges for transport, packing, loading/unloading and handling of materials, cost for arranging dispatch by rail/road direct from manufacturer's premises and completing all necessary formalities in all respects. The prices shall include all taxes, duties, insurance, Royalty, land levies applicable to this Works Contract. Therefore, tenderer should quote their prices taking into account the rate of GST as applicable for this contract as per extant Government orders from time to time.

- a) The Unit prices offered against the various items in schedules will include beside labour the following elements of cost:-
- Cost of all materials required for preparing the cable routes, laying the cables and all other incidentals connected therewith excluding the materials supplied by the Railways.
 - Special tools & installation materials for cable laying etc.,
 - Cost of transportation of material, supplied by the Railway from place of delivery to the site of work.
 - Return of released materials, left over cables and other materials from the site of work and handing over to the Engineer at specified locations or stores depot.
 - Return of damaged materials due to transportation.
 - Cost of preparation of detailed documentation, completion plans/drawings.
 - All other miscellaneous expenses necessary for the execution of work and fulfilment of contractual obligation.
 - Conditions for reimbursements of levy/tax/cess if levied after receipt of tenders.
- b) 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 entered in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the standard GCC for the completion of works to the entire satisfaction of the engineer.
- c) 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 shall ensure that full benefit of input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.

- d) 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.
- e) 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.
- f) Contractor shall be liable to pay/refund the amount collected as GST to the Indian Railways along with interest and penalties, if any imposed by the authorities, in case GST input tax credit of Indian Railways is denied/rejected by the tax authorities due to reasons mentioned below but not limited to:
- Wrong/incorrect invoices issued by Contractor ;
 - No-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.

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.

- g) When work is tendered for by a Contractor or company, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.
- h) The Railway will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the Contractor 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.

2.52 TERMS OF PAYMENT:

The Contractor will be entitled to be paid from time to time by way of "On Account payment" for supply of materials and works as in the opinion of the engineer who has executed in terms of the contract.

All bills shall be subject to any deduction or recovery which the Railway may be entitled to make under contract.

The Contractor shall be entitled to be paid from time to time by way of "On Account" payment as per clause 46(i) of General Conditions of Contract. While processing payment of any 'On Account Bill' 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 Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

Note: Payment(s) of Advances are applicable in the contract, as mentioned in the Tender Documents at Form no. 11 para 19, Railway shall make payment(s) of Interest bearing advances, on the request of contractor. Mobilisation advance shall be made as per clause 46.4 of GCC 2022 or latest. The payment and recovery of such Advances shall be made as under:

2.52.1 ON ACCOUNT PAYMENT (S & T Works)

Such "On Account Payments" will be made to supply equipment materials indicated in the supply schedule on receipt of materials in good condition at the Stores of CDMS/Stores/Project/TPJ.

a) Supply Items:

For supply items of tender, Schedule **90% (Ninety Percent)** of the value of each consignment shall be paid **on receipt of materials at consignee store depot and production of the following documents:**

1. Store receipt certificate issued by consignee.
2. Original Inspection certificate issued by Inspecting Official viz.RDSO/RITES/Railway Representative or Inspection Waiver Certificate issued by the competent authority.
3. Manufacturer's certificate for the equipment that the materials are in according to the contract specifications.
4. Challan/Invoice in duplicate. The payment of supply items should be accepted as per the time frame mentioned in SCC.

The contractor has to furnish an indemnity bond see **Form No.5** (in Forms & Annexures part of Chapter - 3) before payment is claimed, indemnifying the Railway Administration until completion of the work, against all damages, costs, charges, expenses, loss, and liability, which the Railways may sustain, incur or be put to, by reasons or in subsequence directly or indirectly due to the Contractor not fulfilling the portion of the Contract involving the installation, testing and commissioning of the items supplied by the Contractor.

5% of the value of material shall be paid after successful installation and testing of the equipment, certified by a Railway representative.

5% value of the supply items shall be paid in the final bill (as per GCC Para.51 (1)).

b) Installation Items:

90% of the value of installation rate as per agreement shall be paid as on accounts bills only **on production of certificate by the site engineer** that the relevant portion of the installation has been completed.

5% of the value of installation rate as per agreement shall be paid after successful submission of all "As-Made" documents.

5% value of installation rate as per agreement shall be paid in the final bill (as per GCC Para.51 (1)).

c) Supply and Installation of Items:

70% of the value of material as per agreement shall be paid as on accounts bills only **on production of the certificate as brought out in para above.**

20% of the value of material as per agreement shall be paid after successful completion of the installation of the work.

5% of the material value as per agreement shall be paid after successfully submitting all “As-Made” documents.

5% value of material as per agreement shall be paid in the final bill (as per GCC Para.51 (1)).

d) For Testing & Commissioning Items:

95% of the value of the item commissioned shall be paid after successful completion /commissioning of the system by the Railway’s representative.

5% value of the item commissioned shall be paid in the final bill (as per GCC Para.51 (1)).

e) For As-Made Documents:

95% of the value of the item supplied shall be paid after certification by Railway’s Representative.

5% value of the item supplied shall be paid in the final bill (as per GCC Para.51 (1)).

f) For submission of documents:

- i. 30% of the value shall be paid after Submission of SWR Copies
- ii. 30% of the value shall be paid after Submission of TSAA Documents
- iii. 20% of the value shall be paid after the Submission of Apprc Diagrams and Blueprint Copies.
- iv. 20% of the value shall be paid after Submission of NI Drawings/Plans

g) For CAMC: Quarterly Payment.

Note: The CAMC shall come into force immediately after expiry of one year warranty period. The Security Deposit shall be released only after fresh PG for cost of the CAMC is submitted apart from other conditions to be fulfilled.

2.52.2 ON ACCOUNT & Final PAYMENT-Engineering and Electrical/Gen works:

Payment shall be done as per GCC 2022 and its latest correction slips and GST conditions at the time of payment.

On account/Stage payment of individual schedules shall be done after inspection by the Railway Engineer/Representative as detailed in Chapter-4B & 4C.

2.53 FINAL PAYMENT:

- i. Final payment of 5% (Five Percent) of contract value shall be made as per para 51(1) of GCC.
- ii. For releasing of Final Bill, 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 Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

On the basis of (i), (ii) and (iii) above for all the works in all the sections covered in this contract, and reconciliation of materials issued, the final bill for the balance payment for each item of work shall be submitted by the Contractor along with a clear 'No Claim Certificate '.

On the Engineer's certificate of completion in respect of the works, adjustment shall be made and the balance of account based on the Engineer or the Engineer's representative's certified measurements or Engineer's certified "contractor's authorized engineer's measurements" of the total quantity of work executed by the Contractor up to the date of completion and on the rates accepted in Bill of quantities and for extra works on rates determined under Clause 39(of GCC 2022)of these Conditions shall be paid to the Contractor subject always to any deduction which may be made under these presents and further subject to the Contractor having signed delivered to the Engineer enclosing either a full account in detail of all claims he may have on the Railway in respect of the works or having delivered No Claim Certificate and the Engineer having after the receipt of such account given a certificate in writing that such claims are not covered under excepted matter i.e. Clauses 7(j), 8, 18, 22(5), 39.1, 39.2, 40A, 43(2), 45(i)(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1), 63(iv) and 63.2.11 of Standard General Conditions of Contract or in any Clause of the Special Conditions of the Contract, that the whole of the works to be done under the provisions of the Contracts have been completed, that they have been inspected by him since their completion and found to be in good and substantial order, that all properties, works and things, removed, disturbed or injured in consequence of the works have been properly replaced and made good and all expenses and demands incurred by or made upon the Railway for or in the respect of damage or loss by from or in consequence of the works, have been satisfied agreeably and in conformity with the contract.

Note:

For releasing of Final Bill, 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 Shramikkalyan portal at ‘www.shramikkalyan. indianrailways.gov.in’ till ____Month, ____Year.”

2.54 POST PAYMENT AUDIT:

It is an agreed term of contract that the Railway reserves to itself the right to carry out a post-payment audit and/ or technical examination of the works and the final bill including all supporting vouchers, abstracts etc. and to make a claim on the Contractor for the refund of any excess amount paid to him till the release of security deposit or settlement of claims, whichever is later, if as a result of such examination any overpayment to him is discovered to have been made in respect of any works done or alleged to have been done by him under the contract.

2.55 MODE OF PAYMENT TO CONTRACTOR:

All payments to contractors/suppliers will be made through the National Electronic Fund Transfer (NEFT) system. It is mandatory to enclose MANDATE Form given in (**Annexure 2** of Chapter-3 Forms & Annexure) which will be required to be filled in along with the offer. Indian Financial System Code (IFSC) of the concerned bank shall be given in the MANDATE form or through Letter Of Credit (LC) arrangements.

In case Tenderer seeks payment through Letter of Credit then the option can be exercised at the time of bidding only. Special condition for Letter of Credit in works tender vide Railway Board Lr No 2018/CE-I/CT/9 Dt 04.06.2018 are given below:

1. For all the tenders having advertised cost of Rs.10 lakhs or above, the contractor shall have the option to take payment from Railways through a letter of credit (LC) arrangement.
2. This option of taking payment through LC arrangement has to be exercised in IREPS (Indian Railway Electronic Procurement System -the e-application on which tenders are called by Railways) by the tenderer at the time of bidding itself, and the tenderer shall contractor having read over and agreed to the terms and conditions of the LC option.
3. The option so exercised, shall be an integral part of the bidder's offer.
4. The above option of taking payment through LC arrangement, once exercised by the tenderer at the time of bidding, shall be final and no change shall be permitted, thereafter, during execution of contract.
5. In case tenderer opts for payment through LC, following shall be the procedure to deal release of payment through LC:

- a. The LC shall be a sight LC.
- b. The contractor shall select his Advising/Negotiating bank for LC. The incidental cost towards issue of LC and its operation thereof shall be borne by the contractor.
- c. SBI, New Delhi, Main Branch will be the nodal branch for issue of LCs based on online requests received from Railway Accounts Units for tenders opened in financial year 2018-19. SBI branches where the respective Railway Accounts Office has its Account (local SBI branch) will be the issuance/reimbursing branch for LC issued under this arrangement. The Bank shall remain the same for this tender till completion of contract. The incidental cost @0.15% per annum of LC value, towards issue of LC and operation thereof shall be borne by the contractor and shall be recovered from his bills.
- d. The LC shall be opened initially for a duration of 180 to 365 days in consultation with the contractor. The LC shall be extended time to time as per the progress of the contract, on the request of the contractor. The value of LC to be opened initially as well as extended thereafter shall be finalised by the engineer in consultation with the contractor on the basis of expected progress of work.
- e. The LC terms and conditions shall inter-alia indemnify and save harmless the Railway from and against all losses, claims and demands of every nature and description brought or recovered against the Railways by reason of any act or omission of the contractor, his , agents or employees, in relation to the Letter of Credit (LC). All sums payable/borne by Railways on this account shall be considered as reasonable compensation and paid by the contractor.
- f. The LC terms and conditions shall inter-alia provide that Railways will issue a Document of Authorisation (format enclosed as Annexure 2) after passing the bill for completed work, to enable the contractor to claim the authorized amount from their bank.
- g. The acceptable, agreed upon document for payments to be released under the LC shall be the Document of Authorisation.
- h. The Document of Authorisation shall be issued by the Railway Accounts Office against each bill passed by Railways.
- i. On issuance of Document of Authorisation, a copy of Document of Authorisation shall be posted on IREPS for download by the contractor. A digitally signed copy of Document of Authorisation shall also be sent by Railway Accounts Office to Railway's bank(Local SBI Branch)

- j. The contractor shall take print out of the Document of Authorisation available on IREPS and present his claim to his bank (advising Bank) for necessary payments as per LC terms and conditions. The claim shall comprise a copy of Document of Authorisation, bill of exchange and Bill.
- k. The payment against LC shall be subject to verification from Railway's Bank (Local SBI Branch)
- l. The contractor's bank (advising bank) shall submit the documents to the Railway's Bank (Local SBI Branch)
- m. The railway's bank (issuing bank) shall, after verifying the claim so received w.r.t. The digitally signed Document of Authorisation received from the Railway Accounts Office, releases the payment to the contractor's bank (advising bank) for crediting the same to the contractor's account.
- n. Any number of bills can be dealt within one I.C, provided the sum total of payments to the contractor is within the amount for which LC has been opened.
- o. The LC shall be closed after the release of final payment including PVC amount, if any, to the contractor.
- p. The release of performance guarantee or security deposit shall be dealt directly by railway with the contractor i.e., not through LC.

2.56 FINAL SETTLEMENT:

On expiry of the warranty period as per Para 2.43, a fresh Performance Guarantee (PG) shall be submitted based on the value of Comprehensive Annual Maintenance Contract (CAMC) for the entire 5-year period. On submission of the required PG against CAMC, the security deposit of this tender will be refunded to the Contractor.

2.57 DEDUCTION FROM ON ACCOUNT BILLS:

All costs, damages or expenses, which Railways may have paid or Bills/Invoice of Contractor, as and when it is understood that such expenses have been incurred or paid for. All such claims of Railways shall, however, be duly supported by appropriate and certified vouchers, receipts, or explanations as are available to enable the Contractor to identify such claims.

2.58 DEDUCTION OF TAXES & PENALTIES:

Railways will deduct applicable Taxes such as GST as per extant rules and any other cess to be levied by Government of India. Wherever the law makes it statutory for the purchaser

to deduct any amount towards Tax on works contract, the same will be deducted and remitted to the concerned authority. The Contractor and all personnel employed by him shall pay such taxes like Income Tax as are payable under statutory laws of India and the Railways will not accept any liability for the same. In terms of provisions of finance act and income tax act enforce deduction of income tax, surcharge & cess at source shall be made from the contractor and the amount so deducted may be credited to the central government. All other statutory deductions, such as GST, etc., at the rates as applicable at the time of payment, shall be made both from on account bills as well as final bills as per rules in force.

Note: Income Tax and surcharge, if any, as notified by the Income Tax department will be deducted at source from each bill, unless otherwise authorized by the Income Tax Department.

- 1) 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.
- 2) 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
- 3) Deduction of Labour Cess as per extant instructions from Railway Board
- 4) Deduction of Penalties imposed on the contractor by Railway due to default in work i.e., cable cuts, damage to Railway property etc., as per extant Railway Board Guidelines.

2.59 INSURANCE:

2.59.1 INSURANCE FOR PERSONS EMPLOYED BY CONTRACTOR

The contractor shall take out and keep in force a policy or policies of insurance against all liabilities of the Contractor or the Railways at common law or under any statute in respect of accidents to persons who shall be employed by the contractor in or about the site for the purpose of carrying out the works on the site. The Contractor shall also take out and keep in force a policy or policies of Insurance against all recognized risks to their offices and depots. Such insurance shall in all respects be to the approval of the Purchaser and if he so requires in his name.

2.59.2 INSURANCE OF MATERIALS & INSTALLATIONS:

The contractor shall take out and keep in force a policy or policies of Insurance for all materials including Railway supply materials, equipment irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such works are provisionally handed over to the Railways. For this purpose, the works are deemed to have been provisionally handed over when work completion certificate is issued. The Contractor shall not be liable for losses/damages to the materials either used up in the portion of work done or his material kept for use at site, in consequence of mutiny, or other similar causes over which the Contractor has no control, and which cannot be insured. Such losses or damages shall be the liability of the Purchaser and if required by the Railways, be made good by the contractor, at the cost of the Purchaser. The Contractor should, however, ensure the stores brought to site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act in force from time to time.

It may be noted that the beneficiary of the insurance policy should be Railways, or the policies should be pledged in favour of Railway. The contractor shall keep the policy/policies current till the installations are provisionally handed over to the Railways. It may also be noted that in the event of contractor's failure to keep the policy current and alive, renewal of the policy will be done by the Railways for which the cost of the premium plus 20% of premium shall be recovered from the contractor. For the purpose of enabling the contractor to take the insurance cover in connection with this contract, the Railways' engineer will advise the approximate price of all the Railway's supply materials to the contractor.

2.60 RATES DURING NEGOTIATION:

The tenderer shall not increase his quoted rates in case the Railway Administration negotiates for reduction of rates. Such a negotiation shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted will be binding on the tenderer.

2.61 VITIATION:

In the event of vitiation occurring due to increase or decrease in quantities, among the first, second and third lowest valid tenderers etc., the vitiation shall be to the contractor's account. The total value of the work done shall be calculated at the rate offered by those tenderers and the amount payable shall be limited to the lowest aggregate value as worked out. Vitiation shall be applicable as per Railway Board Ir.no.2017/Trans/01/Policy DT 08.02.2018.

2.62 LABOUR CAMPS:

Applicable as per GCC Clause 59 (1) of GCC 2022 and its latest correction slips.

2.63 PAYMENT OF WAGES:

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.shramikkalyan.indianrailways.gov.in. Contractor shall register his Contractor/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.

- a. Contractor shall apply for one time registration of his company/Contractor etc. in the Shramikkalyan portal with requisite details subsequent to issue of letter of Acceptance. Engineer shall approve the contractor's registration on the portal within 7 days of receipt of such request.
- b. Contractor once approved by any Engineer, can create a password with login ID (PAN No.) for subsequent use of the portal for all LOA's issued in his favour.
- c. The contractor once registered on the portal shall provide details of his letter of Acceptances (LOA)/Contract Agreements on Shramikkalyan portal within 15 days of issue of any LOA/or approval of concerned engineer. The engineer shall update (if required) and approve the details of LOA filled by the contractor within 7 days of receipt of such request.
- d. After approval of LOA by Engineer, Contractor shall fill in the salient details of contract labourers engaged in the contract and ensure updating of each wage payment to them on Shramikkalyan portal on monthly basis.
- e. It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payment made thereof after each wage period.

While processing payment of any "On Account bill" or "Final bill" or release of "Advance " or "Performance Guarantee/Security deposit", contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at www.shramikkalyan.indianrailways.gov.in till _____ Month _____ Year.

2.64 ASSIGNMENT OR SUBLETTING OF CONTRACT:

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

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

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

a. (i) Total value of work to be assigned to sub-contractor(s) shall not be more than 50% of total contract value.

(ii) The sub-contractor shall have successfully completed at least one work similar to work proposed for subcontract, in last 5 years, ending date of submission of proposal by Contractor to Railway, costing not less than 35% value of work to be Sublette, through a works contract directly given to him by a Govt. Department; or by a 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, registered at least 5 years back from the date of submission of proposal by Contractor to Railway and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates.

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

(iii) There is no banning of business with the sub-contractor in force over IR.

b. The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be permitted without a formal agreement between Contractor and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractors and the terms of payment in clear & unambiguous manner.

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

- d. The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.
- e. Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of Railway, with prior intimation to Chief Engineer.
- f. The Contractor shall indemnify the railway against any claim of the subcontractor.
- g. The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractor(s), so that the execution of work is not affected in any manner whatsoever.
- h. In addition to issuance of work experience certificate to Contractor, the Engineer, when, based on documents, is satisfied that subcontracted work has been carried out by subcontractor, shall issue work experience certificate to the subcontractor also for the portion of work subcontracted and successfully completed by the sub-contractor.

Note:

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

- i. The responsibility of successful completion of work by subcontractor shall lie with the Contractor. Subcontracting will in no way relieve the Contractor to execute the work as per terms of the Contract.
- j. Further, in case an Engineer is of the view that subcontractor's performance is not satisfactory, he may instruct the Contractor to remove the subcontractor from the work and Contractor has to comply with the above instructions with due promptness. Contractor shall intimate the actual date of discontinuation of subcontract to Engineer. No claim of Contractor whatsoever on this account shall be entertained by the Railway and this shall be deemed as 'excepted matter' (matter not arbitral).

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

2.65 DETERMINATION OF CONTRACT:

Right of Railway to Determine the Contract will be dealt as per clause 61, 62 of GCC 2022.

2.66 SETTLEMENT OF DISPUTES:

Settlement of Disputes in connection with the contract shall be governed in terms of Para 63 and 64 of IRSGCC 2022(Part II) as amended from time to time through correction slips/modifications issued to IRSGCC by the Railway Board.

2.66.1 Matters Finally Determined by the Railways: (Refer GCC Clause 63)

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the contractor to the GM and the GM shall, within 120 days after receipt of the contractor's representation, make and notify decisions on all matters referred to by the contractor in writing provided that matters for which provision has been made in Clauses 8, 18, 22(5), 39, 43(2), 45(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1) to (xiii)(B) of Standard General conditions of contract or in any clause of the special conditions of contract shall be deemed as 'excepted matters' (matters not arbitrable) and decisions of the Railway authority, thereon shall be final and binding on the contractor; provided further that 'excepted matters' shall stand specifically excluded from the purview of the Arbitration clause.

2.66.2 Dispute Adjudication Board (DAB):

This clause is not applicable in the tender having advertised value more than Rs 50 Crore. (Refer Clause 63.2 of GCC 2022 for complete details). (Not applicable since the published tender value is less than 50Cr.)

2.67 FORCE MAJEURE: (Refer GCC Clause 17)

If at any time, during continuance of this Contract, the performance in whole or in part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, serious loss or damage by Fires, Floods, Earth quakes, explosions, strikes, epidemics, Quarantine restrictions, lockouts, any statute, statutory rules, regulations, order of requisitions issued by any Government Department or Competent Authority or acts of God (here-in-after referred to as events) provided, notice of the happening of any such event is given by

either party to the other within 30 days from the date of occurrence thereof neither party shall by reason of such event be entitled to terminate this Contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and works under the Contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of Engineer as to whether the works have been so resumed or not shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party.

2.68 LOCAL CONTENT / PUBLIC PROCUREMENT: (Preference to Make in India), Order 2017

2.68.1 Letter issued by Department of Industrial Promotion and Policy (DIPP) (now renamed as the Department for Promotion of Industry and Internal Trade (DPIIT)) under the Ministry of Commerce and Industry regarding PPP-MII policy issued vide their order No. **P-45021/2/2017-PP (BE- II) dated 16-09-2020**, (as amended from time to time) and Notification of DoT issued vide No. 18-10/2017-IP dated 29.08.2018, 31-08- 2021 (as amended from time to time).

2.68.2 In case a complaint is received by the procuring entity or the concerned Ministry/Department against the claim of a bidder regarding Local Content (LC) in a locally supplied telecom product, services or works, the same shall be referred to the Committee as below. The Committee should dispose of the complaint within 4 weeks, as far as possible, from the date of receipt of complaint along with all necessary documentation in support of Local Content claimed by the bidder. In terms of clause 9(d) of PPP-MII Order, the following Committee is constituted for complaints and independent verification of self-declarations and auditor's/accountant's certificates on random basis:

- i) DDG(TC), TEC, New Delhi -Chairperson - Member
- ii) Director (Technical), C-DOT - Member
- iii) Any other member(s) as co-opted by the chairperson - Member
- iv) DG, TEPC - Member
- v) Director (Finance), DoT - Member
- vi) Director, TEC - Convener

Note: Please enter the percentage of local content in the material being offered. Please enter 0 for fully imported items, and 100 for fully indigenous items. The definition and calculation of local content shall be in accordance with the Make in India policy as

incorporated in the tender conditions.

2.68.3 Provisions of Make in India Policy 2017 issued by Govt. of India, as amended from time to time, shall be followed for consideration of tenders. In this regard, the value of local content of total project in % has to be filled up in Mandatory fields of IREPS Portal. **CA certificate giving value of local content of overall tender has to be submitted along with Bid to comply Make in India Policy requirement.** Value filled up on IREPS portal will be treated as the minimum value of local content. Normally, CA certificate shall mention the same value of local content as filled up in the mandatory field, however, certificate giving values in the form of range (like more than 50% or 21 %-50%) to qualify as per relevant class will also be accepted. However, in case of difference in values in the IREPS field & in certificate, value given in CA certificate will be final. **Non submission of this certificate shall be liable for rejection.**

2.68.4 Vide point no 9.b of DPI IT letter dt: 16.09.2020, in cases of procurement for a value in excess of Rs.10 crores, the class-I local supplier/Class-II local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

2.69 POLICE VERIFICATION OF CONTRACT STAFFS:

Police Verification of antecedents of contractual staff will be applicable for this tender vide RB.DO. No.2023/Sec (CCB)/Contractual Labour DT: 10.09.2024.

2.70 PENALTY FOR DAMAGING THE CABLES:

As per RB Telecom Circular no. 09/2023, JPO for undertaking digging work in vicinity of Signalling, Electrical and Telecommunication Cables circulated vide Railway Board letter No. 2021/tele/5(2)/3-Part(1)(3425647) dt:12.06.2023 or latest RB guidelines in this regard time to time will be applicable to this tender. Penalty will be imposed for damaging of Railway signalling, Telecom, Electrical etc. as per JPO or latest circulars.

Signal /Telecom/OFC / Electrical Cable should not be damaged while executing the track crossing/ trenching/ Cable laying work and the work shall be executed after obtaining approved cable route plan/ Track crossing plan from the executing department. Contractor shall submit the tentative Cable route plan/ Track crossing plan for the particular work and approval of the same shall be obtained before the commencement of the work. If any damages to cables during the execution of work, penalty will be levied as per the RB Telecom Circular no. 09/2023, (copy enclosed separately in IREPS) and in addition to which the cost of damages for the same will be bound by the contractor

****** END OF CHAPTER – 2 ******

CHAPTER –3

FORMS &ANNEXURES

Form No.1A

TECHNICAL CREDENTIALS

{Only for technical eligibility criteria (completed similar work)}
[Refer Para 2.5.1 and 2.5.2 of Tender Document]

For the most eligible contractors who had completed similar works, Tenderers shall have to submit the following details along with tender duly attested by the tenderer. The tenderer shall also enclose relevant certificate/documents issued by the concerned authority in this regard:

1.	Name of work.	
2.	Contract awarding Authority.	
3.	Contact agreement No.	
4.	Name of the firm.	
5.	Date of award.	
6.	The original value of the contract.	
7.	The original date of completion.	
8.	(a) Whether work has been physically Completed	
	(b) Actual date of completion.	
9.	The final value of the contract.	
10.a	Final bill value(gross amount including PVC amount)	
10.b	In case the final bill is pending, the total gross amount already received including PVC amount.	
11.	Whether working as a main contractor	
12.	Whether working in an individual capacity or a Joint venture.	
13.	Whether working as a Sub - Contractor	
14.	If the work was executed as a joint venture firm, the share of each partner to be given.	
15.	The brief scope of work.	
16	Reference with Page No. in the submitted document.	

Signature by officer JAG/ above
Signature & Date

Seal

Form No.1B

TECHNICAL CREDENTIALS

{Only for Technical Eligibility Criteria (for substantially completed similar work)}
[Refer Para 2.5.1 and 2.5.2 of Tender Document]

For the most eligible contractors who had completed similar works, Tenderers shall have to submit the following details along with tender duly attested by the tenderer. The tenderer shall also enclose relevant certificate/documents issued by the concerned authority in this regard:

1.	Name of work.	
2.	Contract awarding Authority.	
3.	Contact agreement No.	
4.	Name of the firm.	
5.	Date of award.	
6.	The original value of the contract.	
7.	The original date of completion.	
8.	(a) Whether work has been Substantially completed	
9.	The present value of the contract (Excluding PVC if any)	
10.a	Gross amount received excluding PVC ending last day of the month previous to the one in which the tender was invited.	
10.b	Gross amount received including PVC ending last day of the month previous to the one in which the tender was invited.	
11.	Whether working as a main contractor	
12.	Whether working in an individual capacity or a Joint venture.	
13.	Whether working as a Sub - Contractor	
14.	If the work was executed as a joint venture firm, the share of each partner to be given.	
15.	The brief scope of work.	
16.	Reference with Page No. in the submitted document	

It is certified that there is NO proceedings of termination of contract on Contractor's default has been initiated

Signature by officer JAG/ above
Signature & Date

Seal

Form No.2

FINANCIAL CREDENTIALS & ANNUAL TURNOVER**[Refer Para 2.5.3 of Tender Document]**

Each Bidder or each member of a JV must fill in this form separately: **NAME OF BIDDER/JV PARTNER:**

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

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

SEAL AND SIGNATURE OF THE BIDDER

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

(Signature of Chartered Accountant)**Name of CA:** _____**Registration No:** _____**(Seal)**

Form No.3

STATEMENT OF DEVIATIONS
PROFORMA FOR STATEMENT OF DEVIATIONS

The following are the particulars of deviations from tender document:

Chapter No. XXX

SL No.	CLAUSE	DEVIATION	REMARKS (INCLUDING JUSTIFICATION)
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Note: Tenderers are advised to submit the deviations from the entire tender document including Annexures. Where there is no deviation, the statement should be uploaded duly signed with an endorsement indicating no deviations. In case, the deviations are not submitted by the tenderer, then it will be treated as NIL deviations to the entire tender document.

Form No.4

Proforma for Bank Guarantee Bond

The President of India,
Acting Through the FA&CAO/CN/MS,
Southern Railway,
Chennai-08.

Ref: Letter of Acceptance No _____ of Dy. CSTE/Project/TPJ, Southern Railway, Trichy-01 issued to _____ (Name of the contractor) for “ _____ (Name of Work). “

1. In consideration of the President of India acting through the - _____ (hereinafter called “the Government”) having agreed to exempt Shri _____. (Hereinafter called “the contractor”), from the demand under the terms and conditions of the agreement under execution between the president of India acting through the _____ and _____. (“The said contractor”) in terms of Letter of Acceptance No _____. DT: _____. “(Name of Work)” by the said contractor of terms and conditions contained in the said Agreement is on the production of Bank Guarantee for Rs _____ (Rupees. _____). As security towards the satisfactory performance of the work from the said contractor for compliance of his obligations in accordance with the terms and conditions in the said agreement.
2. We _____. (Indicate the name of Bank) a body corporate constituted under the Banking Companies (Acquisition and Transfer of undertaking) Act, 1970 having its corporate office at _____. Hereinafter referred to as “the bank” do hereby undertake to pay to the Government an amount not exceeding Rs _____. (Rupees _____.) Against any loss or damage caused to or suffered by or would be caused or suffered by the Government by reasons of any breach by the said contractor/s of any of the terms or conditions contained in the said agreement towards performance of the contract assigned.
3. We _____(indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs _____. (Rupees _____.)

4. We_____ (Indicate the name of the bank) further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the said Contractor / Supplier in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment made by us under this bond shall be valid discharge of our liabilities for payment there under and the said contractor / supplier shall have no claim against us for making such payment.
5. We_____ (indicate the name of the bank) agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till **The Deputy Chief Signal and Telecommunication Engineer/Project/TPJ Trichy-01**, ministry of railway certified that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the expiry of _____ we shall be discharged from all liability under this guarantee thereafter.
6. In the event of the period of the contract being extended and the contractor fails to extend the validity of this Guarantee for a further period to cover the extended period of the contract before the validity date of this Guarantee, a mere demand or claim made on the bank by the Government on or before the date of discharge of this Bond to the effect that the Contractor has failed to extend the validity of this Bond can be conclusive as regards the amount due and payable by the bank under this Guarantee unless the contractor extend the validity and the bank shall pay the amount forthwith to the Government.
7. We_____ (indicate the name of the bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of terms and conditions of the said agreement or to extend the time of performance by the said contractor(s) from time to time or to postpone from any time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement, and we shall not be relieved from our liability by reason of any such variation, or extension is granted to the said contractor or forbearance act or omissions on the part of the Government or any indulgence by the Government to the said contractor/s or by any such matter or thing whatsoever under the law relating to sureties would, but for this provision, have the effect of so relieving us.
8. This Guarantee will not be discharged due to the change in the constitution of the bank or of the said Contractor.

9. We, _____. (Indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.

10. This Guarantee shall be valid up to _____, being the contract's tentative completion period, including the maintenance period unless extended or demanded by the Government.

Notwithstanding anything contained herein,

1. Our liability under this Guarantee shall not exceed Rs _____ (Rupees. _____)

2. This Guarantee shall be valid up to _____

3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us and we receive a written claim or demand on or before _____, being the expiry of the validity period or performance Guarantee Bond. Our liability under this bank guarantee shall be fully discharged beyond the validity period, and you shall not have any claim against this Bank Guarantee.

In witness whereof the, _____. (Indicate the name of Bank) hereby affix our hand and seal on this the _____ day of _____ 2025

For _____
(Indicate the name of Bank)

WITNESSES:

Witness No.1

NAME:

ADDRESS:

PHONE:

SIGNATURE:

Witness No.2

NAME:

ADDRESS:

PHONE:

SIGNATURE:

FORM No. 5

PROFORMA FOR INDEMNITY BOND

I/We M/s._____ (hereinafter called the Contractor) which expression includes his successors and assignees in favour of the president of India acting through the **Deputy Chief Signal & Telecommunication Engineer, Project-TRICHY, No.1, Venkatesan Road, Opp to Prabhu Nursing Home,Ponnagar,Trichy-620001** (hereinafter called the Railway")

Whereas the parties hereto have entered into an agreement vide letter of Acceptance No_____ dated _____for the purpose of executing the said contract until such time the materials hereinafter mentioned are duly erected or otherwise handed over to the Railway.

Whereas I/We_____ (name of the contractors) am/are required to hold in custody for and on behalf of the railway in trust all-important and indigenous signalling material which have been handed over to me for installation of _____ (name of the work) the vide Letter of Acceptance_____ (LOA No and Date) for the purpose of executing the said contract until such time the materials are duly erected and are handed over to Railways. Whereas I/we M/s_____ (name of the contractors) are required to furnish an Indemnity Bond.

Now by this indemnity bond, we hereby undertake that we hold in my custody for and on behalf of the president of India and his property in trust of the said imported and indigenous signalling materials handed over to us for the purpose of execution of the said contract until such time the materials duly erected or otherwise handed over to the Railways.

We shall be entirely responsible for the safe custody and protection of the said important and indigenous signalling materials against all risk till they are duly erected or otherwise delivered to **Deputy Chief Signal & Telecommunication Engineer, Project-TRICHY, No.1, Venkatesan Road, Opp to Prabhu Nursing Home,Ponnagar,Trichy-620001** to any other officer as he may direct otherwise and shall indemnify the Railway against any loss, damage or deterioration in respect of the said materials which are in possession.

The said material shall at all times be open for Inspection by any authorized Officer of the Railways.

Should any loss, damage, or deterioration occur or refund becomes due, the President of India shall be entitled to recover from us the compensation for such loss or damage or deterioration the amount is to be refunded without prejudice to any other remedies available to Railways and also by deduction from any sum due or any sum which at any time

hereinafter may become due to us for this work under other Contract with any other department of the Railways.

The value of the above materials for the purpose of Indemnity that can be claimed this indemnity Bond shall not exceed Rs _____ (Rupees _____)

In the event of any loss or damage or deterioration as aforesaid, the assessment of such loss or damages or deterioration and the assessment of the compensation thereof would be made by the President of India or his authorized nominee, and the said assessment shall be final and binding upon us.

In witness whereof we partner of _____ (name of the contractor) have executed this indemnity bond on the date, month and year first written at _____ dated this _____.

Signed at _____ on this day of _____

WITNESSES:

Witness No.1

NAME:

ADDRESS:

PHONE:

SIGNATURE:

Witness No.2

NAME:

ADDRESS:

PHONE:

SIGNATURE:

Form No.6

RECEIPT CERTIFICATE (FOR SUPPLY ONLY)

From: Sr. Section Engineer (Signal/Telecom/ ----- Division No.

Date:

1. Contract No.
2. Name of Work.
3. Item No. as in Schedule of work.
4. Description of Item.
5. Material Inspected by:
6. Dispatch particular & date.
7. Qty as per dispatch particular.
8. Qty received.
9. Qty short received.
10. Condition on Stores Received.
11. Name of Contractor & Address.
12. Place of receipt.
13. Date of receipt.
14. Ledger No.
15. Name & designation of Stores In- charge

Signature of Stores –in – Charge

Form No.7

REQUISITION-CUM-RECEIPT FOR THE MATERIAL

Requisition Serial No: _____

Date: _____

To: CDMS/Stores/Proj/TPJ

Please issue the materials for the execution of the ongoing work.

Name of the work:

Name of the Contractor:

Site Supervisor: SSE in-charge:

S.No	Description of material	Unit	Scheduled/ planned Qty	Qty so far collected	Qty Now required	Qty now collected

Contractor /Authorized

SSE/PROJ/

Dy.CSTE/XSTE/AXSTE/P/TPJ

Representative

Qty issued as per requisition slip vide challan

No. _____

Dated: _____

CDMS/S&T/STORES/TPJ

Form No.8**i. List of works completed**

Description of work	Organization for whom executed	Approx. value of contract at the time of award (Rs.)	Date of award	Date of scheduled completion of work	Date of actual completion	Final value of contract (Rs.)

ii. List of works in Hand

Description of work	Contract Value	Approx. value of balance work yet to be done	Date of award

Note: The tenderer has to submit the details along with the offer.

Form No.9

FORMAT FOR CERTIFICATE TO BE UPLOADED BY TENDERER ALONG WITH THE
TENDER DOCUMENTS

I..... (Name and Designation)** Appointed as the attorney/authorized signatory of the tenderer.

M/s._____ (hereinafter called the tenderer) for the purpose of the tender documents for the work of “ **Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.**” as per the E- Tender Notice No: T-SG-PROJ-2025-04 Dt: 31.10.2025 of Southern Railway, do hereby solemnly of Contractor and state on behalf of the tenderer including its constituents as under:

1. I/We the tenderer (s) am/are signing this document after carefully reading the contents.
2. I/We, the tenderer (s), also accept all the tender conditions and have signed all the pages in confirm thereof.
3. I/We hereby declare that I/We have downloaded the tender documents from the Indian Railway Website www.ireps.gov.in. I/We have verified the document's content from the website, and there is no addition, no deletion, or alteration to the content of the tender document. However, in case of any discrepancy noticed at any stage, i.e., evaluation of tenders, execution of work, or final payment of the contract, the master copy available with the Railway Administration shall be final and binding upon me/us.
4. I/We declare and certify that I/We have not made any misleading or false representation in the forms, statements, and attachments in proof of the qualification requirements.
5. I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer, and the same shall be binding upon me/us.

6. I/We hereby declare that the information and documents submitted along with the tender by me/us are correct, and I/We are fully responsible for the correctness of the information and documents submitted by us.
7. I/we certify that I/we the tenderer(s) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership Contractor/LLP/JV/Society/Trust.
8. I/We understand that if the contents of the certificate submitted by us are found to be forged/false at any time during process for evaluation of tenders, it shall lead to forfeiture of the Bid Security and may also lead to any other action provided in the contract including banning of business for a period of upto two year. Further, I/we (insert name of the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.
9. I/We also understand that if the contents of the certificate submitted by us are found to be false/forged at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/Security Deposit and Performance guarantee and may also lead to any other action provided in the contract including banning of business for a period of upto two year.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed)

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

** The contents in Italics are only for guidance purposes. Details as appropriate are to be filled in suitably by the tenderer.

Form No.9A

E. New Annexure-V (A), Part of GCC shall be read as under:

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

I/We..... (NAME), attorney/authorised signatory of the (Constituent Contractor/constituent partner) and member/partner of the (Tendering Contractor) hereby solemnly contractor and state as under.

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

SEAL AND SIGNATURE OF THE
CONSTITUENT Contractor/CONSTITUENT PARTNER

Place:

Dated:

SOUTHERN RAILWAY
TENDER FORM (FIRST SHEET)

E-Tender Notice No: T-SG-PROJ-2025-04 Dated.31.10.2025

Name of the work: Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.

To

The President of India,
Acting through the Dy.CSTE/Project/TPJ,
Southern Railway, Trichy-01.

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 **90 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 Southern 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 18 months** from the date of issue of letter of acceptance of the tender.
2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, standard Schedule of Rates (SSOR) with all correction slips up-to-date for the present contract.
3. A Bid Security of Rs.24, 13,400/- 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 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 the receipt of orders to that effect.
4. (a) I/We am/are a Start-up Contractor 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.

4. We are Labour Co-operative Society and our Registration No. is _____ with _____ and hence required to deposit only 50% of Bid Security.
5. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Tenderer(s)

Date _____

Address of the Tenderer(s)

TENDER FORM: (SECOND SHEET)

1. **10. Eligibility Criteria: Instructions to Tenderers and Conditions of Tender:**

The following documents form part of Tender / Contract:

- (a) Tender Forms – First Sheet and Second Sheet
- (b) Special Conditions/Specifications (enclosed)
- (c) Bill(s) of quantities (enclosed)

Standard General Conditions of Contract and Standard Specifications (Works and Materials) of Indian Railways as amended/corrected up to latest correction slips, copies of which can be seen in the office of Chief Signal and Telecommunication Engineer/Projects or obtained from the office of the Chief Signal and Telecommunication Engineer/Projects, Southern Railway on payment of prescribed charges.

- (d) Standard Schedule of Rates (SSOR) as amended / corrected up to latest correction slips, copies of which can be seen in the office of Chief Signal and Telecommunication Engineer/Projects or obtained from the office of the Chief Signal and Telecommunication Engineer/Projects, Southern Railway on payment of prescribed charges.
 - (f) All general and detailed drawings pertaining to this work will be issued by the Engineer or his representatives (from time to time) with all changes and modifications.
2. **Drawings for the Work:** The Drawing for the work can be seen in the office of the Chief Signal and Telecommunication Engineer, Southern Railway at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based generally on the drawing mentioned above, will be given by the Engineer or his representative from time to time.
3. The Tenderer(s) shall quote his / their single percentage rates for all the schedules in **IREPS**. The quantities shown in the attached Bill(s) of Quantities are given as a guide and are approximate only and are subject to variation according to the needs of the Railway. The Railway does not guarantee work under each item of the Bill(s) of Quantities. The tenderer(s) shall quote rates / rebates only at specified place in Tender Form supplied by Railway. Any revision of rates / rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be summarily ignored and will not be considered.
4. Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.

5. The works are required to be completed within a period of 18 (Eighteen) months from the date of issue of acceptance letter.
6. EMD/Bid Security:
 - (a) Subject to exemptions provided under para 5(1) (a) of Part-1 (ITT) of GCC 2022. The tender must be accompanied by a sum of **Rs.24,13,400/- (Rupees Twenty Four Lakhs Thirteen Thousand Four Hundred Only)** as EMD/Bid Security deposited in cash through e-payment gateway/as Bank Guarantee bond, failing which the tender shall be summarily rejected vide **Annexure : 3**
 - (b) The Tenderer(s) shall keep the offer open for a minimum period of 90 days from the date of closing of the Tender. It is understood that the tender documents have been issued to the Tenderer(s) and the Tenderer(s), is / are permitted to tender in consideration of the stipulation on his / their part that after submitting his / their tender subject to the period being extended further, if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Chief Signal and Telecommunication Engineer/Projects of Southern Railway. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposited as or Bank guarantee bond submitted as EMD/Bid Security for the due performance of the above stipulation, shall be forfeited to the Railway.
 - (c) If his tender is accepted,
 - (i) The EMD/Bid Security mentioned in sub para(a) above deposited in cash through e-payment gateway 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.
 - (ii) The EMD/Bid Security mentioned in sub para(a) above submitted as Bank guarantee bond, will be encashed 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 EMD/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 to the EMD/Bid Security that may happen thereto while in their possession, nor be liable to pay interest thereon.
 - (d) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond towards either the Full Security Depositor the Part Security Deposit equal to or more than EMD/Bid Security, the Railway shall return the EMD/Bid Security so retained as per sub para(c) above, to the Contractor.

7. **Rights of the Railway to deal with Tender:** The authority for the acceptance of the tender will rest with the Railway. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/ their tender nor the Railway to assign reasons for declining to consider or reject any particular tender or tenders. In case if tender is accepted in part by Railway administration, Letter of Acceptance shall be issued as counter offer to the Tenderer, which shall be subject to acceptance by the Tenderer.
8. If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the Railway reserves the right to reject such tender at any stage.
9. If any partner(s) of a partnership Contractor expires after the submission of its tender or after the acceptance of its tender, the Railway shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the Contractor retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the Railway shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.

10.1 Technical Eligibility Criteria:

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

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

(OR)

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

(OR)

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

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 authorized by the Public listed company to issue such certificates.

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

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

V= Advertised value of the tender in crores of Rupees

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

The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case 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 **Form No.2**, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

10.3 Bid Capacity: The tender/technical bid will be evaluated based on the bid capacity formula detailed as Annexure 5.

10.4 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 authorized 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 of the Tender Form (Second Sheet) including Para 10.1 to 10.4 - Eligibility Criteria:

- a) 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.
- b) 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.
- c) If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfilment of credentials
- d) 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.

In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.
- e) 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. Organization or public listed company as defined in Note for Item 10.1 Para 10 of the Tender Form No.11 (Second Sheet), the same shall be considered for the purpose of fulfilment of credentials.
- f) 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.
- g) In case of newly formed partnership Contractor, the credentials of individual partners from previous proprietary Contractor(s) or dissolved previous partnership Contractor(s)

or split previous partnership Contractor(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 Contractor. For example, a partner A had 30% share in the previous entity and his share in the present partnership Contractor is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of 0.3×0.2 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 Contractor(s) etc.

- h) In case of existing partnership Contractor, if any one or more partners quit the partnership Contractor, the credentials of remaining partnership Contractor 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 Contractor (e.g. in a partnership Contractor of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the Contractor, the credentials of this partnership Contractor 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 Contractor(s) etc.
- i) In case of existing partnership Contractor if any new partner(s) joins the Contractor without any modification in the name and PAN/TAN no. of the Contractor, the credentials of partnership Contractor 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 Contractor etc.
- j) Any partner in a partnership Contractor cannot use or claim his credentials in any other Contractor without leaving the partnership Contractor i.e., In a partnership Contractor of A&B partners, A or B partner cannot use credentials of partnership Contractor of A&B partners in any other partnership Contractor or proprietary Contractor without leaving partnership Contractor of A&B partners.
- k) In case a partner in a partnership Contractor is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
- l) If the percentage share among partners of a partnership Contractor is changed, but the partners remain the same, the credentials of the Contractor before such modification in the share will continue to be considered for the Contractor as it is without any change in their value. Further, in case a partner of a partnership Contractor retires without taking away any credentials from the Contractor, the credentials of the partnership Contractor shall remain the same as it is without any change in their value.

- m) In a partnership Contractor "AB" of A&B partners, in case A also works as proprietary Contractor "P" or partner in some other partnership Contractor "AX", credentials of A in proprietary Contractor "P" or in other partnership Contractor "AX" earned after the date of becoming a partner of the Contractor AB shall not be added in partnership Contractor AB.
- n) In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership Contractor.
- o) In case company A is merged with company B, then company B would get the credentials of company A also.

11. Tenderer Credentials:

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

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

- (i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with 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) The list of personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- (iv) 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. The standard format of the certificate to be submitted by the bidder is enclosed as Form 9A. In case of other than company/Proprietary Contractor Form 9(A) shall also be submitted by the each member of a partnership Contractor/Joint venture (JV)/Hindu undivided Family (HUF)/Limited liability Partnership (LLP etc., as the case may be. 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 they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.
- (v) The Railway reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Railway, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the Railway shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the Railway there under.

- (vi) (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD/Bid Security besides banning of business for a period of upto 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. EMD/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 for doing business for a period of up to two years.

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

13. **Execution of Contract Documents:** The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the _____, _____ Railway for carrying out the work according to the Standard General Conditions of Contract, Special Conditions / Specifications annexed to the tender and Standard Specifications (Works and Materials) of Railway as amended/corrected upto latest correction slips, mentioned in tender FormNo.10 (First Sheet).

14. Documents to be submitted Along with Tender

(i) The tenderer shall clearly specify whether the tender is submitted on his own (Proprietary Contractor) or on behalf of a Partnership Contractor / 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 Contractor, company, association, trust or society, as the case may be.

(ii) Following documents shall be submitted by the tenderer:

(a) Sole Proprietorship Contractor:

(i) 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 Contractor:

- (i) All documents as mentioned in para18 of the Tender Form (Second Sheet).

(d) Joint Venture (JV):

- (i) All documents as mentioned in para 17 of the Tender Form (Second Sheet).

(e) Company registered under Companies Act2013:

- (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 Contractor/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 No.11 (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.
 - iv. A copy of Rules & Regulations of the Society.
 - v. All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.
- (iii) If it is NOT mentioned in the submitted tender that the tender is being submitted on behalf of a Sole Proprietorship Contractor / Partnership Contractor / Joint Venture / Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.

- (iv) After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Contractor / Partnership Contractor / 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.
 - (v) A tender from JV shall be considered only where permissible as per the tender conditions.
 - (vi) The Railway will not be bound by any change of power of attorney or in the composition of the Contractor 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.
- 15.** The tenderer whether sole proprietor / a company or a partnership Contractor / 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 Contractor or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement except in case where such specific person is authorized for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association /Board resolution, failing which tender shall be summarily rejected.

A separate 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 Contractor or any other person, shall be submitted after award of work, specifically authorizing 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 legalized 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 legalized by the Indian Embassy if it carries a conforming Apostille certificate.

16. Employment/Partnership etc. of Retired Railway Employees:

- (a) Should a tenderer
 - i) be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, whether in the executive or administrative capacity or whether holding a

pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being,

OR

- ii) being partnership Contractor / 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 Contractor or an incorporated company, to become a partner or director as the case may be, has been obtained by the tenderer or the Engineer or officer, as the case may be from the President of India or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.

- (b) In case, upon successful award of contract, should a tenderer depute for execution of the works under or to deal matters related with this contract, any retired Engineer of gazetted rank or retired gazetted officer working before his retirement in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, and now in his employment, then the tenderer will ensure that retired Engineer or retired gazetted officer had retired from government service at least 1 year prior to the date of his employment with tenderer and in case he had retired from service within a year then he possesses the requisite permission from the President of India or any officer, duly authorized by him in this behalf, to get associated with the tenderer.
- (c) Should a tenderer or Contractor being an individual, have member(s) of his family or in the case of partnership Contractor/ 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.

17. JOINT VENTURE (JV) IN WORKS TENDERS

Participation of Joint Venture (JV) in Works Tender: This para shall be applicable for works tenders wherein tender documents provide for the same.

17.1 Separate identity/name shall be given to the Joint Venture.

17.2 Number of members in a JV shall not be more than three, if the work involves only one department (say Civil or S&T or Electrical or Mechanical) and shall not be more than five, if the work involves more than one Department. One of the members of the JV shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV. The other members shall have a share of not less than 20% each in case of JV with up to three members and not less than 10% each in case of JV with more than three members. In case of a JV with foreign member(s), the Lead Member has to be an Indian Contractor/company with a minimum share of 51%.

17.3 A member of a JV shall not be permitted to participate either in individual capacity or as a member of another JV in the same tender.

17.4 The tender form shall be purchased and submitted only in the name of the JV and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent members or any person authorized by JV through Power of Attorney to submit tender.

17.5 EMD/Bid Security shall be submitted by JV or authorized person of JV either as:

- (i) Cash through e-payment gateway or as mentioned in tender document, or
- (ii) Bank Guarantee bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV if the JV has not been constituted legally till the date of submission of tender.

17.6 A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV, their share and responsibility in the JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MoU.

17.7 Once the tender is submitted, the MoU shall not normally be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full EMD/Bid Security shall be liable to be forfeited.

17.8 Approval for change of constitution of JV shall be at the sole discretion of the Railway.

The constitution of the JV shall not normally be allowed to be modified after submission of the bid by the JV, except when modification becomes inevitable due to succession laws etc., provided further that there is no change in qualification of minimum eligibility criteria by JV after change of composition. However, the Lead Member shall continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.

17.9 Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification becomes inevitable due to succession laws etc. and minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.

17.10 On award of contract to a JV, a single Performance Guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, Machinery Advance etc. shall be accepted only in the name of the JV and no splitting of guarantees amongst the members of the JV shall be permitted.

17.11 On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, with the same shareholding pattern as was declared in the MOU/JV Agreement submitted along with the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (in case JV entity is to be registered as Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Contractor) or under 'The LLP Act 2008' (in case JV entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the Railways before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, the contract is liable to be terminated. In case the contract is terminated, the railway shall be entitled to forfeit the full amount of the EMD/Bid Security and other dues payable to the Contractor under this contract. The entity so registered, in the registered documents, shall have, inter-alia, following Clauses:

17.11.1 Joint and Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to the Railway for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the Railways during the course of execution of the contract or due to non-execution of the contract or part thereof.

17.11.2 Duration of the Registered Entity - It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance period after the work is completed.

17.11.3 Governing Laws - The Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.

17.12 Authorized Member - Joint Venture members in the JV MoU shall authorize Lead member on behalf of the Joint Venture to deal with the Contract, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV.

17.13 No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the Railway in respect of the said tender/contract.

17.14 Documents to be enclosed by the JV along with the tender:

17.14.1 In case one or more of the members of the JV is/are partnership Contractor(s), following documents shall be submitted:

- (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
- (ii) A copy of consent of all the partners or individual authorized by partnership Contractor, to enter into the Joint Venture Agreement on a stamp paper,
- (iii) A notarized or registered copy of Power of Attorney in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership Contractor and create liability against the Contractor.
- (iv) An undertaking by all partners of the partnership Contractor 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 Contractor/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

17.14.2 In case one or more members is/are Proprietary Contractor or HUF, the following documents shall be enclosed:

- (i) A copy of notarized affidavit on Stamp Paper declaring that his Concern is a proprietary Concern and he is sole proprietor of the Concern OR he who is signing the affidavit 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.

17.14.3 In case one or more members of the JV is/are companies, the following documents shall be submitted:

- (i) A copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement,
- (ii) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company
- (iii) A copy of Certificate of Incorporation
- (iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual, to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company.

17.14.4 In case one or more members of the JV is/are LLP Contractor/s, the following documents shall be submitted:

- (i) A copy of LLP Agreement
- (ii) A copy of Certificate of Incorporation of LLP
- (iii) A copy of resolution passed by partners of LLP Contractor, permitting the Contractor to enter into a JV agreement
- (iv) A copy of Authorization /copy of Power of Attorney issued by the LLP Contractor (backed by resolution passed by the Partners) in favour of the individual, to sign the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP.
- (v) 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 Contractor/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.

17.14.5 In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:

- (i) A copy of Certificate of Registration
- (ii) A copy of Memorandum of Association of Society/Trust Deed
- (iii) A copy of Rules & Regulations of the Society
- (iv) A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.

17.14.6 All other documents in terms of Para 10 of the Tender Form (Second Sheet) above. (Form No.11)

17.14.7 A power of Attorney executed and issued overseas, the document will also have to be legalized 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 legalized by the Indian Embassy if it carries a conforming Apostille certificate.

17.15 Credentials & Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfilment of the following criteria:

17.15.1 Technical Eligibility Criteria ('a' or 'b' mentioned hereunder):

(a) For Works without composite components

The technical eligibility for the work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV'.

Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for the work as per para 10.1 above, shall have technical capacity of minimum 10% of the cost of work i.e., each non-lead member of JV member must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of advertised value of the tender.

(b) For works with composite components

The technical eligibility for major component of work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV' and technical eligibility for other component(s) of work as per para 10.1 above, shall be satisfied by either the 'JV in its own name & style' or 'any member of the JV'.

Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for any component of the work as per para 10.1 above, shall have technical capacity of minimum 10% of the cost of any component of work mentioned in technical eligibility criteria. i.e., each other (non-lead) member of must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of cost of any component of work mentioned in technical eligibility criteria.

Note for Para 17.15.1:

- a) The Major component of the work for this purpose shall be the component of work having highest value. In cases where the value of two or more components of work is the same, any one work can be classified as Major component of work.
- b) Value of a completed work done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.

17.15.2 Financial Eligibility Criteria:

The JV shall satisfy the requirement of "Financial Eligibility" mentioned at para 10.2 above. The "financial capacity" of the lead member of a JV shall not be less than 51% of the

financial eligibility criteria mentioned at para 10.2 above.

The arithmetic sum of individual “financial capacity” of all the members shall be taken as JV’s “financial capacity” to satisfy this requirement.

Note: Contractual payment received by a Member in an earlier JV shall be reckoned only to the extent of the concerned member’s share in that JV for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in the tender under consideration.

17.15.3 Bid Capacity

The JV shall satisfy the “Bid Capacity” requirement mentioned at para 10.3 of form no.11. The arithmetic sum of individual “Bid capacity” of all the members shall be taken as JV’s “Bid capacity” to satisfy this requirement.

18. Participation of Partnership Contractors in works tenders:

18.1 The Partnership Contractors participating in the tender should be legally valid under the provisions of the Indian Partnership Act.

18.2 The partnership Contractor should have been in existence or should have been formed prior to submission of tender. Partnership Contractors should have either been registered with the Registrar or the partnership deed should have been notarized as per the Indian Partnership Act, prior to submission of tender.

18.3 Separate identity / name should be given to the partnership Contractor. The partnership Contractor should have PAN / TAN number in its own name and PAN / TAN number in the name of any of the constituent partners shall not be considered. The valid constituents of the Contractor shall be called partners.

18.4 Once the tender has been submitted, the constitution of the Contractor shall not normally be allowed to be modified / altered / terminated during the validity of the tender as well as the currency of the contract except when modification becomes inevitable due to succession laws etc., in which case prior permission should be taken from Railway and in any case the minimum eligibility criteria should not get vitiated. The re-constitution of a Contractor in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the Contractor, in any case, shall be at the sole discretion of the Railways and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership Contractor after submission of tender shall be with the consent of all partners and with the signatures of all partners as that in the Partnership Deed. Failure to observe this requirement shall render the offer invalid and full EMD/Bid Security shall be forfeited.

If any Partner/s withdraws from the Contractor after submission of the tender and before the award of the contract, the offer shall be rejected and EMD/Bid Security of the tenderer will be forfeited. If any new partner joins the Contractor after submission of tender but prior to

award of contract, his / her credentials shall not qualify for consideration towards eligibility criteria either individually or in proportion to his share in the previous Contractor. In case the tenderer fails to inform Railway beforehand about any such changes / modification in the constitution which is inevitable due to succession laws etc. and the contract is awarded to such Contractor, then it will be considered a breach of the contract conditions liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

18.5 A partner of the Contractor shall not be permitted to participate either in his individual capacity or as a partner of any other Contractor in the same tender.

18.6 The tender form shall be submitted only in the name of partnership Contractor. The EMD/Bid Security shall be submitted by a partnership Contractor. The EMD/Bid Security submitted in the name of any individual partner or in the name of authorized partner (s) shall not be considered.

18.7 On issue of Letter of Acceptance (LOA) to the partnership Contractor, all the guarantees like Performance Guarantee, guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership Contractor and no splitting of guarantees among the partners shall be acceptable.

18.8 On issue of Letter of Acceptance (LOA), contract agreement with partnership Contractor shall be executed in the name of the Contractor only and not in the name of any individual partner.

18.9 In case the Letter of Acceptance (LOA) is issued to a partnership Contractor, the following undertakings shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

- (a) **Joint and several liabilities:** The partners of the Contractor to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the Railway for execution of the contract in accordance with General and Special Conditions of the Contract. The partners shall also be liable jointly and severally for the loss, damages caused to the Railway during the course of execution of the contract or due to non-execution of the contract or part thereof.
- (b) **Duration of the partnership deed and partnership Contractor agreement:** The partnership deed/partnership Contractor agreement shall normally not be modified/altered/ terminated during the currency of contract and the maintenance period after the work is completed as contemplated in the conditions of the contract. Any change carried out by partners in the constitution of the Contractor without permission of Railway, shall constitute a breach of the contract, liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

- (c) **Governing laws:** The partnership Contractor agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.
- (d) No partner of the Contractor shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other partner/s and that of the Railway.

18.10 The tenderer shall clearly specify that the tender is submitted on behalf of a partnership Contractor. The following documents shall be submitted by the partnership Contractor, with the tender:

- (a) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
- (b) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the Contractor.
- (c) An undertaking by all partners of the partnership Contractor 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 Contractor/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.
- (d) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.

18.11 Evaluation of eligibility of a partnership Contractor:

Technical and financial eligibility of the Contractor shall be judged based on satisfactory fulfilment of the eligibility criteria laid down in Para 10 of the Tender Form (Second Sheet) above.

19. Advances to Contractor –

If specifically provided in Tender Documents of tender having advertised value more than Rs 50 Crores, Railway shall make payment, as an Interest bearing advances, as per Contractor's request. These advances shall carry a simple interest as per RB Ir.No.2018/CE-I/CT/1 DT: 12.05.2023 or latest. The payment and recovery of such advances shall be made as per manners prescribed in Clause 46.4 of the Standard General Conditions of Contract. (Not applicable since the published tender value is less than 50Cr.)

(Signature)
(Designation)
Signature of Tenderer(s) _____
Date _____

Form No.12

Declaration of Proprietary Contractor or Partnership Contractor or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) etc.

I/we hereby solemnly declare that I/We ** is/are participating as a Proprietary Contractor or Partnership Contractor or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) for the **E-Tender Notice No: T-SG-PROJ-2025-04 Dated.31.10.2025**

Signature of Tenderer with Seal

**** - Name of the Tenderer/Bidder**

Note: Tenderer/Bidder shall clearly specify whether he/they are participating as a Proprietary Contractor or Partnership Contractor or Company or Joint Venture (JV) or Registered Society or Registered Trust or Hindu Undivided Family (HUF) or Limited Liability Partnership (LLP) in the above

Form No.13

VENDOR MANDATE FORM

E-Tender Notice No: T-SG-PROJ-2025-04 Dated.31.10.2025

PARTICULARS OF THE TENDERER:

(a) Name.....

(b) ADDRESS:

(i) Holding No. / Premises:

(ii) Room No. :.....

(iii) Street Name:

(iv) City/Village/Town

(v) District:

(vi) State: Country:

(vii) PIN:

(c) Phone No..... Mobile No.....

Fax No. E-mail-id.....

(d) PAN No.....

GST Registration No.....

Signature of Tenderer

“PROFORMA FOR MEMORANDUM OF UNDERSTANDING”

On Non-judicial stamp of Rs. 100/- This memorandum of Understanding (MOU) dated..... (The effective date) M/s..... (OEM Name & address), (which expression shall repugnant to the clause, shall include its successors and permitted assigns) and (Bidder Contractor name & address), herein after referred to as..... (Bidder Contractor name), (which expression shall repugnant to the clause, shall include its successors and permitted assigns). (OEM Name) and..... (Bidder Contractor name), may also herein after be referred to as the "Party" or collectively as the "Parties". Whereas Northeast Frontier Railway, Malegaon -78011 has issued Tender No: Dated for the work of..... (Name of work). Whereas, (Bidder Contractor name), intends to bid for the Project; and whereas, in the event of (Bidder Contractor name), being successfully awarded the "Project" by the Northeast Frontier Railway (Bidder Contractor name), intends to engage (OEM Name) for the supply of materials manufactured by us and also for our services, which has been agreed to by..... (OEM Name); and Whereas, The Parties intend to enter into a written understanding in this respect. Now therefore, the Parties agree as follows:-

1. Understanding:

The Parties agree to work together during the term (as defined in paragraphs below of this "MOU" to prepare and submit the proposals for the Project and, if awarded a contract, to execute the Project in the following manner:-

- a. (OEM Name) will Manufacture and Supply... (OEM Name), provide certification for EOLB,RTU & IPS ETC. as per RDSO specification and provide all the documents sought that are required for RDSO inspection at the time of bidding and for RDSO inspection.
- b.(OEM Name) hereby undertakes that the equipment of EOLB, RTU & IPS ETC. and other accessories are Supplied as per the RDSO Technical specification and as per the Railway schedule of requirement and installation, testing and commissioning of equipment shall also be overseen by (OEM Name) Engineers and offer security certification as per RDSO specification.

c. (OEM Name) hereby undertakes that all Installation, Testing & Commissioning, manuals, Pre-Commissioning Check List will be handed over at the time of supply installation and fulfils the Warranty aspects in compliance to the terms of the tender. d (OEM Name) Shall:

- i) Extend technical support for supply, installation and commissioning of the equipment.
- ii) Impart training to Railway officials at its factory premises and at site.
- iii) Offer Warranty for equipment as per the condition laid in the tender document
- iv) Support Railways when CAMC/ARC is entered, if any on a later date after the expiry of warranty period.
- v) We Confirm that Technical Assistance Centre Presence for Post-Sales Technical Support is available which works 24x7x365 in India.

2. Negation of the formation of Business Organization:

This MOU shall not constitute, create, Or in any way be interpreted to create a joint venture, partnership or formal business organization of any kind between.....(Bidder Contractor name),&.....(OEM Name).

3. Termination:

This MOU is effective from the effective date and will terminate automatically on the completion of three years Warranty period after completion and commissioning of project. (OEM Name) (Bidder Contractor name), Authorized Signatory with seal Authorized Signatory with seal Advocate & Notary with seal 192.

Chapter-3A

Annexures

Annexure 1

INSTRUCTIONS FOR SUBMITTING THE TENDERS AS JOINT VENTURE

On Non-judicial stamp of Rs. 100/- MEMORANDUM OF UNDERSTANDING FOR JOINT VENTURE AGREEMENT

This memorandum of understanding executed this _____ day of _____ 20__ between _____ (Name of Co.) _____ A company registered under the Companies Act 1956 having its registered office at _____ represented through its Director/Authorized Representative _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.**

AND /OR

M/s. _____ a partnership Contractor constituted under the Indian Partnership ACT 1932, having its registered office at _____, represented through its partner Shri _____ /Authorized Representative Shri _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.**

AND/OR

M/s. _____ a proprietary concern having its registered office at _____ Represented through its sole proprietor Shri _____ (hereinafter referred to as _____ which expression shall unless repugnant to the context thereof includes its successors) of the **FIRST PART.** Whereas, the party of the First part i.e. M/s. _____ details to be supplied of the expertise in their field. Whereas, the party of the Second part M/s. _____ details to be supplied of the expertise in their field. Whereas, the party of the third part M/s. _____ details to be supplied of the expertise in their field.

AND

Whereas parties to this MOU have agreed to co-operate with each other to associate jointly and to form a Joint Venture to participate in the Southern Railway Tender. **Now**, therefore, in consideration of the promises and mutual promises and of the undertaking contained herein, it is hereby agreed between the parties of the MOU as follows:

1. The purpose of MOU:

M/s. _____, _____ and _____ agree to Co-operate with each other for the purpose of joint participation in the Southern Railway Tender and in the event, the contracts awarded, to jointly execute the contract. The broad interfaces and scope of work of each party is set forth below:

2. The name of the Joint Venture shall be _____

3. The parties, hereto, represent that:

- a) They are in **possession** of all approvals and valid authorization for the purpose of execution of this MOU.
They have not entered into any agreement/MOU of equal or similar nature with any third-party for this **E-Tender Notice No: T-SG-PROJ-2025-04 Dated.31.10.2025**
- b) That each of the parties of JV, agrees and undertake to place at the disposal of the JV , benefits of its individual experience, technical knowledge and skill and shall in all respects bear its share of the responsibility, including the provision of information advice and other assistance required in connection with the works. The share and the participation of the partners in the JV shall broadly be follows:

M/s. _____ %

M/s. _____ %

M/s. _____ %

“That M/s. _____ shall be the lead member of a JV Contractor who shall have a majority (at least 51%) share of interest in the JV Contractor. The other members shall have a share of not less than 20% each (in case of a Contractor with upto three members) The other members shall have a share of not less than 10% each (in case of JV Contractor with more than three members). In case of JV Contractor with foreign member(s), the lead member has to be an Indian Contractor with a minimum share of 51% (strike out which is not applicable) And all right, interest, liabilities, obligations, work experience and risks (net profits or net losses) arising out of the contract shall be shared or borne by the Parties in proportionate to these shares. Each of the parties shall be bound by guarantees, sureties required for the work as well as its proportionate share in working capital and other financial requirements.

4. The parties to this MOU undertake:

- a. That after submission of the tender, the MOU shall not be modified/altered/terminated during the validity of the tender including extension and maintenance period except when modification becomes inevitable due to succession laws etc., but in no case the minimum eligibility criteria would be vitiated.
- b. That after the contract is awarded the constitution of the JV Contractor shall not be altered during the currency of contract except when modification becomes inevitable due to Succession Law etc., "but in no case the minimum eligibility criteria would be vitiated".
- c. That with respect of the Southern Railway Tender neither party, nor any subsidiary company of either Party, not any joint venture company or any other entity, in which the party/parties, is or are in any way interest, shall complete together with or through any third party, nor shall be parties advise, consult for, engage in or otherwise assist in any way person or entity or any affiliate thereof in respect of any orders or contracts related to this tender.
- d. That none of the members of joint ventures is black listed and/or debarred by the Railway Board or and other ministry or department of Govt. of India/State Govt. from participation in contract/under in the past either in individual capacity or the JV Contractor or partnership Contractor in which they were/are members/partners.

5. Joint & Several Liabilities:

In respect of the Southern Railway Tender, all commercial terms shall comply with each part on back-to-basis specifications of the Railway Board Tender or any other mutually agreed terms with the Owner/Customer. The Parties hereto shall, if awarded the contract for the project for which the Joint Venture is formed, be jointly and severally liable to the Railway for execution of the project in accordance with the contract. The Parties hereto also undertake to be liable jointly and severally for the loss, damages caused to the Railway in course of execution or due to non-execution of the contract or part thereof arising out of the contract.

6. Shri _____ be authorized partner/person on behalf of the Joint Venture to deal with tender, to sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books, and similar such action in respect of Southern Railway tender/Contract. All notices /correspondence with respect to the contracts would be sent only to this authorized partner/person of the JV Contractor.

7. Notwithstanding anything herein, in respect of the Railway Tender, with regard to the internal relationship, the inter se liabilities between the parties shall be in proportion to their respective scope of work and shall be subject to the provisions of this MOU.

8. Responsibility:

Each Party shall assume and accept full responsibility for its Scope of Work and the obligations imposed in the Contract and in this MOU as if it was, with regard to this Scope of Work, an independent partner contracting individually with the Customer. In the event of any defect and damage or any claim arising from the Customer under the Contract or any third party in relation to or as a consequence of any failure to meet the performance specification the Party, within whose Scope of Work the claim arises, shall be entirely responsible for the claim and shall indemnify and hold harmless the other Party from any liability, demand, claim burden cost, expense attorney's fees and costs arising from thereof.

9. Assignability:

No party to the Joint Venture has the right to assign or transfer the interest, right or liability in the contract without the written consent of the other party and that of the Indian Railway.

10. Use of Machinery, Instruments, Labour Force etc.:

The Parties hereto undertake that whatever the machinery, instruments, Labour force (including unskilled, skilled, inspectors, Engineers etc.) they possess at the time of entering into Joint Venture Agreement or which subsequently shall come in their possession and if such machinery, instruments, labour force is required for the speedy and efficient execution of the work, the Party/Parties having the control over the said machinery, instrument, labour force etc. Without having any regard to their share of profit and loss agreed to between the Parties in Joint Venture Agreement shall hand over the same at the disposal of the other party who is actually executing the work for the purpose of execution of the contract without any hindrances and obstacles.

11. Duration of MOU:

It shall be valid during the entire currency of contract including the period of extension, if any and also till the maintenance period is over or till all the contractual liabilities including warranty /guarantee obligations are discharged completely.

12. Applicable Law:

The MOU and any arrangement/agreements regarding the performance shall be construed and interpreted in accordance with and governed by the Laws of India and shall be subject

to the exclusive jurisdiction of the courts at the place where MOU is executed/signed between the parties.

13. Settlement of Disputes:

In the event of disputes arising from the MOU, the Parties to the MOU undertakes to endeavour to settle the said disputes amongst them amicably. However, if the parties fail to resolve the disputes amongst them amicably, the said disputes arising out of or in connection with the present MOU shall be resolved through Arbitration as per the provisions enshrined under the Arbitration and Conciliation Act, 1996 or /and statutory modifications made thereafter.

14. All communications or notices provided for herein shall be in the English language and be delivered, mailed, or tele-faxed to the Parties addresses as indicated below:-

M/s. _____ M/s. _____
_____ All
correspondence and notices to the Joint Venture Contractor shall be addressed to the
Lead Member i.e. M/s. _____/Shri _____ at the address
stated _____ herein below:-
M/s. _____ Such
communication or notices shall be deemed to have been duly given when so delivered
or, if mailed, when received at destination.

15. Each Part shall have full and sole responsibility to bear the expense of and effect the payment of any taxes, duties, special insurance, fees or assessments of any nature whatsoever (including personal income taxes levied or imposed or any of its employees or personnel or any of its subcontractor's employees or personnel) including penalties and interest, if any, levied in connection with the execution of this MOU.

In witness whereof, the Parties have caused this MOU to be executed by their respective authorized representative on the date and year mentioned herein above.

Signature: -
Shri _____ of
M/s. _____

1) Witness Name:
2) Address:

Signature: -
Shri _____ of
M/s. _____

1) Witness Name:
2) Address:

Signature: -
Shri _____ of
M/s. _____

1) Witness Name:
2) Address:

Annexure 2

PROFORMA FOR NEFT MANDATE FORM

FROM:

Date:

To,

**FA&CAO/ CN/MS,
Southern Railway,
Chennai-08.**

Sub: - Willingness to Receive Payment through RBI's NEFT System.

We refer to the National Electronic Fund Transfer (NEFT) System being set up by Southern Railway, Chennai-03 for remittance of our payments using RBI's NEFT scheme and confirm that we are agreeable to our payments being made through the above scheme to our under noted Account:

NAME OF ORGANISATION AND ADDRESS	:
MICR CODE OF BANK	:
IFS CODE OF BANK	
BANK NAME	:
BRANCH NAME	:
BANK ADDRESS	:
BRANCH TELE/FAX NO.	:
BANK ACCOUNT NO.	:
TYPE OF ACCOUNT	:

A Xerox copy of the cheque leaf is attached herewith for necessary action at your end.

Encl: As stated above

Signature & Stamp Confirmed by Bank

Annexure 3

(EMD/Bid Security)

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

Name of the Bank: _____

President of India,

Acting through,

..... Railway,

Beneficiary: Railway

Date:

Bank Guarantee Bond No.:

Date: -----

In consideration of the President of India acting through----- **(Designation & address of Contract Signing Authority)**, Railway,, (Hereinafter called "The Railway") having invited the bid for_____through Notice inviting tender (NIT) No.._____, we have been informed that **[Insert name of the Bidder]** **(Hereinafter called "the Bidder")** intends to submit its bid (hereinafter called "the Bid"). WHEREAS, the Bidder is required to furnish EMD/Bid Security for the sum of Rs.24,13,400/- in the form of Bank Guarantee, according to conditions of Bid.

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

1. KNOW ALL MEN that by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Railway full amount in the sum of **[Insert required Value of EMD/Bid Security]** as above stated.
2. The Bank undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any

disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.

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

IFSC CODE	SBIN000RAIL
IFSC TYPE	BRANCH
BANK NAME	STATE BANK OF INDIA
BRANCH NAME	RAIL
CITY NAME	NAVI MUMBAI
ADDRESS	SECTOR-11, CBD BELAPUR, NAVI MUMBAI
DISTRICT	NAVI MUMBAI
STATE	MAHARASHTRA
BG ENABLED	YES

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

Date

Place.....

Bank's Seal and authorized signature(s)

[Name in Block letters]

[Designation with Code No.]

[P/Attorney] No.

Witness:

1. Signature, Name & Address & Seal
2. Signature, Name& address & Seal

Bank's Seal

[P/Attorney]No.

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

Annexure 4

Insurance Surety Bond for Performance Security

Name of the issuer of surety bond:

President of India,
Acting through
Dy.CSTE/Project/TPJ
Southern Railway.

Date:.....
.....

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

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

WHEREAS, in consideration of the President of India acting through (Designation & address of contract signing authority),Railway,..... (Hereinafter called "The Railway") having accepted the bid of MS XXXXX hereinafter called the contractor, for the work of .XXX' under invitation for bids No, XXXXXX Dated LEDXXXXX, Vide Letter of Acceptance No.....

WHEREAS, the contractor is required to furnish Performance Security for the sum of Rs..... (Rupees .XXXXXXXXXX only), in the form of Surety Bond, being a condition precedent to the signing of the contract agreement.

SB No:

Date:

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

1. KNOW ALL MEN by these present that I/We, the undersigned [insert name(s) of authorized representatives of the Surety], being fully authorized to sign and incur obligations for and on behalf of the Surety, confirm that the Surety, hereby, unconditionally and irrevocably Bond to pay the Railway the full amount in the sum of {XX} ((Rupees .XXX Only) as above stated.

2. The Surety undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Surety shall be final, conclusive and binding, absolute and unequivocal notwithstanding any disputes raised/pending before any Court tribunal, arbitration or any authority or any threatened litigation by the Bidder or Bank.
3. On payment of any amount less than the aforementioned full amount, as per demand of the Railway, the Bond shall remain valid for the balance amount i.e. the aforementioned full amount less the payment made to the Railway.
4. The Surety shall pay the amount as demanded immediately on presentation of the demand by Railway without any reference to the contractor and without the Railway being required to show grounds or give reasons for its demand or the amount demanded.
5. The Surety Bond shall be unconditional and irrevocable.
6. The Bond hereinbefore shall not be affected by any change in the constitution of the Surety or in the constitution of the Contractor.
7. The Surety agrees that no change, addition, modifications to the terms of the Contract Agreement or to any documents, which have been or may be made between the Railway and the Contractor, will in any way release us from the liability under this Bond; and the Surety, hereby, waives any requirement for notice of any such change, addition or modification to the Surety.
8. This Bond is valid and effective from the date of its issue, which is [insert date of issue]. The Bond and our obligations under it will expire on XXXXXXXX ((Expiry Date). All demands for payment under the Bond must be received by us on or before that date.
9. The Surety agrees that the Railways right to demand payment of aforementioned full amount in one instance or demand payments in parts totalling up to the aforementioned full amount in several instances will be valid until either the aforementioned full amount is paid to the Railway or the Bond is released by Railway before the Expiry date.
10. The Surety agrees that its obligation to pay any amount demanded by the Railway before the expiry of this Bond will continue until the amount demanded has been paid in full.
11. The expressions Surety and Railway hereinbefore used shall include their respective successors, administrators and assigns.

12. The Surety hereby undertakes not to revoke the Bond during its currency, except with the previous consent in writing of the Railway. This Bond is subject to the Uniform Rules for Demand Bonds, ICC Publication No. 758.
13. We, the Surety Insurer, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, tribunal, arbitrator or any other authority.
14. The Bond shall be in addition to and without prejudice to any other security Bond (s) of the contractor in favour of the Railway available with the Railway. The Surety, under this Bond, shall be deemed as Principal Debtor of the Railway.

Notwithstanding anything to the contrary contained in these presents,

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

Dated the day of 2025

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

Place.....

Bank's Seal and authorized signature(s)
[Name in Block letters].....
[Designation with Code No.].....
[P/Attorney] No.

Witness

- 1.
- 2.

Annexure 5

TENDERER'S CREDENTIALS (BID CAPACITY)

For tenders having advertised value more than Rs 20 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 up to 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, and
- (ii) 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 up to 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, 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

proforma 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 work 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 the 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.

Annexure 6

CHECKLIST TO THE TENDER

Name of work: “Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division”.

CHECKLIST OF ITEMS TO BE COMPLIED BY THE TENDERERS

Sl.No	Description of Item	Clause	Compliance	Remarks
1	Have you submitted your bid online on IREPS keeping in mind that your Technical Bid documents will be evaluated independent of your Financial Bid and only if your offer is found technically eligible financial components of your offer will be considered?	2.10	Yes/No	
2	Have you submitted Offer letter complete along with Original/Downloaded Tender document including tender forms(Form No.10, 11) (First Sheet & Second Sheet) duly signed with your digital signature?	2.10(I)	Yes/No	
3	Have you submitted the requisite EMD/Bid Security online or uploaded scanned bank guarantee bond?	2.10 (III)	Yes/No	
4	Have you uploaded the credential to establish the eligibility? The documents required for ascertaining Technical & Financial capability as Specified in Qualifying Criteria i.e. Para 2.5 of Instructions to Tenderer shall also be enclosed in the offer. Tenderer should also submit Form 1 & Form 2 along with required Annexures.	2.10 (IV), (V) & (VI)	Yes/No	

5	Have you enclosed form 9 & 9A as per the eligibility	Form.9 & 9A	Yes/No	
6	Have you enclosed Annexure 5 (Bid Capacity) along with the Bid	Annexure 5	Yes/No	
7	Have you furnished the details of year-wise contractual payment received during the last three financial years & current year on Form No.2 regarding meeting Eligibility Criteria?	2.10 (VI)	Yes/No	
8	The tenderers shall submit requisite information as per Form No.2, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.	2.10 (VI)	Yes/No	
9	Have you furnished Annual / Audit reports (along with details of year wise turnover / balance sheet) from a registered Chartered Accountant for the last Three Financial Years?	2.10 (VI)	Yes/No	
10	Have you furnished a Certified copy of JV agreement (MOU) in enclosed format (Annexure 1), in case the offer is from a JV Contractor?	Annexure 1	Yes/No	
11	Have you kept the offer valid for a minimum period of 90 DAYS from the date of opening of tender?	2.12	Yes/No	
12	Have you quoted completion period correctly & precisely as per Para 2.13 of SCC?	2.13	Yes/No	
13	Have you enclosed a declaration that the tenderer accepts all the terms and conditions of Railways? In case of deviations, have you furnished —Statement of Deviations as per Form No.3? In case there is no deviation, NIL statement may be enclosed.	2.10 (IX) & form 3	Yes/No	

14	Have you read the sub-section clause eligibility	2.5.4	YEs/No	
15	Have you enclosed a List of Personnel, Organization available on hand and proposed to be engaged for the subject work?	2.10 (X)	Yes/No	
16	Have you submitted the filled in NEFT mandate form (Annexure 2)?	Annexure 2	Yes/No	
17	Have you noted the applicability of GST ACT 2017 or latest for this tender	2.51	Yes/No	
18	Have you read and agreed to the terms and conditions of the LC (Letter of Credit) in case tenderer opted for LC mode of payment	2.55	Yes/No	
19	Have you read and agreed to Payment of wages Act	2.63	Yes/No	
20	Tenderer to note that after issuing of LOA, the LOA details including labour details has to be uploaded in Shramikkalyan Portal.	2.63	Yes/No	
21	Tenderer to note that payment/ advances /releasing of PG and SD will be done only when the required details are entered in Shramikkalyan Portal only.	2.63	Yes/No	
22	All the financial implications with rates and the quoting of schedules has to be done in FIN.OFFER.TAB only for this tender	2.11	Yes/No	
23	Tenderer to note that, in case CAMC rates are not uploaded or partially uploaded then the offer submitted by tenderer will be summarily rejected	2.43.1 Chapter 5	Yes/No	

End of chapter 3

CHAPTER – 4

SCHEDULE OF WORKS AND SUPPLIES
(For Technical Bid Reference)

Instructions for Quoting Rates:

The Tender consists of Seven Schedules i.e.

Schedules		System of Quoting Rates
Schedule-A	SOR items-S&T works	Single Percentage at schedule
Schedule-B	Non SOR items S&T	Single Percentage at schedule
Schedule-C	Comprehensive annual maintenance	Single Percentage at schedule
Schedule-D1	Engineering USSOR items	Single Percentage at schedule
Schedule-D2	Engineering USSOR items	Single Percentage at schedule
Schedule-D3	Engg Non SOR Items	Single Percentage at schedule
Schedule-E1	Electrical-Non SOR Items	Single Percentage at schedule

Detailed schedule has been uploaded on IREPS web site www.ireps.gov.in.

Note:

1. **Refer NIT in IREPS for detailed schedules.**
2. Rate shall be quoted in IREPS web portal only.
3. Refer Detailed Guidelines Chapter-4A, 4B & 4C for description about the schedules and Inspection clause.
4. There is no Volume-I&II in this tender.
5. Tenderer is advised to digitally sign the Schedules in IREPS upload as part of Technical documents but not in the Financial Tab.
6. All rates must be submitted in the tab for financial offer only on the E-tendering portal. The financial bid will be opened subsequently (on a date which will be notified later) for the tenderer who fulfils the laid down technical and financial eligibility criteria. The offers which are found techno-commercially ineligible will be dismissed.
7. Rates of stores, materials and works are to be quoted according to the (online web portal) proforma of "Schedule of work and supplies" (Financial Bid). Rates in the offer should be in Indian Rupees only. Offers in foreign currency will not be accepted.
8. The tenderer shall quote the complete rate for all items of works given in the schedule of works and supplies in the Financial Bid in IREPS portal only to complete the entire scope of work and make the system completely functional. Offer received for only part of schedule will not be considered and bid shall be rejected.

Schedule of works

Name of the Work: “Provision of interlocking arrangement at 39 Nos of non-interlocked gates in the MDU-MNM, MNM-VPT-TSI-QLN, TEN-TSI, and TEN-TCN sections over MDU division.”

Refer NIT document in IREPS for list of details of schedule items.

*****End of Chapter-4 *****

CHAPTER-4A

DETAILED GUIDELINES FOR SCHEDULE OF WORKS & SUPPLIES-SIGNALLING WORKS

DETAILED GUIDELINES:

I. WITH RDSO INSPECTION:

- 1) MSDAC.
- 2) LED SIGNALS - RED, YELLOW & GREEN Aspect LED signal lamp.
- 3) YELLOW Aspect Road Warning LED (Light Emitting Diode) signal lamp.
- 4) SMPS (Switch Mode Power supply) based Integrated Power Supply system.
- 5) Valve Regulated Lead Acid Batteries.
- 6) KLCR.
- 7) ARA Terminals, Modular Terminal Blocks, Tag blocks
- 8) LC Gate Master and Slave Telephones.
- 9) Supply of Copper tape of size 25mm x 3mm for down conductor.
- 10) RTU without Power supply unit.
- 11) All types of plug-in type relays with plug boards, fixing bolts and nuts, and retaining clips as described in the schedule.
- 12) ND Fuses.
- 13) PBT fuse block ND type fuses as per RDSO Spec. No.: IRS: S-78/92 (to be procured from an RDSO approved supplier)
- 14) PBT terminals 25mm and 60mm centre.
- 15) Wire PVC 16/0.2mm, 3/0.75mm, 7/1.4mm copper, 10 sq.mm copper, 4 Sq.mm copper.
- 16) Electrical Key Transmitter.
- 17) All types of Signalling and Telecom cables.
- 18) Maintenance Free Earthing as per RDSO/SPN/197/2016.
- 19) Earth leakage detector.
- 20) Normal/Derivation Joint.
- 21) HRC fuse block and fuses of required ratings

II. WITH RITES INSPECTION

- 1) RFID (Radio Frequency Identification) Marker Locator.
- 2) FRP(Fiber Reinforced Plastic) Type Goods Warning Board
- 3) Enclosure/Cabin for EOLB(Electrically Operated Lifting Barrier) control panel

- 4) DWC (Double Wall Corrugated) Split pipe of 120/103 mm Dia
- 5) GI Pipes 50mm dia-3.65mm thick and 100 mm dia-4.50 mm thick conforming to IS-1239 amended up to date, with coupling and bends for cable laying on bridges.
- 6) HDPE pipes of any dimensions.
- 7) Mechanical items such as Signal Post, Ladder, Aspect, Offset Brackets etc.,
- 8) Half split DWC ducts of standard make 120 mm out dia and 103.5 inner dia.
- 9) DWC Split pipe of 250/217 mm dia.
- 10) Class 'A' Protection.
- 11) Cable Route Tracer.
- 12) Surge Protection Device.
- 13) Class D SPD (110V AC/DC), Class D SPD (24V AC/DC)
- 14) GI earth Electrode

III. WITH CONSIGNEE INSPECTION

- 1) Aluminium Telescopic Ladder.
- 2) Retro reflective tapes.
- 3) Reflective underground warning tape made of LDPE (Low-Density Polyethylene).
- 4) Paint for Booms, pedestals etc.
- 5) KLCR Relays Box.
- 6) Calling on Board.
- 7) All types of bonds.
- 8) PVC Warning Tape.
- 9) GPS cum RFID based cable route marker.
- 10) GI flat, MS Cable Tray.
- 11) Portable cable fault locator.
- 12) Digital earth ground resistance tester.
- 13) Powder coated cable termination rack 500 capacity.
- 14) Battery Analyser.
- 15) Relay Rack.
- 16) Hand Held Digital Insulation Resistance Tester.
- 17) Digital Multimeter.
- 18) AC/DC Clamp Meter, Transmission Measuring System.

- 19) Relay Racks, Aluminium Ladders, PVC cable troughs etc.
- 20) Supply of Power equipment stand.
- 21) Ladder material, Deflector plates and other associated items.
- 22) DIN channel for the terminal.
- 23) END plates for modular terminal block.
- 24) END clamp for modular terminal block.
- 25) Shorting link insulated.
- 26) Operating tool, screw drivers and stripper.
- 27) 11mm and 30mm thick ECO-FRIENDLY/ CRIBS/ TEAM CRIB (Acid Resistant)
- 28) Tool Kit for installation and Maintenance of MSDAC and EI.
- 29) Galvanization of Signal posts, ladders, point rods etc.
- 30) OFC joint Enclosure and FMS box.
- 31) Cement
- 32) EWS locks with keys (one key for 10 locks)
- 33) Foundation bolts, nuts & washers for apparatus cases of size 20mmx460mm to Drg.No.SA 112 A/M.
- 34) G.I. wire for earthing.
- 35) 50mmX6mm/40mmX6mm M.S. flat for earthing.
- 36) Hard wood shelf plank 37mm thick for apparatus cases.
- 37) Phenolic synthetic industrial fibre base fine weave cotton fibre sheet - 6mm thick to IS specification 2036 - 1995 - Type F5 sheet of 6mm thick for termination of cables in apparatus cases and diagnostic panel, and 3mm thick for FTOT/ relay rack blanking.
- 38) T.W. planks 25mm thick, for fixing track feed resistance, for fixing EKT and for manufacturing Termination Box, Toolbox.
- 39) TW planks 50X150mm, 50mmx50mm, 25mmx100mm and 25mmx150mm thick for control panel frames, cable clamps and fixing cables.
- 40) Distilled water plant.
- 41) Rubber mat.
- 42) Coloured twine balls.
- 43) Common salt for earthing.
- 44) Copper Battery lugs and eye lugs.
- 45) Copper eyelets for 16/0.2mm and 1/1.5 sq.mm wires.

- 46) Copper tape 20mm x 1.5mm for Bus Bar.
- 47) Cotton waste, Grease Yellow, Honeybee Wax and insulating tapes.
- 48) Decolum sheet for decorative purposes.
- 49) Electrolytic Condensers of rating depending on the circuitry requirements. The voltage rating shall not be less than twice the working voltage of the circuit.
- 50) Emery and sandpapers & Firewood.
- 51) Fixing bolts and nuts (brass) for Terminal blocks and Fuse Blocks in FTOT & for fixing plug-in type relays, 50 Way terminal boards etc.
- 52) Flexible conduit Pipes.
- 53) Kerosene Oil & Oil axle mineral.
- 54) Lead wool for packing signal poles.
- 55) MS angles 25mmx25mmx6mm, 50mmx50mmx6mm for manufacturing relay fixing frames.
- 56) MS flats 50mmx6mm & 25mmx6mm for manufacturing relay frames, Signal collar rings, clamps for bridges, boards, for fixing equipment in apparatus cases and also for fixing 'E' type locks on doors of apparatus cases, and for latching arrangement.
- 57) Paints of all kinds for IS Specification including anticorrosive paints.
- 58) Petroleum jelly.
- 59) Phenolic Laminated Sheet (Hylam sheet)
- 60) Pipe locks/G.I. Locks/NAVTAL locks-6 levers/Padlocks - 50mm with keys.
- 61) PVC hose pipes of sizes.
- 62) PVC sleeves of sizes.
- 63) PVC/Nylon sleeves (Sq. Type) for writing cable core particulars
- 64) Raw wood varnish.
- 65) River sand (Coarse/Fine) or M-sand (Coarse/Fine).
- 66) Rosin core is the best quality.
- 67) Rubber gromites, rubber mat.
- 68) Solder soft high grades.
- 69) Split pins for all mechanical fittings.
- 70) Stone Jelly (20-25mm).
- 71) Tags for terminals.
- 72) Terminal lugs (copper) for all sizes of wires.

73) Wire netting arrangement for CLS units.

74) Wood screws (Brass of sizes & nails of sizes).

APPLICABLE SPECIFICATIONS

ITEM/ACTIVITY	SPECIFICATION:
SMPS based IPS	RDSO/SPN/165/2023 Ver. 4.0 Amdt. 1
Earthing	RDSO/SPN/197/2016 or latest,
Automatic Fire Detection and Alarm System for Signalling & Telecom Installations	RDSO/SPN/217/2025 /Ver.3.1
LED Signal Aspects - all aspects(Red, Green, Yellow and Road warning aspects)	RDSO/SPN/199/2025 Revision 1.2 Amdt. 1 or latest
8-Channel Earth Leakage Detector	RDSO/SPN/256/2025 Ver. 2.0 or latest
KLCR relays	RDSO/SPN/219/2016 Ver 1.0 with Amendment-1
Relay, Non-AC Immunized	BRS:930, IRS:S 34 & IRS:S 23 or latest
Relay, AC Immunized	BRS:931A, IRS:S 60, IRS:S 34 and IRS:S 23 or latest
Isolation transformer	IRS TC 76-2001 or latest
Master and Slave Gate Telephone unit with voice recorder	RDSO/SPN/TC/51/2021 Rev.1.or latest
MSDAC	RDSO/SPN/176/2013/Version 3

4.0 Detailed Technical guidelines for Schedule- B (NS Items):

Supply of MSDAC as per RDSO spec: RDSO/ SPN/176/2013 version 3 or with latest amendments:

The LC gate identified with the track circuits provision will have two track circuits. In lieu of

the same track circuits, they shall be provided with MSDAC in Dual configuration with 6 DPs i.e. 3+3 DPs per LC gate covering the 2 track sections, and the evaluators connected in redundancy placed in the respective LC Hut.

Tenderer shall design the scheme for

a) Provision of required number of Evaluators, Track-Side junction boxes, Detection points and Track Clearance Relays etc.,

b) During the design, tenderer shall ensure that MSDAC Evaluators to be kept at LC Huts.

c) The MSDAC system provided in the LC Hut will be interconnected with 6Quad and OFC cables. In case of failure of 6 Quad/OFC cable the MSDAC system shall automatically changeover the other cable seamlessly and the indication of working cable to be shown as status at LC Hut.

d) Tender design shall include marking of Track Section and Supervisory Track sections in the LC track sections and ensure that the resetting of Track Section/Supervisory Track section will be done automatically and manually as the case may be.

e) All Track sections, supervisory track sections, block supervisory track sections to be interfaced to EI/OC System if applicable, in the respective LC gate for displaying the all track section information and reset information.

These schedules include

- Supply of MSDAC system consisting of Axle Detectors, Track side electronics / DAC field units, Central Evaluator, Reset unit, Relay unit, LV/Co-operation box, etc. with all other accessories fully wired and fully equipped.
- Site survey by Foot for the entire section for identifying the cable Route and finalization of DP plan, Evaluator Plan, Track crossings, Cable core plan etc.
- Necessary 24V supplies including DC-DC converters will be provided through IPS.
- Configuration of MSDAC at site by OEM or authorized OEM representative.
- Lightening and Surge Protection for MSDAC as suggested by OEM.
- Supply of Technical Documents/Manuals, Troubleshooting Guidelines etc.
- The required length of inbuilt cable with Axle Detector is up to 5-10 Meters.
- Provision of MSDAC Track Section, Supervisory Track Section status to the end of stations for monitoring, wherever applicable.

- Testing and commissioning of the entire installation should be done by an authorized OEM representative.
- Supply of Track sections relays not covered in this schedule.

Note: Break up details are to be submitted by the contractor along with the MOU after issue of LOA before entering into the agreement. All the MSDAC equipment to be provided with efficient lightning and surge protection which are also to be supplied along with the system. This also includes the design of axle counter circuits, indoor and outdoor installation, testing and commissioning including the testing and commissioning of track side electronic units including rail contact.

Scope of Railways:

- a) Railways will provide the Approved Signalling plan of LC Gate indicating with DP's and LC Hut.
- b) Provision of 230V AC Power Supply.
- c) Provision of 10KVA/25KVA AT supply.

Scope of the Tenderer:

- a) Based on the Approved SIP, the tenderer has to prepare the DP and Evaluator segregation for each LC Gate that is provided with a track circuit.
- b) Power supply requirements and the overall Load current shall be mentioned for each LC Hut.
- c) Space requirements and Floor Plan to be enclosed.
- d) Tenderer to specify the scheme for interfacing Reset and Co-operation box at LC Gate with Evaluators located at LC Hut.
- e) 110V DC and Unregulated 230V AC will be provided by the Railways. Tenderer has to provide the suitable DC-DC converters such as 12V/24V/50V DC or as per the requirement of OEM in N+1 configuration as recommended by RDSO.

1.2 After the award of contract, Tenderer shall get MoU with RDSO approved source covering supply of equipment for MSDAC and its spares, Installation, Testing and Commissioning and Card Wise Repair cost of MSDAC equipment by the same RDSO approved sources including after sales support required during the Warranty period, before supply of equipment is undertaken. Further, tenderer shall ensure that:

The original manufacturer shall

- i) Offer technical support for supply, installation and commissioning of the equipment.
- ii) Undertake verification and certification of pre-commissioning checklist as per RDSO guidelines.
- iii) Sign on the Application for Technical System approval by RDSO to ensure that the installation is as per the RDSO stipulations.

- iv) Impart training to Railway officials at their factory premises and at site.
- v) Supply all the MSDAC tool kits as prescribed in the manual.
- vi) Guarantee to support till the entire section is commissioned and 12 months thereafter.
- vii) Offer Warranty for equipment for a period of one year from the date of commissioning.
- viii) Guarantee to supply spares for a minimum period of **7 years** after the expiry of the warranty period.
- ix) Support Railways for entering into CAMC/ARC if any on a later date after the expiry of warranty period.
- x) All the designs shall be signed by IRSTELO license holders in the respective category.

Note: Unconditional LOA shall be issued by Railway subject to production of MoU as per Para above.

SUPPLY OF RFID CABLE ROUTE MARKER LOCATORS

RFID Marker Locator should have the following features:

- Controls: Push-button interface with dedicated controls/menu for locating markers, memory capture, GPS activation, and navigation features.
- Data Acquisition: Reads IDs up to 1.5 m deep and logs optional descriptive text (min 20 characters) per marker.
- GPS & Navigation: Built-in GPS to record coordinates; audio guidance to navigate back to the marker.
- Display: Back-lit LCD, 4×20 characters.
- Memory Capacity: Stores up to 8,000 marker records.
- Frequency Support: 101.4 kHz.
- Power Source: Operates on ten 1.5V “C” batteries; ~45 hours intermittent use.
- Depth Measurement: ±2 cm accuracy.
- Software & Outputs: USB connectivity for data export; outputs include RFID ID, Description, GPS coordinates; supports map integration.

- RFID Marker locator shall be provided with complete Marker Database software suitable for RFID cable markers of Item No.82 of Schedule- A. It should: Locate 2 different marker frequencies simultaneously.
- Read, write and locate RFID markers.
- Estimate exact location of underground markers.
- Have a large, backlit, high-resolution graphic display.
- Withstands a wide temperature range of -4 to 122 °F (-20 to 50 °C).

SUPPLY OF SMPS BASED IPS:

The supply and installation of SMPS based IPS shall conform to RDSO Specification RDSO/SPN/165/2023, Version 4.0 (Amdt.1) and shall fulfill the following requirements:

BATTERY SECTION:

Battery Section consists of Battery bank of 110 volt DC for supply to Load when there is no availability of power from FRBC Section. IPS system should be suitable for charging 200AH battery bank of VRLA Maintenance free cells as per IRS: S 93/96(A) (or Latest).

Battery racks (MS) for VRLA batteries batteries, along with its accessories duly, shall also be supplied with battery bank. OEM shall supply copper cable of suitable dia (16 Sq. mm) as per IS: 694 and grade 1100V for connecting IPS to Battery bank.

REMOTE MONITORING SYSTEM:

Facility for remote monitoring of IPS to be provided as stipulated in Remote Diagnostic and Predictive Maintenance System (RDPMS) FRS no. RDSO/RDPM/FRS/2021 or latest. Arrangement should be done in such a way that the health of batteries may be monitored from remote (Divisional control or any other place as directed by the railway representative). This arrangement may be done either through Data logger or through the RDPMS system as directed by the railway representative.

Functional & Technical Requirements

Input & Environmental Conditions

- Input: 230 V AC, 50 Hz (range 150–275 V, 48–52 Hz), including supply from grid or DG sets with AMF and 10% overload capability.
- Environment: Indoor tropical climate up to 50 °C and 95% RH; outdoor installations must meet RDSO/SPN/144/2006 standards.

Modular System Architecture

- FRBC Panel: Float Rectifier cum Boost Charger modules feeding 110 V DC, providing both float and boost battery charging.

- AC Distribution Panel (ACDP): Includes inverters (110 V DC to 110 V AC, 2KVA), AC-AC Convertors (230V AC-110 V AC, 500 VA).
- DC Distribution Panel (DCDP): Contains DC–DC converters of various outputs, with digital voltmeter included.
- Status Monitoring Panel: This panel consists of status indications and critical alarms of IPS, with audio alerts to be provided in Gatekeeper's lodge or any other place as directed by the executive.

Battery & Redundancy Features

- Compatible VRLA (IRS S-93/96A or latest) batteries; installed with racks and initial charging certificates.
- N+1 redundancy to be ensured with uninterrupted operation and hot-swap replacement.

Safety, Protection & Monitoring

- Built-in surge/lightning protection on AC input; automatic disconnection upon voltage anomalies within 500 ms, with alarms; auto-reconnect when stabilized.
- Real-time local monitoring with data logging and potential-free contacts for remote diagnostics.

Design & Construction Guidelines

- Cabinets must not exceed 2000 mm (H) × 750 mm (W/D) are to be structured for easy module access and hot-swappable front mounting.
- Robust racks with anti-vibration pads, ventilation, and cable grommets provided.

Installation & Commissioning

Commissioning must be completed by the OEM, accompanied by a Pre-Commissioning Checklist based on RDSO format (SIG-0101) and a fitness certificate. The format for joint pre-commissioning checklist and post commissioning load measurements shall be a part of instruction manual. The system shall be commissioned, as per specification and representatives of the manufacturer and the railways shall sign this jointly.

WARRANTY

The manufacturer shall submit a certificate of the equipment for its satisfactory performance for **Four (04) years from the date of supply**. The warranty of IPS may be extended for additional 04 years (with quarterly visit of authorized person) on additional payment basis. During the warranty/ extended warranty period, any defect should be repaired free of cost

The IPS Scheme is enclosed separately in IREPS.

EI ALTERATION

Alteration to the existing Electronic interlocking as per the signalling Plan & Table of Control issued by Railways and the latest RDSO & HQ guidelines by modification to the existing Interface and Interlocking circuit, modification to the application logic software of VDU & MT, Alteration to the Relay Rack wiring as per the modified interface circuits including supply of necessary wiring material, upgradation and validation of Data logger Database, Testing of modified logics, commissioning and submission of As-made documents. The list of Stations and their respective makes of EI are mentioned below:

Station	EI(MAKE)
BJM	MEDHA

Technical conditions for Earthing and Bonding, Class A and SPD protection

The Installation of Class–A Franklin rod type lightning protection system shall be carried out in accordance with RDSO TAN 3006 Ver. 3.1. In addition, the following points shall be ensured:

Exothermic Welding: All precautions for exothermic welding of connections for the earthing and bonding system for signalling equipment shall strictly follow Annexure IV of RDSO TAN 3006 Ver. 3.1

Earth Electrode: The typical installation of the earth electrode shall be as per RDSO/SPN/197 Ver. 1.0, provided in Annexure II of RDSO TAN 3006 Ver. 3.1.

Surge Protection: The surge protection system shall be connected in accordance with RDSO TAN 3006 Ver. 3.1 and the RDSO Guidelines on Earthing, Bonding, Surge and Lightning Protection dated 01.01.2025, which are uploaded on IREPS.

OEM Certificate and Warranty: The OEM shall issue a certificate after the installation of the earthing and bonding system. **The warranty period for the earthing system shall be 60 months from the date of commissioning.**

Down Conductor: The down conductor shall consist of a 50 sq. mm copper-bonded steel conductor, securely connected to both the air terminal and the earth pit. All materials required for these connections, including copper tape for the boundary of the room, shall be supplied by the contractor. The length of the copper tape shall be suitable for the perimeter of Room as per the typical building drawing CE612 (refer drawing uploaded in IREPS).

Perimeter Earthing Scheme: The scheme for perimeter earth has been uploaded on IREPS and shall be followed during installation.

Preparing a Signal Interlocking Plan (SIP) for a Level Crossing (LC) Gate Signalling

- Site Survey:
- Assess the physical layout of the LC gate and nearby tracks.
- Identify existing signalling infrastructure.
- Drafting the Layout:
- Use standard symbols and nomenclature as per Signal Engineering Manual (SEM) and Railway\Board guidelines.
- Include all relevant elements: signals, points, gate, and track circuits.
- Designing Interlocking Logic
- Define how signals interact with gate status.
- Incorporate fail-safe mechanisms.
- Control Table Preparation
- List all routes and conditions for signal clearance.
- Include gate status as a critical condition.
- Validation and Approval

Technical Specification: DWC Split Pipe (120/103 mm)-,

1. General Description

- Type: Double Wall Corrugated (DWC) HDPE Split Pipe
- Diameter:
- Outer Diameter: 120 mm \pm 3 mm
- Inner Diameter: 103 mm \pm 2 mm
- Construction:
- Outer Layer: Corrugated for strength and impact resistance.
- Inner Layer: Smooth bore for easy cable insertion.
- Material: High-Density Polyethylene (HDPE), virgin grade, UV stabilized.

2. Material Properties

- Base material: HDPE conforming to IS 7328 or equivalent.
- UV resistance: Stabilized for minimum 10 years outdoor life.
- Non-flame propagating, non-toxic, and chemically resistant.

3. Mechanical Properties

- Ring Stiffness: ≥ 4 KN/m² as per IS 14930 / IEC 60721.
- Impact Strength: No cracking/breakage when subjected to 3 impacts at 0 °C.

- Crush Resistance: Shall withstand 750 N over 300 mm length without permanent deformation exceeding 10%.

4. Split Design

- Pipe shall be longitudinally split for easy installation over existing cables.
- Provided with a male-female self-locking mechanism or coupler to ensure tight closure.
- Joints shall be dust-proof and prevent ingress of rodents, water, and soil.

5. Dimensions & Tolerances

- Standard Length: 3 m \pm 10 mm (split pipes are usually supplied in shorter lengths for ease of handling).
- Wall Thickness:
- Outer wall (corrugated): ~3.0–3.5 mm
- Inner wall (smooth): ~1.5–2.0 mm

6. Colour

- Outer wall: Black / Orange (commonly used for electrical/telecom)
- Inner wall: Yellow / Grey / White (smooth for cable pulling visibility).

7. Marking

Each pipe shall be clearly marked at intervals of 1 m with:

- Manufacturer's name/trademark
- Pipe size (120/103 mm)
- Material grade (HDPE)
- ISI certification mark (if applicable)
- Year & batch of manufacture

8. Standards / Compliance

- IS 14930 (Part 1 & 2): HDPE Ducts
- TEC GR/DWC-34/01 (for telecom applications)
- BS EN 50086 / IEC 61386 (for mechanical requirements)

TECHNICAL SPECIFICATION OF WARNING TAPE-

- **Material:** Virgin polyethylene (PE) or polypropylene (PP), chosen for durability and resistance to environmental stress.
- **Type:** Non-adhesive barrier tape, often laminated with reflective coating for visibility

Yellow with black text: Common for electrical or signalling cables.

Red with white text: Often used for high-voltage or danger zones.

- **Text:** Bold warning messages like “CAUTION – SIGNAL CABLE BELOW” or “DANGER – DO NOT DIG”.
- **Reflectivity:** Integrated reflective strips or coating to ensure visibility in low light or underground conditions.

Attribute	Typical Value
Width	75 mm to 150 mm
Length per roll	100 m to 200 m
Thickness	100 to 150 microns
Reflective layer	Embedded or surface-laminated

While laying the cable, the warning tape colour orange, min width 250 mm by printing with black letters (“Indian Railways Signal and Telecom/OFC cable” on both side of the tape) in the trenches to be provided continuously at 0.3 mtr to 0.5mtr depth as applicable to protect the cable.

Supply and Provision of Automatic Fire Detection and Alarm System (AFDAS)

The Supply and installation AFDAS system shall conform to RDSO/SPN/217/2025 Version No. 3.1 or latest. The Tentative Scheme of installation of AFDAS components is enclosed separately in IREPS. The Pre-Commissioning checklist issued by RDSO is uploaded in IREPS, the same shall be complied with prior to commissioning.

PVC INSULATED UNDERGROUND, UNSCREENED CABLE FOR RAILWAY SIGNALLING:

This specification requires reference to the following Indian Railway Standard

Specifications (IRS) and Indian Standard Specification (IS) are given below:

- IRS : S - 23 : Electrical Signalling and Interlocking Equipment (Tentative
- IS : 723 : Steel Countersunk head wire nails
- IS : 3975 : Mild steel wires, strips and tapes for Armoured Cables
- IS : 5831 : PVC Insulation and sheath of electric Cables
- IS : 6745 : Determination of Mass of zinc coating on zinc coated iron and steel articles
- IS : 8130 : Conductors for Insulated Electric Cables and flexible cords
- IS: 9938: Recommended colours for PVC Insulation for LF wires and cables.
- IS : 10810 : Methods of test for Cables

GENERAL REQUIREMENTS

CONDUCTORS:

- 3.1.1. The conductor shall be composed of plain, annealed high conductivity copper wire(s) complying with IS: 8130 except for annealing test requirements. The dimensions, nominal weights and resistances of conductors shall be in accordance with the values given in Table. Any other sizes may be accepted as agreed between the purchaser and the manufacturer. In such cases, the wire diameter, the insulation thickness and the tolerances thereon shall be specified by the purchaser.
- 3.1.2. Conductors of nominal area less than 25 sq. mm shall be circular only. Conductors of nominal area 25 sq. mm and above may be circular or shaped.

INSULATION:

The Insulation shall be of PVC compound conforming to the requirements of Type 'A' compound of IS: 5831-84. (General purpose insulation for maximum rated conductor temperature 70° C operation) except for insulation resistance, tensile strength and percentage elongation. Re-cycled or re-claimed material shall not be used. The specific gravity of PVC insulation taken from finished cable shall not exceed 1.42.

3.2.2

Applicable for power cable only	Applicable for Signalling Cable only
The insulation resistance of each core shall not be less than 5.0 Mega-Ohm per kilometre at 50° C.	The insulation resistance (Dry) of each core shall not be less than 10.0 Mega-Ohm per kilometre at 50° C and insulation resistance (Wet) shall not be less than 7.5 Mega-Ohm per kilometre at 50° C for cable conductor sizes upto 2.5 sq. mm. For cable conductor sizes more than 2.5 sq. mm, the insulation resistance (Dry and Wet) shall be 5 Mega-ohms / Km at 50° C.

- 3.2.3 The insulation shall be applied by extrusion in one continuous process and shall be homogeneous and free from any joints or repairs. It shall fit closely on the conductor but shall not adhere to it so that it is possible to remove it easily, without damage to the conductor.
- 3.2.4 The average thickness of the insulation shall not be less than the nominal value t_1 as specified in Table 2. The smallest of the measured values of the thickness of insulation shall not fall below the nominal value t_1 in mm. by more than $0.1\text{mm} + 0.1 t_1$.

3.4 INNER SHEATH (Common Covering)

3.4.1 The laid up cores shall be provided with an inner sheath applied by extrusion. It shall be ensured that it is as circular as possible.

3.4.2 The inner sheath shall be so applied that it fits closely on the laid up cores and it shall be possible to remove it without damage to the insulation.

3.5 ARMOURING

3.5.2

Applicable for power cable only	Applicable for Signalling Cable only
Armouring shall consist of the following :	Armouring shall consist of the following:
a) Galvanised round steel wire to IS: 3975 except tensile strength and percentage elongation, or b) Galvanised Steel strip to IS: 3975 except tensile strength and percentage elongation, or c) Any other material (as agreed between the purchaser and the manufacturer).	a) Galvanised round steel wire to IS: 3975 with exception to tensile strength and percentage elongation, or b) Galvanised Double Steel Tape to IS: 3975 with exception to tensile strength and percentage elongation, or c) Any other material (as agreed between the purchaser and the manufacturer).

3.5.3

Applicable for power cable only	Applicable for Signalling Cable only
Where the calculated diameter below armouring does not exceed 13mm, the armour shall consist of galvanised round steel wires only. Wire armouring shall be applied upto 9 cores of 1.5 mm ² conductor nominal cross sectional areas. Above 9 core of 1.5 mm ² or any other sizes of conductor where the calculated diameter below armouring is greater than 13 mm, the armouring shall consist of either Galvanised round steel wires or Galvanised steel strips.	Where the calculated diameter below armouring does not exceed 13mm, the armour shall consist of galvanised round steel wires only. Wire armouring shall be applied below 12 core of 1.5 mm ² conductor nominal cross sectional areas. 12 core and above of 1.5 mm ² or any other sizes of conductor where the calculated diameter below armouring is greater than 13 mm, the armouring shall consist of Double Steel Tape.

3.5.4

Applicable for power cable only	Applicable for Signalling Cable only
The armour wires/strips shall be applied as close as practicable. The maximum gap between any two adjacent wires or strips shall not exceed 10% of the nominal	The armour wires shall be applied as close as practicable and shall not override each other. The cumulative gap shall not exceed the nominal diameter of a wire.

3.6 OUTER SHEATH

3.6.1 The outer sheath shall be applied by extrusion in one continuous process and shall be homogeneous and free from joints and repairs. It shall be applied :

- a) Over the insulation in case of unarmoured single core cables. &
- b) Over the inner sheath in case of unarmoured twin, three and multi-core cables. &
- c) Over the armouring in case of armoured cables.

3.6.2 PVC compound conforming to the requirements of type ST1 compound to IS: 5831-84 except for tensile strength, percentage elongation and shrinkage shall be used for outer sheath. The colour of the outer sheath shall be black.

3.6.3 The thickness of PVC outer sheath shall be determined in accordance with procedure laid down in IS: 10810 (Part-6)-1984. The average thickness shall not be less than the nominal value (t_s) specified in Table 6 and the smallest of the measured values shall not fall below the nominal value by more than $(0.2\text{mm} + 0.2 t_s)$.

Note 1:- In case of single core unarmoured cables. It is permissible to supply insulation and outer sheath in a single extrusion out of the material intended for insulation. However the thickness of such extruded sheath shall be equal to the sum of thickness of insulation and outer sheath specified separately. The smallest of the measured values of the total thickness shall not fall below the sum of the nominal values of insulation and outer sheath thickness specified by more than $0.2\text{mm} + 0.2 (t_1 + t_s)$.

Note 2:- In case of multi-core unarmoured cables, it is permissible to apply the inner and outer sheath in a single extrusion out of the materials intended for outer sheath. However, the thickness of such extrude sheath shall be equal to the sum of the thickness of inner and outer sheath specified separately.

The smallest of the measured values of the total thickness shall not fall below the sum of the minimum value of inner sheath thickness and nominal value of outer sheath thickness specified by more than $0.2\text{mm} + 0.2 t_s$.

3.6.4 **For Signalling Cable only:** It shall be ensured that outer sheath is circular and ovality (ratio of minor to major dia.) does not exceed 15% of outer sheath.

PVC Insulated Cables & Wires For Indian Railway Signalling.

0.1 This specification is issued under the fixed Serial No. IRS: S76-89 followed by the year of original adoption as standard or in case of revision, the year of last revision.

Adopted – 1989

0.2 This specification requires reference to the following Indian Railway Standard specification (IRS) and Indian Standard Specification (IS):

- IRS S : 23 - Electrical Signalling and Interlocking Equipment
- (Tentative)
- IS: 723 - Steel Countersunk Head Wire Nails.
- IS: 5831-84 - PVC Insulation and Sheath of Electric Cables.
- IS : 10810 - Methods of Test for Cables
- IS: 8130-84 - Conductors for insulated electric cables and flexible cords.
- IS : 9938 - Recommended colours for PVC insulation for
- LP wires and cables.
- IRS: S63 - PVC insulated cables for Railway Signalling.

3. GENERAL REQUIREMENTS

3.1 Conductors

3.1.1 The conductors shall be composed of plain, annealed high conductivity copper wire (s) complying with IS: 8130 except for annealing test requirements. The dimensions, nominal weights and resistances of conductors shall be in accordance with the values given in Table. Any other sizes may be accepted as agreed between the purchaser and the manufacturer. In such cases, the wire diameter, the insulation thickness and the tolerances thereon shall be specified by the purchaser.

3.2 Insulation

3.2.1 The insulation shall be of PVC compound conforming to the requirements of type A compound of IS: 5831-84 (General purpose insulation for maximum rated conductor temperature 700 C operation) except for the values which have been specified in this specification. Re-cycled or re-claimed PVC compound shall not be used.

3.2.2 The insulation resistance of each core shall not be less than 3.0 mega ohm per kilometre at 500 C for core insulation thickness of 0.5 mm and 5 mega ohm/Km at 500 C for core insulation thickness of 0.8 mm & above.

3.2.3 The insulation shall be applied by extrusion in one continuous process and shall be homogeneous and free from any joints or repairs. It shall fit closely on the conductor but shall not adhere to it so that it is possible to remove it easily, without damage to the conductor.

3.2.4 The average thickness of the insulation is not to be less than the nominal value t_1 as specified in Table 2. The smallest of the measured values of the thickness of insulation shall not fall below the nominal value t_1 by more than $0.1 \text{ mm} + 0.1 t_1$.

3.2.5 The cores of cables shall be identified by different colouring of PVC insulation. The colours shall conform reasonably to the standard colours shown in IS: 9938.

3.2.6 For single core cables, the colour scheme as recommended in Clauses 3.2.5 of IRS: S 63 shall be adopted unless otherwise specified by the purchaser.

3.4 Sheath

3.4.1 In case of multicore cables, the sheath shall be applied by extrusion in one continuous process and shall be homogeneous and free from joints and repairs.

3.4.2 PVC compound conforming to the requirements of Type ST1 to IS: 5831-64 except for the values which have been specified in this specification shall be used for the sheath. The colour of the sheath shall be grey. Re-cycled or reclaimed PVC compound shall not be used.

3.4.3 The average thickness shall not be less than the nominal value (ts) specified in Table 5 and the smallest of the measured values shall not fall below the nominal value by more than $(0.2\text{mm} + 0.2 \text{ ts})$.

Cable laying practices:

Technical details:

Sl. No.	Description
i	<p>Trenching and laying of cable ducts, Signalling, telecommunication, Power cables, termination of cable on terminals with supply of all necessary fixtures and material, blowing of OFC, splicing, jointing, provision of joint chambers and loop chambers, termination of fibres on FDMS of OFC and testing of cables and fibres, placing of cable route markers and associated works is in the scope of the work.</p> <p>Practices as specified in IR Telecom Manual, guidelines issued by RDSO for signal cable laying vide RDSO/SI/G/2010 Ver 1.1 or latest, Southern Railway technical guidelines shall be followed. In the RE area special precautions laid down in RDSO guidelines shall be followed.</p>

ii	<p>Requirements of micro-tunnelling / trenchless laying, laying of HDPE pipe / polyolefin duct / DWC pipes / GI Pipe and protection arrangements etc. shall be assessed based on site survey and shall be indicated in the cable route plan and submitted for approval of Authority Engineer.</p> <p>Cable shall be laid as per approved cable route plan and cable core / distribution plan at a depth not less than one metre from the ground level and warning tapes of approved make shall be provided at depth of 0.5m from ground level. The width of cable trenches should commensurate with the number of cables. The minimum width shall be kept as 0.3 meters. An extra cable loop of 6 to 8 meters shall be kept at each end of the main cable / tail cable / power cables / 6Q cable, at apparatus cases, at signal foundations, ABS huts / Relay rooms, major bridges and culverts.</p> <p>If the cables are to be laid in the station area/ circulating area by breaking concrete/ road/ platform/ any other surface, the work area shall be brought back to its original state after completion of cable laying.</p>
iii.	<p>Trenching and cable laying shall be carried out in Two paths. One is called the main path and another one is called the redundant path. Main and Redundant path for cable laying shall be on the opposite side of tracks. If there is no space for cable laying on the opposite side of the track, then trenches shall be made with path diversity on the same side with prior approval of Authority Engineer.</p> <p>a) If for any reason if the cable laying is done in only one path (with prior approval of authority engineer), that path shall be considered as the main path In the main path, the trenches shall be sufficiently protected to avoid damage to signalling, Power, HDPE duct etc.</p> <p>b) Where power cables carrying 230V or above are to be taken through the same trench as signalling/communication cables, separation between power & communication cables as per extant instructions may be provided.</p> <p>c) In hard rocky areas, the rock shall be cut to a depth not less than 300 mm & after laying of cables in trenches, the cables shall be protected with a layer of brick or half cut split DWC as per the instruction of Authority Engineer (Drg. No.SK/SR/26) and concrete the remaining portion up to ground level, with 1:3:6 concrete mix.</p>
	<p>d) In areas where continuous rock is encountered, the cables shall be laid in GI pipes of adequate diameter and complete length of the GI pipe shall be clamped and concreted with 1:3:6 concrete mix upto the height/width of 300</p>

	<p>mm above /adjacent of GI Pipe.</p> <p>e) In case of cable laying across culverts/bridges, the cables shall be laid in GI pipes of adequate size with necessary masonry supports / MS clamps at an interval of every 2 metres. The ends of the pipes shall be closed with brick masonry abutments work so that no cable is exposed.</p> <p>f) The trench path shall be straight as far as possible. The trenching shall be carried out without causing damage to the working cables. The trenches shall be made without causing damage to cess and close to railway boundary in block sections and nearby tracks in station section. A qualified engineer shall be deployed at the work spot continuously. The guidelines issued vide Railway Board Lr No.2021/Tele/5(2)/3-Part(1)(3425647) dated 12.06.2023 Telecom Circular No. 17/2013 issued vide Railway Board Lt. No.2003/Tele/RCIL/1 Pt.IX Dt: 24.06.2013 for taking up digging activity near S&T cables shall be followed. Necessary bushes/trees/jungle shall be cleared before taking up the trenching.</p> <p>g) The contractor shall lay the cable under the supervision of the Authority Engineer/ his representative, after the trenches have been inspected by the Authority Engineer/ his representative and found to be clear of debris, having a level bedding and of adequate depth.</p> <p>h) It is the responsibility of the contractor to deploy night watchmen/ patrolling teams for the safe upkeep of cables laid in trenches.</p> <p>i) After completion of cable laying, the excavated earth shall be again put up in the trench. It shall be ensured that there are no stones or any sharp materials present. The refilled earth shall be consolidated and extra earth also shall be placed on the trench to compensate for the shrinkage and consolidation of earth.</p> <p>j) Trenching and cable laying shall be carried out in one path for short distance only, where it is not feasible to provide in two separate path duly taking approval from Authority Engineer.</p> <p>k) Micro tunnelling/HDD/ trenchless digging shall also be adopted if it is found advantageous for quick delivery of the project but not envisaged during the survey shall be decided by the Authority Engineer. Micro tunnelling shall be carried out at a depth of not less than 1.6 mtr from ground level. In this case, Cable markers to be provided along the route and no need to provide HDPE duct and warning tapes. However, OFC cables are laid through HDPEs pipes only.</p>
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iv	<p>a) Track Crossings, Road crossings, Platform crossings, Trenching in Circulating area, shall be carried out by Microtunneling / HDD/ Trench less digging at depth of 1.6 mtrs from track level to the extent possible. Microtunneling / trenchless digging/ manual track crossing shall include supply and insertion of HDPE duct of Dia 110 mm, PE 80, PN6 (IS 4984) of 103.5mm inner dia & 120mm outer dia conforming to specification IS 14390(part2): 2001 & provisioned with couplers.</p> <p>b) If micro tunnelling is not feasible for track crossings / Road crossings, manual horizontal boring method shall be followed. For track crossings, micro tunnelling/ horizontal boring shall be done at a depth not less than 1.0 mts from the bottom of the sleeper.</p> <p>c) If both the above mentioned methods are not feasible, manual track crossing / road crossing shall be done at a depth not less than 1m from the bottom of the sleeper. While carrying out manual track crossing, it may be ensured that the excavated sand is dumped on tracks soiling the working track/ballast. After the completion of manual track crossing, the location of track crossing shall be restored to original condition and certified fit for normal train operation by an authorised representative of the PWAY department.</p> <p>d) The surface area shall be brought back to its original state after completion of cable laying</p> <p>e) While executing track crossing / road crossing by any of the above methods, cables shall be laid in Dia 110 mm, PE 80, PN6 (IS 4984) or DWC pipe of 103.5mm inner dia & 120mm outer dia conforming to specification IS 14390(part2): 2001 & provisioned with couplers.</p> <p>f) Wherever the above three options are not feasible, cables shall be taken over the foot over bridge in lieu of track crossing as decided by the Authority Engineer. Cable shall be laid inside HDPE pipe of Dia 110 mm, PE 80, PN4 (IS 4984) of suitable diameter properly clamped to the FOB structure.</p> <p>g) A cable coils pits of 1.5mtr x 1.5 mtr and depth as per site condition shall be constructed near Relay room, ABS Hut, LC Gate and cable coil loops shall be kept in this pit duly protected with a layer of bricks and cable markers.</p>
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v	<p>Cable Laying on Bridges:</p> <p>a) On bridges, the cables are to be laid through GI Pipes 50mm dia- 3.65mm thick/100mm dia-4.5mm thick/DWC pipe with off-set both ends and with coupling wherever required as per Railway requirement. The pipes shall be suitably supported over the bridges/drainage/culverts with brick masonry works of size 300x300x300mm at an interval of 2M in box type bridges and suitable MS clamps at an interval of 1M in Girder bridges. The end of pipes will be closed with brick masonry abutments of size 0.5mx0.5mx0.5m.</p> <p>b) Cable laying on important/ major Bridges with concrete girders and having built in duct shall be laid through HDPE pipe of Dia 110 mm, to specification PE 80(IS 4984). Masonry brick blocks of size 500 x 500 mm (width X height) shall be provided at either end of the bridge to cover exposed HDPE pipe completely.</p> <p>c) Cable laying on important/ major Bridges with concrete girders without built in duct shall be done through GI pipes of adequate diameter. Concrete masonry of 300X300X300 mm above GI pipes shall be provided at every 2 mts .The GI pipes shall be clamped at every 1 mt. The GI pipes and concrete masonry shall not infringe as per IRSOD. Both ends of the GI pipes are to be closed with brick masonry.</p> <p>d) Cable laying on all minor bridges / culverts shall be as per DRG No. 15-D8 of IRSEM. Medium class GI Pipes of adequate diameter for laying cable on the culvert shall be used. When the cables are to be laid on the bed of culverts or under culvert, the laying shall be done as per IRSEM drawing no DRG No. 15-D7. This procedure shall be adopted for minor bridges/culverts where there is no perennial water flow.</p>
vi	<p>When the cables have to be taken inside a relay room / ABS hut / Dy. SS room / LC gate hut etc., the cables shall be laid & bunched over powder coated MS ladder of appropriate width made of angle of size 38mm X 38 mm X 3 mm and taken inside the relay room. The base of the ladder shall be properly concreted with 1:3:6 concrete.</p> <p>The above arrangement shall be protected by constructing a brick masonry block around the ladders.</p>

vii	<p>When the cables are required to be taken inside working location boxes / Signal Post, the cable shall be taken from underneath the location box foundation. Inside of the location box shall be sand filled, plastered and sealed with bitumen compound after taking the cables inside.</p> <p>For working functions, the planning shall be such that it is possible to change over without disconnection of working function or with bare minimum disconnection. Wherever there is paucity of space in the existing locations, new wired location with foundation shall be done and existing cables shall be jumpered from the existing location to the new wired location and existing location shall be converted into Junction Box.</p>
viii	<p>6Q cable shall be jointed using jointing kits to specification IRS TC 77/2012 Rev 3 with latest amendments. These joints shall be kept in a separate new Half Location Box duly fixing with teak wood reapers on both ends of the joint without any sharp bends.</p> <p>6Q cable shall be terminated on WAGO / Phoenix terminals which shall confirm to RDSO Specification No. 189/2004 or latest at location boxes near DPs of MSDAC. 6Q cable pairs shall be twisted before termination.</p>
ix	<p>When the cables are required to be taken inside working location boxes / Signal Post, the cable shall be taken from underneath the location box foundation. Inside of the location box shall be sand filled, plastered and sealed with bitumen compound after taking the cables inside.</p> <p>For working functions, the planning shall be such that it is possible to change over without disconnection of working function or with bare minimum disconnection. Wherever there is paucity of space in the existing locations, new wired location with foundation shall be done and existing cables shall be jumpered from the existing location to the new wired location and existing location shall be converted into Junction Box.</p>
x	<p>6Q cable shall be jointed using jointing kits to specification IRS TC 77/2012 Rev 3 with latest amendments. These joints shall be kept in a separate new Half Location Box duly fixing with teak wood reapers on both ends of the joint without any sharp bends.</p> <p>6Q cable shall be terminated on WAGO / Phoenix terminals which shall confirm to RDSO Specification No. 189/2004 or latest at location boxes near DPs of MSDAC. 6Q cable pairs shall be twisted before termination.</p>

RTU Technical Details:

Sl. No.	Description
i	<p>The RTU as per specification IRS: S 99-2006 Amd. 3 or latest shall be provided at each LC Hut. All the materials such as tag blocks, cables, wire coils and interface equipment etc. required shall be supplied and installed.</p> <p>RTU shall be equipped and wired with not less than 20% spare capacity for both Analog and digital inputs to cater for future requirements. RTU with 512 digital inputs and 32 analog inputs to be provided at LC Huts. Necessary protocol converters to be supplied wherever applicable. Augmentation of data loggers / RTUs available at stations / interlocked LC gates shall be carried out to accommodate additional digital and Analog inputs.</p>
ii	<p>Modifications, upgradation, wiring, validation and updating database, fault logics of the new inputs related to Automatic Block Signalling work in existing data loggers at stations, LC gates, test room, central control etc. and any software / hardware upgradation in existing RTU required for the functioning of the RTU network shall be arranged. This shall also include supply and installation of additional modems/ data concentrators required at stations / interlocked LC gates for networking of RTUs.</p>
iii	<p>Installation, wiring, validation, networking of RTUs shall be carried out by authorised Engineer of OEM. Pre-Commissioning checklists and OEM installation certificates shall be prepared and signed by OEM authorised engineers.</p>
iv	<p>Provision of FEP / MFEP, additional servers required, if any, to augment the RTU network at Divisional and HQ signal control is in the scope of work.</p>
v	<p>Potential free contacts of IPS, ELD, SPD, Fire alarm, MSDAC, USFBI / FN MUX, networking equipment, proximity switch, FACS etc. shall be wired to RTU and required fault logics shall be developed to generate alarms and SMS alerts.</p>

Technical Specification for Aluminium telescopic ladder

Aluminium telescopic ladder is a lightweight, portable, and extendable ladder designed for easy storage and versatile use.

Material: Made of aluminium, which makes it strong, rust-proof, and lightweight.

- Telescopic design: Collapses into a small size for easy transport and storage.
- Adjustable height: You can extend it step by step to the desired height.

- Safety lock system: Each rung locks in place when extended.
- Non-slip feet: Provides stability and grip on different surfaces.
- Load capacity: Usually supports 120–150 kg (varies by model).

Extends up to 3.8–4.7 meters

SUPPLY OF FERRULE PRINTER

The Ferrule Printer should adhere to the following specifications:

Print Width: 10mm or more

Print Technology: Thermal transfer or better

Print Speed: Min. 10 mm/s.

Resolution: More than 180 dpi.

No. Of printable lines: Min. 2

Battery: Inbuilt or rechargeable

Similar to: Casio KL-HD1 or Brady M210 or Canon MK3000 or better

It includes supply of 5 rolls of Cassette tape compatible for supplying each ferrule printer.

CHAPTER-4B

DETAILED GUIDELINES FOR SCHEDULE OF WORKS & SUPPLIES -ENGINEERING WORKS

CHAPTER-4B

SPECIFICATION FOR BUILDING WORKS

Setting out works:

The contractor shall be responsible for the true and proper setting out of the works for correctness of the position, levels, dimensions and alignment of all parts of work and for provision of all necessary pegs, reference pillars, instrument, equipment and appliances and labour in connection therewith. If at any time during the progress of the work any error shall appear or arise in the position of levels, dimensions or alignments at any part of the works, the contractor on being required to do so by the Engineer in charge shall at his own expense rectify such errors to the satisfaction of the Engineer in charge and he shall carefully protect, preserve secure all bench marks site rails, pegs, reference pillars and other things used in setting out of the works. The contractor shall have sufficient number of survey instruments such as theodolites, levelling instruments, levelling staff etc. and arrange to set out the alignment at his own cost and also establish necessary reference pillars as required and directed by the Engineer.

EARTH WORK:

The classifications of soils in excavation shall be decided by the Engineer in charge and his decision shall be final and binding on the contractor. Merely the use of explosives in an excavation will not be considered as a reason for higher classification unless blasting is clearly necessary in the opinion of the Engineer in charge. Excavation for foundation/foundation works etc. shall include any wet excavation that may be met with and will be paid for under the respective items of USSOR 2021, for the wet excavation or bailing out water with or without mechanical means or for any other precautions of work which may be found necessary during the course of execution. Even if any springs of water are met with, NO EXTRA PAYMENT will be made other than the respective items mentioned in the USSOR 2021. Whenever excavation for catch water is ordered, the excavated spoils should be spread, consolidated and sectioned to the required profile to form a bund on the downhill side of the catch water drain. Payment for excavation shall be made under the relevant items of Schedule as the case may be and no extra payment shall be made for consolidation and sectioning to profile for forming bund and catch water drain. No payment will be made for any earthwork sink age below ground level due to soil conditions and payment will be made only based on the original ground levels recorded before the commencement of the work and finished profile of the work. The contractor should study the site conditions before tendering.

3.0) No separate payment will be made for site clearance or jungle clearance or shrubs clearance, brush wood, grass or other obstructions including small trees of girth not exceeding 30 cm and the rates accepted in this contract are deemed to include all

such costs except dismantlement of structure if any which will be paid for suitably under USSOR 2011 as per the rates accepted in the tender schedule.

- 4.0) Samples of all fittings and fastenings including locking arrangements of approved quality required for doors, windows, ventilators as well as all sanitary and water supply fittings etc. should be submitted to Engineer in charge and used in the work only after his specific approval. Approved samples should be deposited with the Engineer in charge.
- 5.0) The Railway will have the right to check the quality of any material required for construction like cement, steel, sand, coarse aggregate, admixtures, bricks, timber and concrete cubes etc. for its conformity with specification. The testing charges will have to be borne by the contractor. Sufficient cube moulds will have to be supplied by the contractor at his own **cost**.

CEMENT:

The cement used shall be any of the following, with the prior approval of the Engineer:

- a) 43 Grade Ordinary Portland cement conforming to IS:8112;
- b) 53 Grade Ordinary Portland cement conforming to IS: 12269;
- c) Rapid hardening Ordinary Portland cement conforming to IS: 8041;
- d) High strength Portland Cement conforming to IRS: T:40;
- e) Portland slag cement conforming to IS: 455 (See Note 1 & 4 below)
- f) Portland pozzolana cement conforming to IS:1489 (See Note 2 & 4 below)
- g) Sulphate resistance cement conforming to IS: 12330 (See Note 3 below)

Note 1:

Portland slag cement conforming to IS: 455 may be used for pre-stressed concrete work, provided slag content in cement is not more than 50%.

Note 2:

Portland Pozzolana cement shall not be used for RCC & PSC works. Portland pozzolana cement can be used only for foundation concrete and concrete works in bridge substructures where reinforcement is not provided for structural strength or reinforcement provided is only nominal for temperature stresses etc. When Portland pozzolana cement is used, supporting form work shall not be removed till concrete attains at least 75% of the design strength.

Note 3:

The sulphate resisting cement conforming to IS: 12330 shall be used only in such conditions where the concrete is exposed to the risk of excessive sulphate attack e.g. concrete in contact with soil or ground water containing excessive amount of sulphate. It

shall not be used under such conditions where concrete is exposed to risk of excessive chlorides and sulphate attack both.

Note 4:

The rate of development of strength is slow in case of blended cement i.e. Portland pozzolana cement and Portland slag cement, as compared to ordinary Portland cement. This aspect should be taken care while planning to use blended cement. Accordingly, the stage of pre- stressful period of removal of form work and period of curing etc. should be suitably increased.

Cement to be used on the works should be procured from the main cement plants or from their authorized dealers and each consignment shall be covered with the manufacturer's test certificate.

Cement bags in packing's should bear the following information in legible markings:

- 1) Manufacturer's name, registered trade mark of manufacturer, if any.
- 2) Type of cement.
- 3) Weight of each bag in kgs or number of bags/tonne.
- 4) Date of manufacture, generally marked as week of the year/year of manufacture.

Example: 15/03 which means 15th week of 2003.

Tests on cement will be conducted as per IS 4031. Some of the tests which may be carried out are:

- 1) compressive strength
- 2) initial & final setting time
- 3) consistency

Empty cement bags would be the property of the contractor and shall be disposed of by the contractor himself. In case the Railway is in need of empty cement bags, good and usable empty cement bags are to be supplied by the contractor at the rate of Rs. 2/- per bag for empty cement gunny bags and Rs.1.40 per bag for empty polythene/paper bags.

The cement shall be used within 3 months of manufacture. The decision of the Engineer in charge as to whether the cement is fit for use in the work shall be final and binding on the contractor. For M 20 and higher mix of cement concrete, the quantity of cement will be based on the design mix. For concreting under water 10% extra quantity shall be added and allowed towards extra consumption.

The cement consumption of the works which are not based on design mix shall be as per the 'Cement Schedule' and as per the 'Specifications for materials and works 1969' of Southern Railway.

STEEL:

The reinforcement shall be any of the following with the prior approval of Engineer:

- a) Grade I mild steel and medium tensile steel bars conforming to IS: 432 (Part I);
- b) High strength deformed steel bars conforming to IS: 1786;
- c) Thermo mechanically treated (TMT) bars satisfying requirements of IS: 1786;
- d) Rolled steel made from structural steel conforming to IS: 2062 Gr A and Gr B.

Steel shall be procured from the main producer such as SAIL, TISCO, IISO, TINL-VSP or authorized stock yards. Re-rolled steel will not be accepted. Each batch of steel shall be covered with a manufacturer's test certificate.

Payment for steel (reinforcement) will be as per the reinforcement actually utilized in the work. No extra amount will be paid for wastage or for cut rods if any, which would be the property of the contractor. The weight of the steel will be calculated from the nominal or actual unit weight whichever is less.

Binding wires used for binding/fixing reinforcement shall be galvanized iron wires. The contractor should make his own arrangements for the required binding wire for all RCC works including the works under USSOR 2011 items though it is mentioned otherwise in the USSOR 2011 rates.

In addition to test certificates produced by the tenderer/contractor, Railway may draw samples and send for testing independently at Railway's own laboratory or through outside agencies, cost of which shall be borne by the contractor. The decision of the Engineer as to the necessity of such a test shall be final and binding on the contractor.

Aggregate:

The aggregate shall conform to IS: 383 and shall before use, be tested through one of the approved testing institutions and the result submitted in accordance with Appendix A of IS 383. Coarse aggregate shall be crushed stone, angular in shape and gravel shall not be used. Fine aggregates shall be resulting from natural disintegration of rock which has been deposited by streams or glacial agencies.

Water:

Water to be used in making and for curing concrete shall conform to IS: 456.

The contractor shall arrange for water supply necessary for the work. Ordinarily no water will be supplied by Railways to the Contractor either for drinking purpose or for execution of the work and the rate quoted shall include the cost of arranging water supply.

However if surplus water is available from a nearby Railway source, the contractor may be allowed to draw water for his work on payment of necessary water charges as fixed by

railway administration. Necessary arrangement of drawl of water by pumping, laying of pipe line and storage arrangement etc. shall be done by contractor at his cost.

Form work:

Form work shall conform to the shapes, lines and dimensions shown in the drawings and shall be so constructed and supported as to remain sufficiently rigid and water tight to prevent loss of mortar and water from the concrete and shall be able to carry all the loads and forces during the casting as well as later. For important works steel shuttering with tubular steel centering shall be used in accordance with the manufacturer's/designer's instructions. All panel joints, corners and seams should be made water tight by using approved sealing materials. Also the steel form should be thoroughly cleaned before use. Form faces should be treated with a releasing agent to prevent concrete sticking to the forms and thereby aid in stripping. Only approved types of releasing agents with prior permission of the Engineer in charge shall be used. Use of black oil or grease is totally prohibited. Ample access should be provided within the form work for proper cleaning up, placement, consolidation and inspection of concrete.

Construction joints:

The surface of the construction joints should be cleaned properly and prepared so as to ensure adequate bond with the concrete placed below or adjacent to it and to obtain the required water tightness. Any approved method of cleaning for removal of laitance, bleed water and fines by using wire brush, water jetting, green cutting, and sand blasting may be used with the prior approval of the Engineer in charge.

Concrete:

The concrete shall be produced and laid in the manner as given in IRS Concrete Bridge Code 1997 (Second Revision) for General Bridge construction corrected upto date and IS 486.

The concrete shall be of controlled quality with nominal maximum size of coarse aggregate limited to 20 mm unless specified otherwise in the schedule. Batching of different ingredients for production of concrete shall be done by weight only. A modern, mechanized or automatic weigh batcher shall be used for the weighing aggregates and cement. The weight batch shall have accuracy of + 3%. Modern high speed mixer or any other mixer approved by the Engineer shall be used for mixing concrete. The concrete shall be consolidated by means of vibration with approved type needle/form/surface vibrators.

The contractor should submit concrete mix design before starting the work and obtain the approval by Engineer in charge/DRM (Works) MDU Division, Southern Railway before the execution of work. In case the source of cement/type change a new UNIX design shall be submitted for approval.

The minimum grade of plain cement concrete shall be M 20 and that of Reinforcement and cement concrete shall be M25 unless specified otherwise in the tender schedule. Only approved design mix shall be used for the concrete.

The minimum grade of concrete shall be M-40 for pre tensioned pre-stressed concrete structure.

The minimum quantity of cement to be used for various grades of concrete shall be as under:

M 20 350 kgs/cum]

M 25 400 kgs/cum] with 43 grade cement

M 30 420 kgs/cum]

Maximum water cement ratio:

The limits for maximum water cement ratio for design mix shall be based on environmental conditions as per extant Railway Board's instructions. The limits for maximum water cement ratio for different environmental conditions shall be as under:

Maximum water -cement ratio			
Environment	Plain concrete (PCC)	Reinforced concrete (RCC)	Prestressed concrete (PSC)
Mild	0.55	0.45	0.40
Moderate	0.50	0.40	0.40
Severe	0.45	0.40	0.40
Very severe	0.45	0.38	0.35
Extreme	0.40	0.35	0.35

Samples from fresh concrete shall be drawn as required in IRS Concrete Bridge Code 1997. The test cubes should be cast at regular intervals and tested to assess the strength of concrete. The contractor should establish cube testing equipment at or near the site of work. The cost of casting of cubes and their testing will have to be borne by the contractor. In case the contractor desires to use a curing membrane instead of water curing, he may do so after submitting the necessary data and after the same is approved by the Engineer in charge. No extra payment on this account would be admissible. It should be PRECAST noted that no additional payment would be made for curing/vibrating the concrete at different heights and the contractor should make his own arrangements for the provision of

necessary staging/scaffolding etc. and carry out curing/vibrating at all levels as directed by the Engineer in charge. If curing is not being done to satisfactory standard, the Engineer may get it done at the contractor's cost without any notice to him as the curing cannot wait for any such notice time, etc. The Engineer's decision shall be final and binding as to whether satisfactory curing is being done or not. The cost of curing will be recovered from the 'ON ACCOUNT BILLS'.

Ready Mixed Concrete (RMC):

Concrete produced by completely mixing cement, aggregates, admixtures, if any, and water at a Central Batching and Mixing plant and delivered in fresh condition at site of construction.

Ready Mixed concrete may be used, wherever required. It shall conform to the specifications of concrete, as laid down in IRS Bridge Code, IS: 4926 (Specification for Ready Mixed Concrete) may be referred. Re-tempering with concrete: Under any circumstances, re-tempering i.e. addition of water after initial mixing, shall not be allowed, as it may affect the strength and other properties of concrete.

Time period for delivery of concrete:

The concrete shall be delivered completely to the site of work within 1 ½ Hr (when the atmospheric temperature is above 20 degree C) and within 2 Hrs (when the atmospheric temperature is at or below 20 degree C) of adding the mixing water to the dry mix of cement and aggregate or adding the cement to the aggregate, whichever is earlier. In case, location of site of construction is such that this time period is concerned inadequate, increased time period may be specified provided that properties of concrete have been tested after lapse of the proposed delivery period at the time of finalizing mix design.

Transportation of ready mixed concrete:

The ready mixed concrete shall be transported in concrete transit agitators conforming to IS: 5892 (Specification for concrete transit mixers and agitators). Agitating speed of the agitators during transit shall not be less than 2 revolution per minute nor more than 6 revolutions per minute. Any excess quantity of cement and steel left over after completion of the work will have to be disposed of by the contractor and cannot be taken over by the Railway.

Payments:

Payments as specified in the schedules will alone be admissible. No site installation charges will be payable and the tenders with such conditions are liable to be rejected.

Scope of the work for nominated Pre Cast huts:

Design of LC huts as per the layout plan attached separately in IREPS with Tender Document and construction as per the approved drawings at the specified location along

with supply of all electrical fittings & carrying out necessary electrical wiring with all the related works as per approved designs and drawings.

Technical Details

Sl. No	Description
i	<p>LC huts shall be pre-stressed precast RCC structures of approved design and sourced from a reputed company that has constructed precast RCC buildings of cumulative floor area not less than 2, 00,000 sq. feet in the government and/or corporate sector before the closing date of the tender.</p> <p>The precast manufacturer shall have their own manufacturing facility with valid ISO certification before the tender closing date.</p> <p>A survey shall be carried out at each LC hut location to assess the Highest Flood Level (HFL), and the report shall be submitted to the Authority Engineer. The floor level of the LC hut shall not be less than 1000 mm or not less than 300 mm above the HFL, whichever is higher.</p> <p>The LC hut shall be provided with a railing on the side facing the track. The grade slab shall be constructed either with precast panels or in situ concrete, and it shall be properly integrated with the wall panels to prevent shrinkage. Fixtures required for the installation of equipment shall be integrated into the wall panels and floor during the casting stage itself.</p> <p>Entry into the LC hut shall be provided with steps as well as a ramp. Windows and doors shall be made with unbreakable materials.</p> <p>Concreting shall be done with a 1:4:6 concrete mix for a width of 1500 mm and thickness of 250 mm from the foundation of the LC hut on all four sides, duly levelling and ramming the earth.</p>
iii	<p>The size of the LC huts shall be as per the diagram attached separately in IREPS (CE 612). While arriving at the size of the LC hut, recommendations of OEM regarding the space to be maintained between different equipment racks and working space shall be kept in mind. The layout plan attached with this document indicates only the minimum distance to be maintained between equipment. If any deviation from the attached layout plan is required as per revised design considerations, the modified plan shall be submitted by the contractor for the approval of the Authority Engineer.</p>
iv	<p>The LC hut shall consist of one floor only. The floor height shall not be less than 1000 mm from the surrounding ground level. Height of the roof inside the hut from flooring top to roof bottom shall not be less than 3600 mm. Foundation & Super structure shall be designed for Safe Bearing Capacities of soil (SBC) for five different categories (50-75 KPa), (75-100 KPa), (100-150 KPa), (150-200 KPa) & 300 KPa with/without water table</p>

	and submitted for approval duly proof checked by reputed govt institutes like IIT/NIT/RITES. Appropriate foundation & Superstructure design shall be adopted at a particular location by carrying out Soil testing from NABL approved laboratories. Detailed QAP for foundation and super structure shall be submitted for approval.
v	All the materials used for construction shall be as per IS specifications. Design shall comply with latest IS codes. Loading standards shall be as per IS 875 or latest and relevant IS codes. Flooring shall be able to handle loading of 2000 kg/ sq. mt in addition to live loads.
vi	Windows shall be made of UPVC with glazed glass doors, MS grill of approved type and integrated wire mesh. Door frames shall be made of MS. The outer door shall be made of MS and double door type. The inner door shall be of solid WPC (Wood Polymer Composite). Ventilators shall be of louvered Aluminium type with integrated wire mesh and provided as per layout plan attached and relevant IS codes for Precast structures. Flooring shall be able to handle loading of 2000 kg/ sq. mt in addition to live loads.
vii	All doors and windows shall be painted with two coats of approved colour. Indoor and outdoor shall be painted with weather proof emulsion paints of minimum two coats of approved colours. The Paint shall be of approved brands such as Asian, Berger, Indigo, British, Dulux etc.
v	The flooring shall be provided with double vitrified tiles of size not less than 600 mm x 600 mm.
ix	Cable duct of size 300 mm x 300 mm shall be provided as indicated in the layout plan. Arrangements shall be made inside the LC hut to fix cable trays, supporting angles of cable termination racks, relay racks and supports for various equipment. After completion of cable laying, cable ducts shall be provided with matching tiles.
x	<p>Supervision of building and electrical construction activities, quality control shall be done by a qualified Civil Engineer having minimum five years of working experience in a reputed construction company/organisation as approved by Authority Engineer. The above-mentioned Civil Engineer shall be available at site during the entire period of LC Hut construction.</p> <p>The Contractor shall arrange for inspection of LC Huts by RITES in different stages but not limited to</p> <ul style="list-style-type: none"> ● Foundation Stage ● First slab stage ● Second slab stage ● Finished stage
xi	Proper approach shall be provided from track formation to LC hut. The

	width of the approach shall not be less than One meter.
xii	Arrangements shall be made on the roof of the LC huts to erect Class A protection system. Base plate for installation of the mast for Class A protector shall be embedded in the roof while casting Slab. Hooks for connecting stay wires of class A protection mast shall be provided in the slab.
xiii	Provision for Cable entry shall be provided in LC hut for not less than 60 cables as close as possible to CT rack as per layout plan.
xiv	The contractor is responsible for loading, unloading and transportation of all construction material of LC hut to the sites.
xvi	All the materials used shall be as per the approved list issued by Southern Railway and as per the instructions of engineer in charge.
xvii	The roof of LC huts shall be painted with one coat of silane Althatic, Urethane Resin Blend Solvent Based high technology Membrane radiant heat reflecting insulating Thermal barrier coating.

SPECIAL CONDITIONS OF CONTRACT FOR MOVEMENT OF VEHICLES NEAR RAILWAY TRACK:

NOTE: Tenderers have to submit the site and structural drawings for the approval of Railways. Soil tests, in accordance with the site conditions, will be conducted during the execution of the work if necessary.

Safety precautions

1. No lorry or road vehicles shall be operated so as to affect the safety of trains. They should be allowed to work well outside the moving dimensions. At each of the locations where road vehicle machinery is working, an authorized responsible railway official should be posted as in charge to ensure that the road vehicle machinery does not infringe the schedules, moving dip engines any time and protecting the track in case of emergency. To facilitate the driver to whistle, a whistle board will have to be provided at the appropriate place.
2. At vulnerable locations where construction activity is in progress adjacent to existing railway lines should be cordoned off with proper barricades. The most vulnerable locations shall be barricaded with rail barricades projecting at least in above the ground. At all other locations barricades of not less than 1.5 m height consisting of bamboo, casuarinas poles and supported horizontally with similar bamboo, casuarinas poles should be provided.

3. All the barricades are to be painted or stuck on with road luminous paint strips at suitable intervals.
4. The entry to new banks which run alongside the existing track should be protected by barriers which can be closed and opened when necessary.
5. At locations which are not vulnerable, provision of barricade can be with (i) 6.6 m wide and 0.3 m deep trenches or (ii) stones of minimum size 30 cm x 15 cm at 1 m intervals and projecting 0.3 m above ground level and painted white. Trenches should be allowed only in those locations where they do not lead to subsidence to railway track as may be assessed by the SE/Pway.
6. Barriers shall also be provided in the case of doublings, particularly at the existing formation. These barriers are to be opened only for the movement of railway contractors, authorized vehicles or other railway vehicles.
7. Railway vehicles employed by the contractor should have the certificate for its road worthiness and each vehicle numbered and the license particulars maintained. Contractor should ensure that the drivers permitted by them to work on such road vehicles have photo identity cards.
8. Wherever the work requires the movement of road vehicles within a distance of 3.5 to 6 m from the center line of the nearest track, such work shall be done only in the presence of railway employees authorized by the Engineer in charge. No part of the road vehicles will be allowed at less than 3.5 m from the track center. The cost of such railway employees shall be borne by the Railway.
9. No movement of road vehicles within 6 m of railway track shall be permitted unless the driver of the vehicles is assisted by a helper with a whistle who shall guide him and ensure safety.
10. The driver of the vehicles shall always face the track. When reversing the vehicles and whenever he cannot face the track for whatever reason, he shall invariably be assisted by the helper with a whistle who should guide him and ensure safety.
11. All work sites shall be supervised by the contractor representative as also a representative of the Railway organization. The contractor's representative shall be issued with a certificate by DEN/ADEN to the effect that they have acquired sufficient knowledge about the safety precautions that are needed to be followed while working near the track. Whenever work of plying of road vehicles within the 6 m zone is actually in progress, look out men should invariably be available. Look out men will have to be provided by the contractor from out of the list of persons who are authorized to carry out these duties. Authorization will be issued to the individuals by the Engineer In charge. One supervisor who shall be permanent staff (Trackman) loaned to JE/SSE/W from the respective gangs and in whose beat the work is in progress (to be spared by the respective SSE/Pway) will monitor the availability and

alertness of the lookout men. In case of non-availability of look out men, the Railway supervisor shall stop further activities of plying of road vehicles. Even if no work is executed in the night, look out men shall patrol the beat as identified by the representative of the MDU Division to ensure the safety of the running trains especially from infringements.

12. Working alongside the track during night hours is normally prohibited. Such work can be done at night only with the written permission of the Engineer of the construction activity. Where night work is permitted, lighting of the work site as required should be done.
13. The contractor shall be fully responsible against loss or damage arising from working of lorries and other machinery adjacent to the running track and making the contractor safety responsible for any loss or damage which the Railway or the Contractor or any 3rd party may suffer.
14. The contractor shall be fully responsible for ensuring safety at all times and shall bear the cost of all damages in cases of accidents/unusual occurrences resulting in damage to railway property and passengers.
15. Supervisors and operators of the work executive agencies working at or near Railway track should undergo specified training on matters to safe working along and on the track salient features of observing moving dimensions and clearances which may be imparted to such supervisors at Zonal/Divisional Training Schools and the cost of such training shall be borne by the contractor, which will be Rs. 93/- per trainee per day for the year 2000 with a 10% escalation p.a. with an expected duration of the course of about 3 days so as to ensure that they get acquainted with safety precautions that are required to be taken while executing works which have bearing on the safety of the running trains. The supervisors mentioned in Para 9 above should be trained in protection rules and supplied with minimum equipment required for protecting the track. Such staff should also be provided with basic communication facility (a walkie talkie with communication facility to the nearest Station Master or adjacent site) so as to communicate with the nearest station in case of emergencies/unusual occurrences. Till it is made available, the supervisor shall use the nearest LC gate telephone or other means of communications to relate the incident most speedily.

*******END OF CHAPTER-4B*******

CHAPTER - 4C

DETAILED GUIDELINES FOR SCHEDULE OF WORKS & SUPPLIES - ELECTRICAL WORKS

CHAPTER - 4C

SPECIAL CONDITIONS OF CONTRACT

1. **Prior approval is required from Sr.DEE/G/MDU for supply of supply items. Quantity mentioned in the tender is provisional, it may increase or decrease based on site condition. Before the supply of materials, the contractor and Railway supervisor jointly inspect the site and arrive at the actual required quantity of supply materials.**
2. The works shall only be executed based on approved **Drawing/Layout plan** issued by Railways. The contractor has to submit the proposed arrangements in the relevant Drawing/Layout/plan with Bill of materials (BOM) and shall get approval from Sr. Divisional Electrical Engineer/General, Madurai. In case of any deviation required during the execution of work in the approved drawing, the same shall also be approved.
3. **Materials:** All materials / fittings /appliances etc. used in electrical installations shall conform to BIS Specifications wherever these exist. In case of the materials for which BIS Specifications do not exist, Sr.Divisional Electrical Engineer /General, Southern Railway, Madurai or his authorized representative shall approve the materials.
4. All sample materials including switchgears shall get prior approval before using. Only reputed make of materials should be used.
5. **RAILWAY SUPPLY ITEMS:**
 - a) All other materials required for the successful completion of the work shall be arranged by the Contractor.
 - b) All Railway materials to be issued by Railways will be issued to the contractor as per relevant clauses of this Contract. The contractor shall make necessary arrangements so as to protect the Railway materials from pilferage/theft/loss and maintain them in good condition in such a way that while in storage they do not suffer any deterioration in quality in any manner whatsoever and shall have to compensate the Railways, in case the materials are considered to have been damaged, deteriorated, or have come to such a state that the same cannot be allowed to be installed/used. Railways will not be responsible for any damage/loss/deficiency/deterioration in quality suffered by the materials issued to them (Please refer to other conditions of contract). The contractor shall maintain proper account for the materials issued to their workman for installation and the remaining quantity of the material. All Railway materials shall be exclusively used for installation/use for the purpose for which it is issued and the contractor shall not

divert/remove the materials issued to Railways for any other work not connected with this tender enquiry.

6. INSPECTION:

All materials coming under the contractor's scope of supply shall be inspected by RITES organization for **individual item value is more than Rs. 5 lakhs** in addition to manufacturers test certificate with sample checks to ensure proper quality of goods. Inspection charges shall be borne by contractors. A copy of all the test certified/Test results of test conducted by the inspecting agency shall be submitted along with bills. For materials of purchase value below Rs. 5 lakhs/item inspection shall be done by the F with the sample. (Suppliers Invoice and Material inspection certificate by RITES/consignee inspection must be enclosed for material acceptance).

7. COMPETENT SUPERVISORS

- a) The erection of all equipment according to the specification will be done by the contractor at his cost. For this purpose, the contractor shall employ competent representatives (Minimum qualification of Diploma in Electrical and Electronics Engineering or ITI passed with Electrical B license issued by a Government Licensing Authority) to supervise the erection of the equipment and the carrying out of the works at all stages. The said representatives shall be present at site during working hours and any written orders or instructions which the Railway's Engineers may give to the said representatives of the contractor shall be deemed to have been duly given or communicated to the contractor.
- b) Electrical License: The work shall only be carried out either by the contractor having valid Electrical contractor license issued by the Government of Tamilnadu / Kerala /Karnataka / any other State (or) Engage agency/person having valid electrical contractor license issued by the Government of Tamilnadu / Kerala /Karnataka / any other State for carrying out the installation work of the voltage class involved. Attested copy of the Electrical License shall be submitted to Sr.DEE/G/MDU or his authorized representative before commencement of work.
- c) The contractor or his representatives will accompany the Railway's Engineers on inspection or proceed to their offices whenever called upon to do so.
- d) The contractor's representatives shall give necessary direction to his workmen and ensure that they execute their work in sound and proper manner. He shall employ only such supervisors, workmen and labourers for the execution of any of the works as are careful and skilled in their respective trades and callings, if and whenever required by the Railways the contractor shall submit a correct return showing the names of all personnel employed by him for the contract. In the event of the Railway's Engineer being of the opinion that the contractor is not employing a sufficient number of

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

8. PENALTY CLAUSE:

In the case of slow progress of work, shortfall in work & skipping of work, the Sr.Divisional Electrical Engineer/General service/Madurai's decision will be final and binding based on the Lump sum penalty on case to case basis with respect to the nature and offence and inconvenience caused to the Railway reported by the concerned filed supervisor.

9. PAYMENT CLAUSE:

No advance payment shall be made to the contractor. Part payments for completed portions of work will also be arranged. Payment will be arranged for the quantities executed based on the measurement recorded by the Senior Section Engineer / Electrical / Virudhunagar from time to time only through the Electronic Fund Transfer System.

10. Before commissioning of the installation, the following tests shall be conducted and the results should be as per standards.

- i) Insulation test.
- ii) Earth continuity test path
- iii) Earth resistance value etc.

11. GUARANTEE/WARRANTY:

- a) The Contractor shall guarantee satisfactory working of the installation erected by him for a **period of 12 months** from the date of commissioning. The guarantee for spares should be coincident with the guarantee for erected equipment.
- b) **For all LED light fitting warranty period is 5 years and for BLDC fans warranty period is 3 years.**

Payment terms for LED luminaries, BLDC Fans is as follows,

- a) **70% of the accepted contract value after supply of LED luminaries, BLDC Fans**
- b) **5% of accepted contract value after erection, testing and commissioning of Luminaries, BLDC Fans,**
- c) **25% of accepted contract value at the rate of 5% at the end of every year of warranty period of 5 years for LED luminaries, BLDC Fans**
- d) **Normal security deposit (SD) other than for LED and BLDC fans will be released after expiry of normal maintenance period of one year.**

- c) For the period of guarantee the contractor has an experienced Engineer and necessary equipment to attend to any defective installation resulting from defective erection and/or defects in the equipment supplied by the contractor. This engineer shall not attend to rectification of defects which arise out of normal wear and tear and come within the purview of routine maintenance work. The Contractor shall bear the cost of modifications, additions or substitution that may be considered necessary due to faulty material, design or workmanship for the satisfactory working of the equipment. The final decision shall rest with the Sr.Divisional Electrical Engineer, Southern Railway, Madurai or his representative.
- d) During the period of Guarantee/Warranty the contractor shall be liable for the replacement at site of any parts which may be found defective in the fittings & Components, arising from faulty design, materials, workmanship or negligence in any manner in the part of the contractor provided always that such replaced items are promptly returned to the contractor if so required by him at his (contractor's) own expenses. In case of type defects in contractor's equipment and components detected during the guarantee period, contractor shall replace all such items irrespective of the fact whether all such cost of repairs carried out on his behalf by the purchaser at site. In such a case, the contractor shall be informed in advance of the works proposed to be carried out by the purchaser.
- e) If it becomes necessary for the contractor to replace or renew any defective portion of the fittings or components under the para aforesaid then the provision of the said para shall also apply to the portions of the fittings & components so replaced and renewed until the expiry of six months from the date of such replacement or of renewal or until the end of the above mentioned period, whichever is later. Such extension shall not apply in case of defects of a minor nature the decision of the Sr. Divisional Electrical Engineer /General, Southern Railway, Madurai or his successor/nominee being final in the matter. If any defect is not remedied within a reasonable time during aforesaid period the purchaser may proceed to do the work at the contractor's risk, and expense, but without prejudice to any other rights and remedies which the purchaser may have against the contractor in respect of such defects or faults.
- f) Any materials, fitting or components supplied shall also be covered by the provisions of this paragraph. The liability of the contractor under the guarantee/warranty will be limited to re-supply of equipment, components and fittings.

Such re-supply shall be effected at the contractor's depot or in the event of closure of the depot at the stores depot of the Engineer-in-charge of maintenance of overhead equipment of the section covered by the contract.

- g) Any materials, fitting or components supplied shall also be covered by the provisions of this paragraph. The liability of the contractor under the guarantee/warranty will be limited to re-supply of equipment, components and fittings.

Such re-supply shall be effected at the contractor's depot or in the event of closure of the depot at the stores depot of the Engineer-in-charge of maintenance of overhead equipment of the section covered by the contract.

- h) In the case of materials, components, fittings and equipment supplied by the purchaser, no liability will rest on the contractor for failures on account of defective materials or workmanship and for any consequential damages. Such defective materials if not yet erected on line will be returned by the contractor to the purchaser and quantities will be considered for the purpose of final reconciliation over and above allowance.
- i) Any materials, fitting or components supplied shall also be covered by the provisions of this paragraph. The liability of the contractor under the guarantee/warranty will be limited to re-supply of equipment, components and fittings.

Such re-supply shall be effected at the contractor's depot or in the event of closure of the depot at the stores depot of the Engineer-in-charge of maintenance of overhead equipment of the section covered by the contract.

- j) In the case of materials, components, fittings and equipment supplied by the purchaser, no liability will rest on the contractor for failures on account of defective materials or workmanship and for any consequential damages. Such defective materials if not yet erected on line will be returned by the contractor to the purchaser and quantities will be considered for the purpose of final reconciliation over and above allowance.

EXPLANATORY NOTES FOR SCHEDULE OF WORK

Scope of the work is involving Supply and laying of LTUG cables, supply and erection of CLS panels and wiring & installations at proposed 39 LC gates.

SW A Power Supply Arrangements

Sl.No	Description of item
1 to 3	<p>LTUG, XLPE (Cross Linked Poly Ethylene) insulated cable 4 core PVC outer sheathed Armoured with galvanized steel strip/round steel wire with Aluminium conductor of specified size standard and shaped conductor suitable for Rated Voltage of 1100V grade and conforming to IS 7098 part I (1988) with amendment number 1, 2 and 3 reaffirmed 2005 or latest and IS 8130(1984) with latest amendments and with ISI marking. Cable shall be supplied by the OEM or their authorized dealer duly producing dealership certificate. Cable shall be tested by CPRI, ERDA, NABL or any other laboratories recognized by the Govt. of India and test certificate to be submitted and OEM warranty certificate shall be produced by the supplier along with the supply of the cable.</p> <p>The actual length of the LTUG Cable required for execution shall be measured after preparing the location drawing and finalizing the cable route and procurement shall be done according to the cable route as given in the approved location drawing.</p> <p>Warranty- 1 year from date of commissioning.</p> <p>Preferred make: Havells, Polycab, KEI, RR, Finolex.</p>
4	<p>The earth for cable trench shall be excavated in all kinds of soil and obstructions in the way of cable trench shall also be removed. The route will be marked by the Railway representative. The cable trench shall be as per drawing No: U/E/DRG- 1901. The excavated earth should be filled back duly ramming for consolidation throughout the length of cable trench.</p>
5	<p>The earth for cable trench shall be excavated in concrete flooring/Road/Track and obstructions in the way of cable trench shall also be removed. The route will be marked by the Railway representative. The cable trench shall be as per drawing No. U/E/DRG-1901. The excavated earth should be filled back duly ramming for consolidation throughout the length of cable trench</p>
6	<p>Dismantling of tar road including necessary tools& plant labour etc., and as per instruction of site Engineer in charge.</p>

Sl.No	Description of item
7	Demolishing plain cement concrete including disposal of material within 50m. Including tools & plant labour etc., and as per instruction of site Engineer in charge.
8	Providing and laying of Plain Cement Concrete by mixing of 1:3:6 including supply of cement, sand and coarse aggregate etc. and tools & plant labour etc. and as per the instruction of site Engineer in charge and as required at site.
9 to 10	<p>Drawing of LTUG cables of size mentioned in schedule in the existing HDPE pipe already laid in the excavated cable trench duly pulling the cable from drum / loose coil, manually. (Only cable will be supplied by Railways).</p> <p>Cable laying.</p> <p>Cable installation shall include power, control lighting cables. These shall be laid in trenches, cable trays, conduits, trunkings etc., as more detailed in the drawings. Cable routing given on the layout drawings shall be checked in the field so as to avoid interference with structures, heat sources, drains, piping, air- conditioning duct etc. The quantities, sizes and types of which are indicated in the Bill of Quantity / cable schedule. However, any change in routing shall be done to suit the field conditions wherever deemed necessary, after obtaining approval of the Engineer-in-charge.</p> <p>Sufficient care shall be taken while laying cables to avoid formation of twist, sharp bend etc. in order to avoid mechanical injuries to cables. Rollers shall be used for pulling of power cables.</p> <p>Cable installation shall provide minimum cable bending radii as recommended by the manufacturer. However, the bending radius for various types of cables shall not be less than those specified below, unless specifically approved.</p> <p>Cables as far as possible shall be laid in full uncut length from one termination to the other, without any straight through joints.</p> <p>Cables shall be neatly arranged in the trenches / trays in such a manner that criss-crossing is avoided and final take off to the motor / switchgear is facilitated. Arrangement of cables within the trenches / trays shall be the responsibility of the contractor. Cable routing between cable trench and equipment/motors shall be taken through GI pipe sleeves of adequate size. Pipe sleeves shall be laid at an angle of maximum 450 to</p>

the trench wall. In case of larger diameter cables i.e. 50 mm and above. Adequately sized pipe with larger bending radius shall be provided for ease of drawing of cable. In places where it is not possible, cables shall be laid in smaller branch trenches.

Type of cable	Single core	Multi core
Unarmoured	10 times the outer diameter of cable	10 times the outer diameter of cable
Armoured	15 times the outer diameter of cable	12 times the outer diameter of cable

Sl.No	Description of item
	<p>All cables shall be identified close to their termination point by cable numbers as per cable schedule. Cable tag numbers shall be punched on aluminium straps (2mm thick, 20 mm wide) securely fastened to the cable and wrapped around it. Alternatively, cable tags shall be circular in construction.</p> <p>Each underground cable shall be provided with identity tags of lead securely fastened every 30 m of its underground length with at least one in the end trench before the cable enters / leaves the ground. In unpaved areas, cable trenches shall be identified by means of markers as per standard drawing. These cable markers shall be placed at location of changes in the direction of cables and at intervals of not more than 25 m and at cable joint locations.</p> <p>All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of cables shall be taped with approved PVC end cap or rubber insulating tape.</p> <p>Each row of cables shall be laid in place and before covering with sand, every cable shall be tested for an insulation test in presence of the Engineer -in- charge. Any cable which proves defective shall be replaced before the next group of cables is laid.</p> <p>Where cables pass through foundation walls or other underground structures, the necessary ducts or openings shall be provided in advance for the same. However, should it become necessary to cut holes in existing foundations or structures, the electrical contractor shall determine their location and obtain approval of the Engineer-in- charge</p>

	<p>before cutting is done.</p> <p>At road crossings cables shall be taken through ERC (Electrical Road Crossing) consisting of the required number of 150 mm diameter RCC/PVC/HDPE pipes or through CTC (Cable Tray Culvert) or through pipe culvert in trays as specified in layout drawings. Also, at road crossings and other places where cables enter pipe sleeves an adequate bed of sand shall be given so that the cables do not slack and get damaged by pipe ends.</p> <p>Wherever the cable trench crosses the storm water waste channel / drain, cables shall be taken through PVC/RCC/HDPE pipes. Where cables are required to cross drains of depth more than 1200 mm, cables shall be taken over the drain on cable trays supported suitably using ISMC 150/200 sections.</p> <p>Ends of cables leaving the trench shall be coiled and provided with protective cover till such time the final termination to the equipment is completed.</p>
11 to 12	<p>Supply of cable termination kit consisting of single flange type brass cable gland and 4 numbers of aluminium crimping sockets.</p> <p>And termination and connection of LTUG cable of sizes mentioned in schedule.</p> <p>With single flange type brass cable gland aluminium tube terminal type crimping.</p> <p>Supply of cable termination kit consisting of single flange type brass cable gland and 4 numbers of aluminium crimping sockets.</p> <p>And termination and connection of LTUG cable of sizes mentioned in schedule with single flange type brass cable gland aluminium tube terminal type crimping sockets. Note: One termination comprises one number of single flange type brass cable gland and with four numbers of aluminium crimping sockets for all cores of the cable.</p> <p>Cable Termination</p> <p>Termination shall be done by using compression type lugs in accordance with the manufacturer's instruction. Termination and connection shall be made in such a manner, so as to avoid strain on terminals.</p> <p>Cable termination at the equipment end shall be carried out by the following methods.</p> <p>a) Power cables up to 120 sq. mm : crimping (manual)</p>

- b) Power cables above 120 sq. mm : crimping (hydraulic)
- c) Control cables : crimping (manual)

For cables up to 120mm², each lug shall be crimped at minimum two places. For cables above 120mm², each lug shall be crimped at minimum three places. Lugs provided shall be suitable for hydraulic crimping.

All PVC cables of 1. 1 KV grade shall be terminated at the equipment by means of compression type cables glands suitable for the cable size. They shall have a screwed nipple with conduit electrical threads and check- nut. All cable entries for outdoor termination shall be preferably through bottom. Outdoor cable termination through top of equipment shall not be permitted.

Power cables wherever colour coding is not available, shall be identified with red, yellow and blue PVC tapes. Where copper to aluminium connections are made, necessary bimetallic washers shall be used. For trip circuit identification, additional red ferrules shall be used only in the particular cores of control cables at the termination points in the switchgear / control panels and control switches.

In case of control cables, all cores shall be identified at both ends by their terminal numbers by means of PVC ferrules suitable for core size. Wire numbers shall be as per schematic / wiring/inter-connection diagram. All unused spare cores of control cables shall be neatly punched and ferruled with cable tag at both ends for future use.

The contractor shall drill holes for fixing cable glands wherever necessary. Gland plate shall be of nonmagnetic material/ aluminium sheet in case of single core cables. All unused cable entries on equipment/panels shall be plugged / sealed.

The cable shall be terminated at electrical equipment through glands of proper size. The individual cores shall then be dressed and taken along the cables ways or shall be fixed to the panels with polyethylene straps. The cable glanding shall be done as per manufacturer's instructions. Cable armour shall not be exposed after termination is complete.

In case of termination of cables at the bottom of a panel over a cable trench having no access from the bottom, close fit holes shall be drilled in the gland plate for all the cables in one line. Then, the gland plate shall be split in two parts along the centre line of holes. After fixing the bottom plate, uncovered cable holes/gaps shall be sealed with a cold setting' compound.

	<p>Crimping of lugs to cable leads shall be done by hand crimping / hydraulically operated tool as per requirement. Insulation of the leads shall be removed before crimping. The conductor surface shall be cleaned and shall not be left open. Suitable conducting jelly shall be applied on the conductor lead. Lugs shall enclose all strands of cable core. Cutting of strands shall not be allowed.</p> <p>The contractor shall bring to the notice of the Engineer-in-charge any mismatch in cable glands, lugs provided with the equipment vis-à-vis to the cable size indicated in the cable schedule for taking corrective action.</p> <p>The jointing and termination of medium voltage power cables shall be carried out by trained personnel only. Jointing and termination of high voltage cables shall be done by skilled and experienced jointer duly approved by the Engineer- in-charge. Only type tested termination kits of approved make shall be used.</p> <p>No unauthorized repairs, modifications shall be carried out in the hazardous area equipment terminal box and junction box. Damaged enclosures of hazardous area equipment shall be brought to the notice of the Engineer-in- charge by contractor- After termination is complete, all the bolts, nuts, hardware of the terminal box shall be properly placed in its position and tightened.</p> <p>Where required, cable sealing boxes intended to be used with the apparatus shall be filled with solid setting type bituminous compound unless otherwise specified.</p>
13	Supply and fixing of medium duty GI pipe of 50 mm dia, conforming to IS.1239, part 1 (2004), for cable leading without clamp.
14	Supply and fixing of medium duty GI pipe of 65 mm dia, conforming to IS.1239, part 1 (2004), for cable leading without clamp.
15	Supply and provision of sealing compound for cable leading pipe for leading of power cables of upto and including 50sqmm size.
16	Supply and provision of sealing compound for cable leading pipe for leading of cable of above 50 sqmm but up to and including 185 sqmm.
17	Supply, placing of cast iron cable route indicators, cast iron plate type including MS flat size 40mm x 6mm x 350mm length concreting and coping, painting etc. complete with all other accessories as per drawing No: CEE/CN/MS/11-2004
18	Fabrication, supply and fixing of cable looping box with aluminium bus bars as per drawing No: DRM/EL/TPJ-10-2015.

19	Erection of cut rail post upto and including 5.5 feet height with foundation and accessories like base plate, including supply of two coats of each Zinc chromate primer, aluminium paint as per drawing no. CEE/CN/MS/20-2004.
20 to 22	Supply of specified size diameter PN-6, PE 63 grade HDPE pipe. HDPE pipe confirming to IS specification no.4984/1995 or latest. The actual length of the HDPE pipe required for execution shall be measured after preparing the location drawing and finalizing the cable route and procurement shall be done according to the cable trench length as given in the approved location drawing.
23	Laying of PN-6, PE 63 grade HDPE pipe of all sizes from 50mm dia to 63 mm dia in the excavated trench. The price offered shall be inclusive of laying of PN-6, PE - 63 grade, HDPE pipe confirming to IS specification no.4984/1995 or latest. The actual length of the HDPE pipe laying shall be measured after preparing the location drawing and finalizing the cable route. For joining the HDPE pipes wherever required suitable, ISI marked PVC coupling of suitable rating/ suitable MS coupler shall be used and both the pipes shall be joined together firmly with suitable solvent/ hardware. No Extra payment will be admissible for supply and fixing the PVC/ MS couplings. The rate offered shall be inclusive of all the cost of Labour required for uncoiling and laying the HDPE pipe at site.
24	Laying of PN-6, PE 63 grade HDPE pipe of all sizes above 63mm dia in the excavated trench. The price offered shall be inclusive of laying of PN-6, PE - 63 grade, HDPE pipe confirming to IS specification no.4984/1995 or latest. The actual length of the HDPE pipe laying shall be measured after preparing the location drawing and finalizing the cable route. For joining the HDPE pipes wherever required suitable, ISI marked PVC coupling of suitable rating/ suitable MS coupler shall be used and both the pipes shall be joined together firmly with suitable solvent/ hardware. No Extra payment will be admissible for supply and fixing the PVC/ MS couplings. The rate offered shall be inclusive of all the cost of labour required for uncoiling and laying the HDPE pipe at site.
25	Supply and laying of 6 SWG GI wire for earth continuity, GI wire should be drawn in Already laid HDPE pipe along with LTUG cable including termination / Laid in the ground for earth Continuity between Electrical installation and Earth pit as directed by senior section Engineer In-charge.
26	Supply and laying of RCC pipe of 150mm internal diameter and 25mm thick with suitable collar conforming to NP2 class as per IS No:458 including jointing using gunny bag and cement grouting

27	<p>Fabrication, supply and fixing of clamps made out MS flats of different sizes for fabrication of clamps for various requirements. This shall be made use for fixing of items indicated in the note below. The clamp shall be made out of MS flat of suitable size, painted with two coats in each of zinc chromate and grey enamel paint or suitable colour as instructed by the Engineer in charge and using GI bolts with nuts of suitable size for fixing.</p> <p>Note: This shall be made use for fixing of items such as UG cables, cable leading pipe, 'U' brackets for shelter mains, enclosures made out of 16 SWG sheet steel contemplated elsewhere and cable tray etc.</p>
28	Supply, erection, testing and commissioning of MCB distribution board single phase flush mounting suitable for housing incoming 25A, DP, 30mA RCBO and outgoing 6A SP MCB - 6 Nos, including MCBs, RCBO, internal wiring and required accessories.
29	Supply of AUTOMATIC CHANGE OVER SWITCH (Colour Light Signalling (CLS) PANEL) - 30A/32A (5 KVA) capacity as per latest RDSO specifications.
30	Supply of AUTOMATIC CHANGE OVER SWITCH (Colour Light Signalling (CLS) PANEL) - 60A/63A (10 KVA) capacity as per latest RDSO specifications.
31	Supply of AUTOMATIC CHANGE OVER SWITCH (Colour Light Signalling (CLS) PANEL) - 150A (25KVA) capacity as per latest RDSO specifications.
32	Erection, testing and commissioning of Colour Light Signalling panel. (Only CLS panels will be supplied by Railways).
33	Supply, Erection, testing and commissioning of LV Box, made up of CRCA Sheet, powder coated housing with 2 numbers of 63A Re-wirable porcelain Fuse base mounted on a hylam sheet with locking arrangements complete.
34	Supply, Erection, testing and commissioning of LV Box, made up of CRCA Sheet, powder coated housing with 2 numbers of 150 A Re-wireable porcelain Fuse base mounted on a hylam sheet with locking arrangements complete.
35	Supply, erection and testing of earthing arrangements to drawing No: CEE/CN/MS/16-2004 also necessary Continuity wire of 6 SWG, GI wire, average 5 meters length and connection from earth electrode to the main distribution board/post/ installation. The earth value should be well below the value as per relevant I.E. Rules and IS specifications and mentioned elsewhere in the schedule, when measured independently.

36	Fabrication, supply, fixing and commissioning of outdoor metallic box of single door size 400X300X200 mm made of 14 SWG sheet steel with hinges for opening at LCs and stations. The looping box shall consist of 100A, 4-way terminal connectors fixed on a hylam sheet of 200X200X6 mm thickness and its proper cable looping/ terminal connections. The box shall have back clamps of suitable size and sufficient numbers of 70 Sq. mm cable glands with all accessories. The loop box as well as clamps should be painted with two coats of red oxide and two coats of aluminium/ grey metallic paint. This includes fixing of the box on wall/ Structure with suitable mounting / rag/ anchor bolts.
37	Fabrication, supply, fixing and commissioning of outdoor metallic box of single door size 400X300X200 mm made of 14 SWG sheet steel with hinges for opening at LCs and stations. The looping box shall consist of 200A, 4-way terminal connectors fixed on a hylam sheet of 200X200X6 mm thickness and its proper cable looping/ terminal connections. The box shall have back clamps of suitable size and sufficient numbers of 185 Sq. mm cable glands with all accessories. The loop box as well as clamps should be painted with two coats of red oxide and two coats of aluminium/ grey metallic paint. This includes fixing of the box on wall/ structure with suitable mounting / rag/ anchor bolts.
38	Supply, erection, testing and commissioning of 10 Sqmm PVC insulated single core multi standard Aluminium cable for main supply from TNEB pole to Customer MDB including insulators/separators, 7/20 G.I wire for supporting.(2 runs of 10 Sqmm Al wire + one run of 7/20 G.I wire is taken as one metre for measurement purpose).
SW B	Wiring and installation
1 to 2	<p>Specification for PVC rigid wiring conduit pipes</p> <p>The PVC wiring conduit pipe shall be of rigid PVC pipe of outer diameter indicated in the schedule, heavy duty type suitable for electrical wiring purpose with plan ends and shall conform to IS: 9537 part 3: 1983. Only ISI marked PVC pipes should be used. Standard lengths of pipe should be 3.00m. PVC wiring conduit also includes bends, elbows, tees, straight through couples and junction boxes. Junction boxes shall be of single way/ two way/ three way/ four way types as per wiring requirement. Junction boxes shall be covered with PVC cover on the top.</p>
3 to 4	<p><u>Specification for wiring –General</u></p> <p>The following additional specifications are applicable for this contract. These are in the nature of additional requirements over and above the specifications for electric wiring.</p> <p>a) Wiring shall be carried out with single core, PVC insulated copper</p>

conductor through PVC pipes already provided. The cables proposed to be used are of flexible type of appropriate voltage class and other specifications as indicated in the specifications. Approved cables only should be used. Cables proposed to be used shall be rendered for inspection and only on acceptance the same may be used.

- b) The attention of the tenderer is invited with regard to spurious makes of cables sold in the market. If at any time the cables used were found to be spurious, the work has to be redone by the contractor at his own cost duly removing the wiring carried out with spurious materials.
- c) All materials, fittings shall conform to IS specification. In case of materials for which no IS specification exists, the materials shall be approved by the Sr.Divisional Electrical Engineer/General/Madurai prior to their use.

SYSTEM OF WIRING

1. The system of wiring shall be that separate phase, neutral and earth wires shall be taken for each circuit from the main control board/ distribution fuse board. Similarly, from control board to each and every light point/ fan point, separate phase, neutral and earth wires shall be taken.
2. Where more than one control board is to be connected in any one circuit, the supply can be taken from one control board to the other by taking separate phase and neutral wires (one earth continuity connections if required) or from the main control board/ distribution fuse board through separate phase and neutral wired for each control board.
3. Suitable PVC connectors shall be used for such purpose in the main control boards for termination of phase and neutral wires controlling to light points/ fan points and other control boards. No jointing or twisting of wires is permitted either inside the control boards or anywhere also outside.
4. LAYOUT OF WIRING: Power circuits if any shall be kept separate and distinct from the light and fan circuits. The wiring shall be done in such a way to facilitate easy inspection. The wiring shall be carried out in an approved manner.
5. No joints shall be permitted in the wiring. If any jointing of cables is found to have been carried out in the PVC pipe wiring, a penalty of Rs.500/- per joint detected will be levied. In addition, the contractor has to redo the portion of the wiring found to have been carried out

with joining at his own cost to an acceptable standard.

6. No power will be supplied by the Railway for the contractor to carry out his work. If the contractor, if he desires to have temporary supply for his works, he may apply for the same to the Sr.Divisional Electrical Engineer, Madurai. If feasible, supply may be made available on terms applicable as for outsiders. The contractor has to bear all the costs.
7. Necessary earth continuity connections shall be provided keeping in mind the maintenance requirements, safety etc. In addition to the above earth connection, the contractor is required to have a separate earth pit and earth connection as detailed in the schedule of work.
8. On completion of the wiring work, necessary tests will be conducted to certify the correctness of the work carried out by the contractor which shall cover broadly the following:
 - i) Insulation resistance from conductor to earth.
 - ii) Earth resistance of earth pits and effectiveness of the earthing provided.
9. The tenderer should furnish makes/manufacture's names for materials proposed to be supplied by him and get the same approved by Engineer-in-charge before the same are employed for the physical execution of work. All other materials for which no specific brands are available in the market and fabricated items, should get prior approval from the competent authority before execution.

Specification for FR PVC wiring cables.

Description: Single core flexible FR PVC insulated, unsheathed multi stranded copper wiring cables for wiring voltage up to & including 1100V AC conforming to IS: 694:2010.

Conductor :Bright annealed bare electrolytic copper multi stranded (not more than 0.30 mm dia) conductor as per IS:8130:2013

Insulation :Dielectric grade PVC compound conforming to IS 5831:1984 with additional for retardant properties (FR) for working voltage up to 1100V with ISI mark.

SPECIFICATION –General

NOTE-1. Test & Guarantee Certificates: Tenderer/Contractor shall submit Manufacturer's Test and Guarantee Certificates along with materials asked for by the Engineer-in charge.

NOTE-2. The breaking capacity of HRC fuse links should be 10kA. All MCBs should be of 10kA short circuit breaking capacity type and of "C" series, unless stated otherwise. Conforming to IS/IEC,60898-1:2015

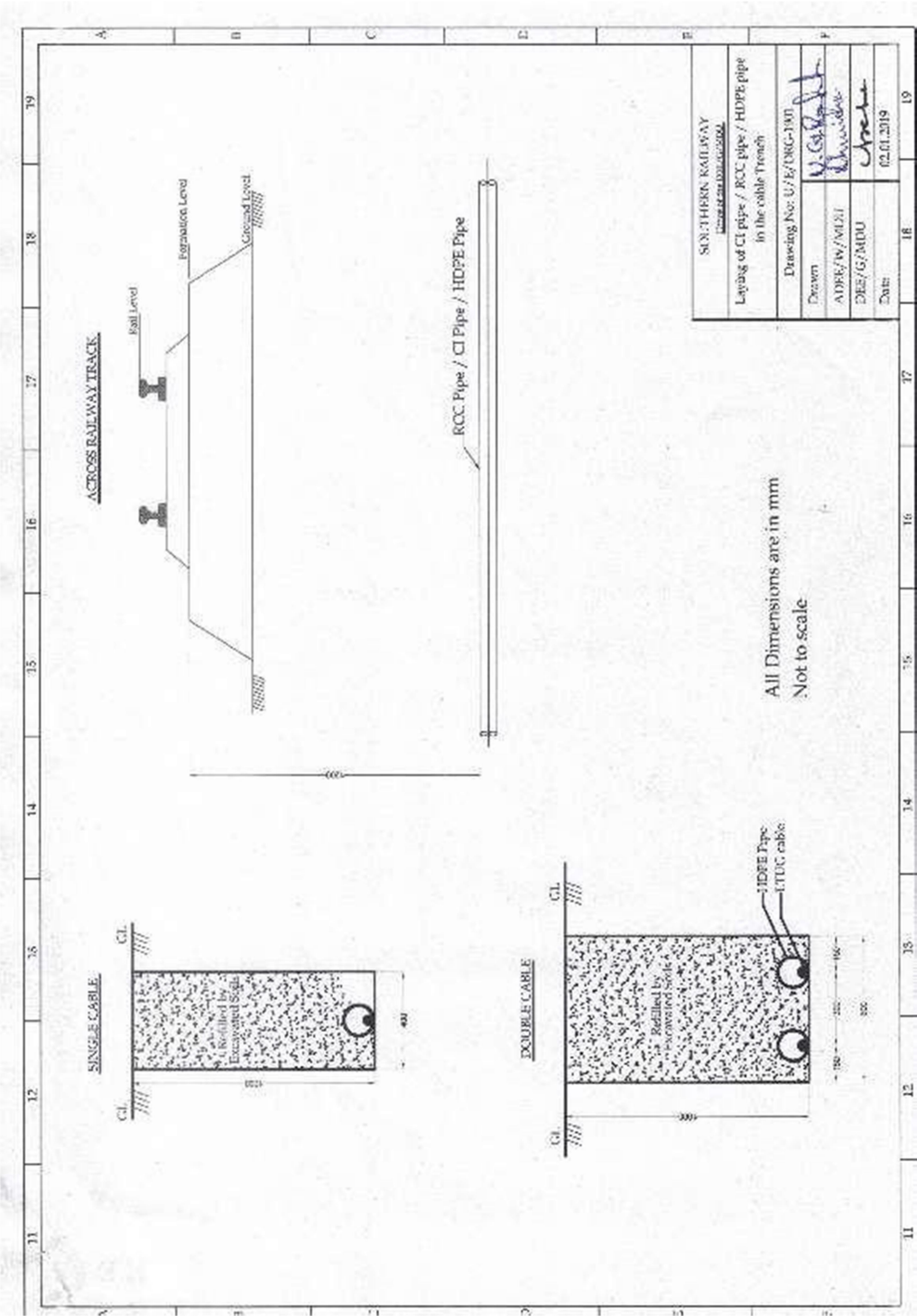
NOTE-3. All switches/control boxes shall be fixed by concealed/ open

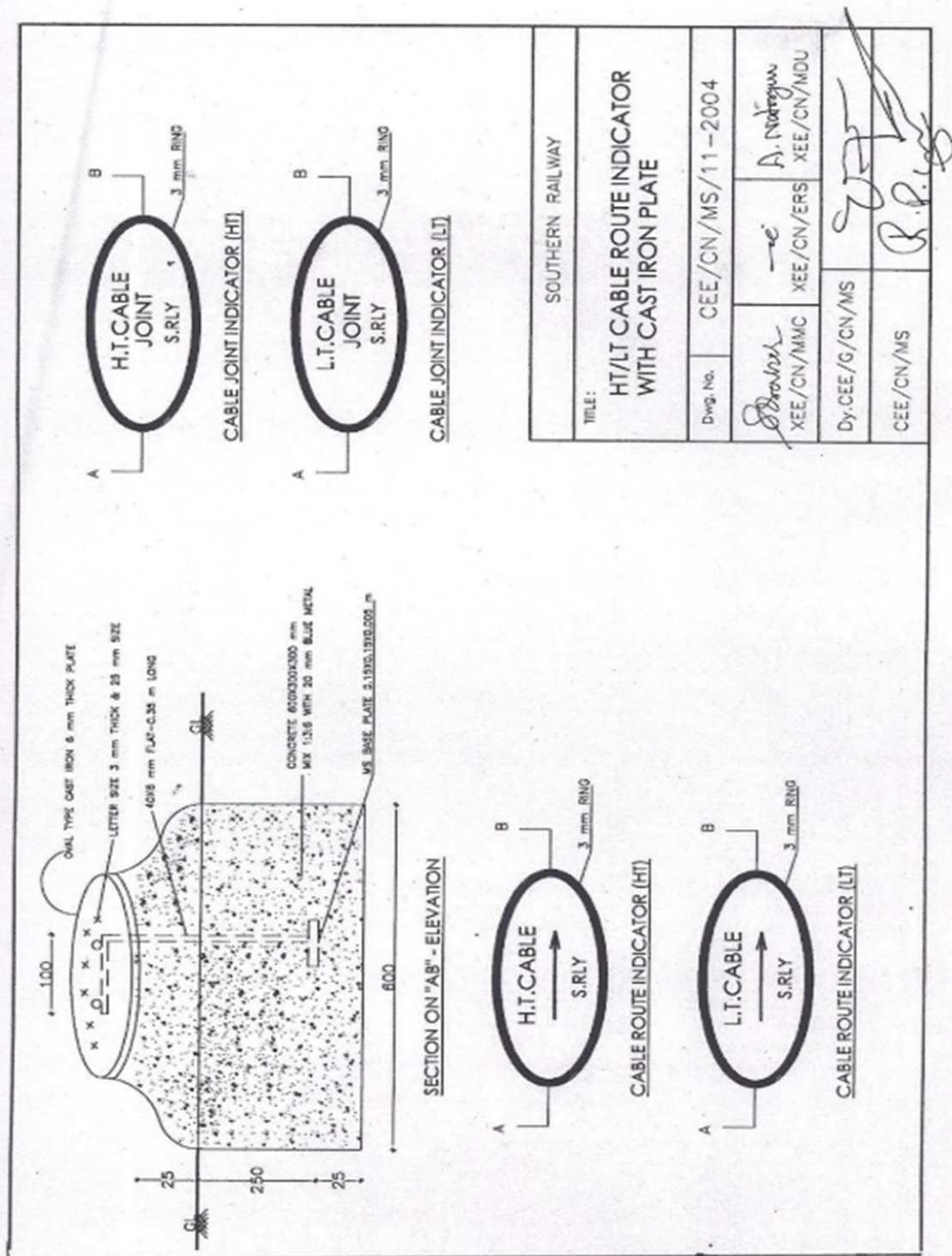
	<p>wiring method to suit the site requirement with required accessories including plastering etc. as detailed in the schedule description. For mounting by open method, an angle iron frame work made out of MS angle of suitable size made out 25mmx25mmx3mm size shall be used, if not specifically mentioned in the specification, painted with two coats in each of primer zinc chromate and aluminium or grey enamel paints shall be used. Use only GI bolts and nuts for fixing, even if not mentioned in the schedule.</p> <p>NOTE-4. GI and MS pipe conforming to IS.1239-1:2004 to be used.</p> <p>NOTE-5. Any removal /dismantlement of existing installation should be done with the consent of the Engineer-in – charge. All such released materials should be immediately handed to the stores depot of the Engineer- in – charge or as instructed by him.</p> <p>NOTE-6. “Danger-440V” or “Danger-230V” stickers shall be affixed on panel boards, MCB type SDBs, switches, looping boxes, metering bunks and in all important locations as instructed by the Engineer-in-charge.</p> <p>NOTE-7. All materials to be used for the work should conform to relevant IS specification.</p>
5	Supply, fixing of metal sub control switch board of size 300X150X58 mm 1.6mm thick with 3 mm thick hylam decolam sheet, with 16A strip connector for Neutral and earth including all required accessories.
6	Supply, fixing of metal sub control switch board of size 200X150X58 mm 1.6mm thick with 3 mm thick hylam decolam sheet, with 16A strip connector for Neutral and earth including all required accessories.
7	Supply, fixing of metal sub control switch board of size 150X100X58 mm 1.6mm thick with 3 mm thick hylam decolam sheet, with 16A strip connector for Neutral and earth including all required accessories.
8	Supply, fixing, Testing and commissioning of 5 A light switch / Fan switch / calling bell switch models similar to Anchor make Penta PC in the existing hylam sheet on the sub control switch board including termination with required accessories.
9	Supply, Fixing, Testing and commissioning of one 5A three plate Ceiling rose / batten Lamp holder in the existing Round block with PVC batress including termination with required accessories.
10	Supply, fixing, testing and commissioning of switch and socket 6A-5Pin type including internal wiring in the existing control board.
11	Supply, fixing, testing and commissioning of switch and socket 6A/16A - 5Pin type including internal wiring in the existing control board.
12	Supply, fixing , testing and commissioning of 25A single phase MCB Protected Socket

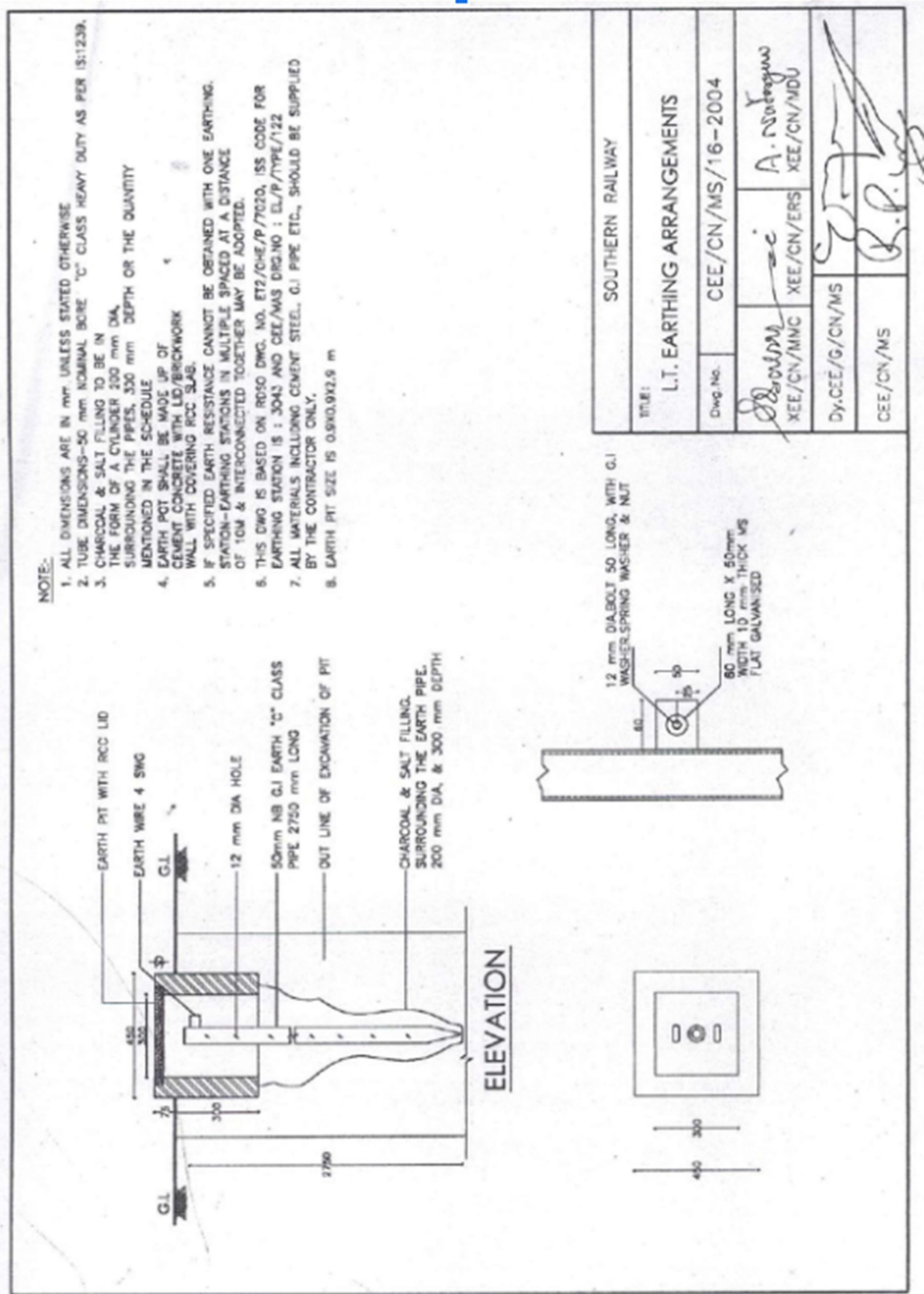
13	<p>Supply of 4 feet Retrofit type LED fitting with Suitable driver & LED lamp of 18- 20 W. The housing of the lamp shall be made of aluminium body with polycarbonate milky diffuser including fixing clamps, suitable for indoor operation. Supply of light fitting shall be similar to Havells make model No. REGAL BATTEN T8UPTO1X22WSSBSWHNW and Luminaire shall be similar to Havells make model no. PHOTON ULTRAE2.0 1213T8SSTL20WLED865SPC. Warranty 5 years. Preferred makes: Bajaj, Surya, Crompton, Philips, Havells Wipro.</p> <p>LED efficacy ≥ 120 lumens/watt and THD $< 10\%$, operating between -20 to 40 C with better CRI > 80 & $R9 > 0$. CCT: 5700- 6500K, Operating voltage of 140-280V, Power factor ≥ 0.90, Surge protection > 2kV. Life of 50000 burning hours @ L70. Average lighting angle - 165°, THD < 10, System lumens efficacy min 2200 lm.</p> <p>LED lights (including driver etc.) shall be guaranteed for satisfactory performance and manufacturing defects for a period of 60 months from the date of commissioning or 72 months from the date of supply whichever is earlier. Warranty certificate of the lamps is to be furnished by the contractor at the time of supply</p>
14	<p>Fixing testing of LED Tube light fitting complete. Fitting shall be fixed with round block with patress on side wall/ceiling with two wooden/PVC round blocks including wiring by 3CX1.0 sq. mm PVC insulated & sheathed round flexible copper cable. (Only Fitting and Lamps will be supplied by Railways).</p>
15	<p>9/10W surface mounted LED luminaire , with high efficiency LED as lighting source Lumen efficacy of LED ≥ 120 lm/w, CCT:5700K/6500K, CRI ≥ 80, PF ≥ 0.95 Powered by Integral LED driver (SMPS based constant current supply) with lower THD, Output open/Short Circuit protection, Surge Voltage protection ≥ 3.5 KV , System Lumens of 900 with THD ≤ 15, Operating temperature: -10°C to $+45^\circ\text{C}$, Operating voltage range: 140 V - 270V. Similar to Havells make model No.INTEGRANXTRDDLRSURD 9WLED865S LED lights (including driver etc.) shall be guaranteed for satisfactorily performance and manufacturing defects for a period of 60 months from the date of commissioning or 72 months from the date of supply whichever is earlier. Warranty certificate specifying SI no's of the fittings is to be furnished by the contractor at the time of supply.</p>

16	Erection of 9/10 W Surface mounted LED fittings including wiring from ceiling rose to fitting.
17	<p>Supply, Fixing, testing and commissioning of energy efficient BLDC ceiling fan sweep of size 1200 mm with 230V, 50 Hz, AC supply, CMM - 220 (Min), power consumption 35 watts (max), Double ball bearing type, complete with all accessories Fan (including driver etc.) shall be guaranteed for satisfactorily performance and manufacturing defects for a period of 24 months from the date of commissioning or 36 months from the date of supply whichever is earlier.</p> <p>Make: Bajaj, Crompton, Usha Polar, Orient. Havells, Atomberg, superfan, surya</p>
18	<p>Supply of Exhaust fan, Propeller Type of 300mm sweeps with Louvers, 1400 RPM , Capacitor type Motor with required fixing fasteners etc., conforming to IS 2312 latest suitable to operate on AC single phase 230 V supply.</p> <p>Fan (including driver etc.) shall be guaranteed for satisfactory performance and manufacturing defects for a period of 24 months from the date of commissioning of 36 months from the date of supply whichever is earlier.</p> <p>Make: Bajaj, Crompton, Usha Polar, Orient.. Havells, Atomberg, superfan, surya</p>
19	Fixing, testing and commissioning of exhaust fan including wall opening, fixing of frame and plastering as required for housing exhaust fan including wiring with 3CX1.0sqmm PVC insulated & sheathed copper flexible cable. (Exhaust fan will be supplied by Railways).
20	<p>Supply of IP 65 Protection 45W LED street light luminaire, Warranty 5 years. Preferred makes: Bajaj, Surya, Crompton, Philips,Havells Wipro.</p> <p><u>Technical specification for LED street light of 45Watts</u></p> <ol style="list-style-type: none"> 1. Input voltage : 90 V to 270 V 2. LED lamp efficiency : ≥ 100 LM/Watt 3. Power factor : > 0.90 4. Life expecting : 50,000 hours 5. Rated watt : 45 W(cool white) 6. Luminous flux : 7,500 to 10,500 lumens 7. Working humidity : 10% to 90% 8. Colour Temperature : 4,500 to 7,000 K with test certificate 9. Ingress protection : IP 66 as IS : 10322 10. Total harmonic distortion (THD) : $<15\%$ with test certificate 11. Colour rendering index (CRI) : ≥ 70 12. Working Temperature : -20 deg to 50 deg C 13. Average lighting/beam angle : 120 to 160 deg 14. Control Circuit : Compatible to LED 15. Lamp starting time : Not more than 5 sec

	<p>16. Energy consumption : Not more than 1.2 times at rated voltage</p> <p>17. System power efficiency : > 85%</p> <p>18. Luminary Casing : Pressure die cast Aluminium with Toughened glass cover and Water Proof fixtures</p> <p>19. LED thermal management : LED shall be mounted on heat sink Conductive aluminium with fins to Dissipate the heat to ambient air</p> <p>20. Pole entry/Retro fitting : Suitable for fixing in existing lighting Pole (30 mm to 40 mm dia) and locking Bolt & nut</p> <p>21. Light source : SMD LED clips as per LM80/ IS 16106 With test certificate</p> <p>22. Electrical connector : Connecting wires with minimum One meter length</p> <p>23. Warranty : 5 Years for free replacement</p> <p>24. Made in India only (Chinese Make not accepted)</p> <p>25. Online purchase products are not accepted</p> <p><u>Standards</u></p> <p>1. LED luminaire conformity to IS: 10322/part 5/section/2012 latest and IS: 16107(part 2/section 1): 2012 latest</p> <p>2. Photo biological safety of LEDs used shall be as per IS: 16108/2012 (Exempt Group)</p> <p>3. Type of LED luminaire as per IS 16107 (part 2/section-1/2012)</p> <p>4. Type of LED Modules as per IS 16103(Part 2/2012) 16107(Part 2/sec 1):2012.</p> <p>5. Type Test report.</p>
21	Fixing of Street light fitting in existing LS Post / Wall / Structure (Only Street light fittings will be supplied by Railways).
22	Supply and fixing of 25mm dia nominal bore heavy duty GI pipe suitable for fixing of street light fittings in the wall including bending, clamping etc.







CABLE LOOPING BOX WITH ALUMINIUM BUS BARS.



Front view with door removed.

Side View.

†. All dimensions are in mm unless stated otherwise.

1. All dimensions are in mm unless stated otherwise.
2. Sheet metal for fabrication of the backing shall be 16 SWG.
3. The enclosure shall be weather- and vermin- proof, provided with neoprene rubber gasket at front, hinged front door and provided with locking arrangement. There should be a minimum of three numbers of hinges for fixing of front door.
4. The enclosure shall be of 40 mm x 6 mm size and 320 mm height and built of suitable size, supported with SMC materials. At two numbers of 25mm thickness, two numbers, one on either side here to "Y" shape, in turn are installed at MS flats of 25mm thickness that be provided to position bus bars properly, for fixing of SMC, insulation and all bus slaking holes that be provided to position bus bars suitably and with adequate clearances. All bus bars shall be covered with a hygien sheet of 350mm width, 400 mm height and 3 mm thick as indicated in the drawing figure, using four numbers of 63 bolts of 6 mm dia and of suitable length.
5. Use three numbers of channels made out of 2 mm thick (14 SWG) sheet steel of inner depth of X, Y, Z, 2, which are 25mm, 50mm and 91 mm for fixing of insulation for 2nd, 3rd and 4th bus bars respectively from bottom fixed using GI bolts of 6 mm dia and of adequate length on the main flat.
6. Necessary holes shall be drilled in the bus bars in suit connection of one number of incoming cable at up to and including 24C sizes and two numbers of outgoing cables of auto and including 120 J sizes.
7. The cables, as indicated and specified, shall be provided in the bottom of the enclosure for one number of incoming cable of up to and including 140 sqmm size and two numbers of outgoing cables of 4p ic and including 220 sqmm size, all 11UG, armoured and sheathed aluminium cables.
8. Two, shrouded sleeves of metal, yellow, Blue and Black colours shall be provided on all two bars of R, Y & B phases and Neutral respectively.
9. The toping bus shall be provided with low numbers of clamps made out of MS flat of 30mm size size suitable for fixing on ear posts / accessories of suppliers on railway platforms. Each clamp shall have two MS nuts, one fixed on the enclosure run through due proximity of the enclosure and the other bent to be fixed on rail / accessories.
10. The toping bus or all steel items including clamps that be powder coated in grey shade.
11. Use four numbers of GI bolts of 10 mm dia of L-shape length with nuts and spring washers for fixing of the locking key.
12. The earthing provisions that be made for earthing of the enclosure, using 6 mm dia GI rods with 16 SWG, 25 mm dia copper washers.

[illegible]

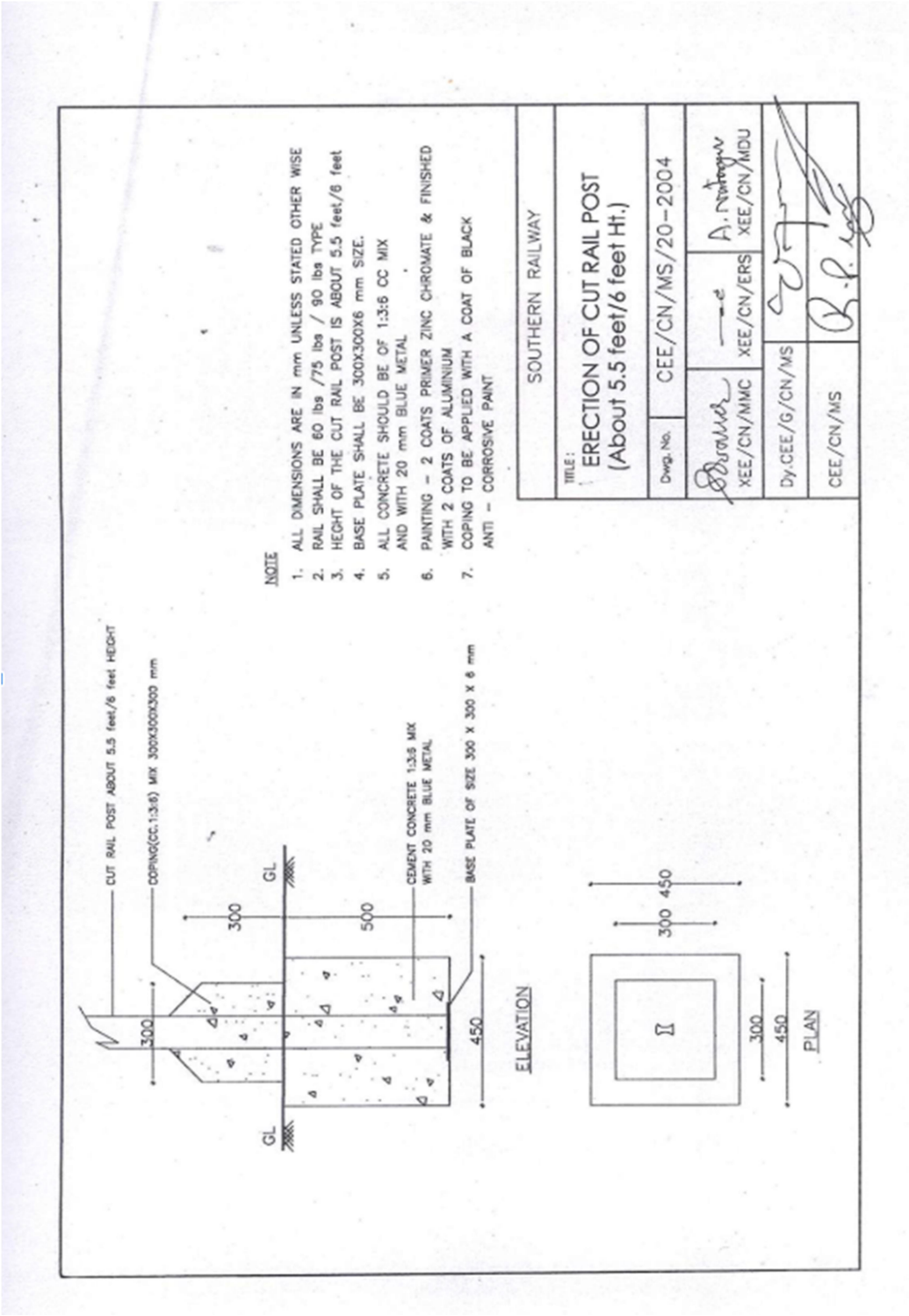
"U" clamp for fixing of insulators

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DATE: 04-11-2015



6. CONSERVANCY CESS CHARGES

(Ref: Rly. Board letter No. F(X) 1/95/1/1 dated 07.09.2021) if applicable,

Item No.	Item Description	Avg. No. of Labourers/ workman employed per day	Conservancy Cess charges to be recovered (per month)
I	Railway Contractors:		
	a) Engg.Works Contractors	1 to 5	₹ 159/-
	(Engg., Elect., Mech., Signal etc.)	6 to 10	₹ 312/-
		11 to 25	₹ 785/-
	b) Genl. Goods handling Contractors including Contractors awarded by Stores dept.	26 to 50	₹ 1,143/-
		51 to 100	₹ 1,534/-
		101 to 200	₹ 1,926/-
	c) Coal handling Ash pit cleaning contractors	201 to 300	₹ 2,318/-
	d) Railway siding use by the contractors	301 to 750	₹ 2,676/-
		751 to 1500	₹ 5,382/-
	e) Contractor supplying water to engines.	1501 to 3000	₹ 10,768/-
		3000 & over	₹ 21,508/-

***** End of Chapter 4C*****

CHAPTER-5

Comprehensive Annual Maintenance Contract Conditions

CHAPTER - 5

ANNUAL MAINTENANCE CONTRACT CONDITIONS

1. INTRODUCTION

This Comprehensive Annual Maintenance Contract (CAMC) is executed between Madurai Division, Southern Railway (hereinafter referred to as “Railway”) and [Name of Contractor] (hereinafter referred to as “Contractor”).

This CAMC shall govern the operation, preventive maintenance, corrective maintenance, and upkeep of Electric Operated Lifting Barriers (EOLB) and Emergency Sliding Booms (ESB) installed at 39 LC gates under MDU Division.

The CAMC shall come into force immediately after expiry of one year warranty period.

2. DURATION AND EXTENSION

- a. The CAMC shall be valid for **five (5) years** from the date of commencement.
- b. The contract may be **extended for additional terms of two (2) years each** on mutually agreed terms and conditions. The rates for the extended period may be reviewed and mutually agreed prior to such extension.
- c. No Price Variation Clause (PVC) shall apply for the CAMC period.

3. SECURITY DEPOSIT AND PERFORMANCE GUARANTEE

- a. The Security Deposit (SD) for the original work shall be released **only after submission of fresh Performance Guarantee (PG)** for the cost of the CAMC in accordance with latest GCC 2022 along with its correction slips.
- b. PG shall remain valid for the full CAMC duration plus 60 days thereafter.

4. GENERAL CONDITIONS

- a. The CAMC is Comprehensive, covering all equipment, hardware, and peripheral components listed in Annexures A, B, and C, unless otherwise excluded under Annexure D (Items Not Covered).
- b. The contractor shall comply with all **labour laws, safety laws, environmental regulations, and statutory requirements** as per latest GCC 2022 along with its correction slips. .
- c. Rates are **“all-inclusive”** covering GST, duties, levies, labour cess, and other statutory obligations.

- i. Any statutory **increase in GST or levies** after the date of tender opening but within the original completion period will be reimbursed.
 - ii. Any **decrease in GST or levies** shall be recovered from the contractor's bill.
- d. The Railway reserves the right to:
 - i. Add additional equipment under this CAMC on mutually agreed rates.
 - ii. Terminate the CAMC by serving a 14-day notice if performance is unsatisfactory or if the Railway decides to abandon the work.

5. SCOPE OF WORK

5.1 Activities Covered

- a. Monthly Preventive Maintenance – as per Annexures A & B.
- b. Breakdown / Failure Restoration – Major failures to be attended within 3 hours, minor failures within 24 hours.
- c. Arranging vehicles for the transportation of materials from SSE/stores or MDU SRM Stores to the site, and for the mobilization of CAMC staff to site for carrying out maintenance and for immediate attention of failures/breakdowns.
- d. Maintenance of register at each SSE section for recording the failures with details for time of intimation, arrival and restoration time.
- e. Testing of gear with the deputed railway staff after restoration of the gear before handing over for operations.

5.2 Minimum Resources

- a. Two Gangs comprising one skilled and one unskilled labourer each, should be engaged for doing the CAMC work, stationed at Virudhunagar (VPT) and Tenkasi (TSI). These locations may be changed as per the directions of SrDSTE/MDU.
- b. Contractor to mobilize additional manpower as required for emergencies (vehicle hit, natural calamities, etc.) as directed by the railway representative.
- c. The Contractor should transport the boom / materials from the SSE stores/SRM stores, as applicable to the site, to facilitate the restoration with the CAMC team as directed by the railway representative.

5.3 Spares & Tools

- a. Minimum spares as per Annexure C shall be available with the contractor at all times.

- b. Any Railway spare used for restoration must be replenished by the contractor within 15 days.
- c. The onus of maintaining adequate rotating spares is on Contractor. The list of spares and their quantity to be submitted by the Contractor to the SSE/Signal.
- d. In the event of replacement of a part/component, the replacement should be with a component of equivalent or higher quality/capacity with the same or higher functionality. The modules/components repaired shall carry a warranty period of minimum 12 months and if the repaired modules happen to fail within this warranty period the responsibility lies with the contractor who shall then repair those modules free of cost.

6. PERFORMANCE REQUIREMENTS AND PENALTIES

I. Preventive Maintenance (PM) Periodicity

- 1. **Monthly Preventive Maintenance Visit** shall be carried out on a fixed date every month as directed by Sr.DSTE/MDU.
- 2. A minimum gap of 25 days shall be maintained between two consecutive visits, but should not exceed 35 days from the date of visit. The “due date” for PM shall be calculated on a **monthly periodicity from the first date of CAMC**.
- 3. The Contract staff shall be available on telephone round the clock for passing on failure/incidents information by Railways and immediate attention.
- 4. A permanent contact number to be provided with each Gang and the number to be shared with the Railway Representative for communication of failures at any time round the clock. The contractor shall give 24x7 (All days in a week during day and night) service including Sundays and Holidays, during the CAMC period.
- 5. The Contractor should submit in writing the Name, Designation, Phone No. and Address of the Contractor's Maintenance staff within the sectional jurisdiction for effective and immediate communication. Before any change in Address is effected, this should be intimated in advance to the Railways.
- 6. The Contract team shall visit the LC Gate every month with all necessary measuring instruments, tools, spares, and other consumables to carry out maintenance, test, check and record readings and carry out adjustments if required to ensure the technical and safety requirements covered under the scope of CAMC.

7. The contractor should programme maintenance in such a manner so as not to interfere in the working and movement of trains and road traffic. The period between successive maintenance shall not exceed one month.
8. The Contract team shall visit the LC Gate every month with all necessary measuring instruments, tools, spares, and other consumables to carry out maintenance, test, check and record readings and carry out adjustments if required to ensure the technical and safety requirements covered under the scope of CAMC.
9. During the period of CAMC, the contractor shall remain responsible to arrange for replacement and setting right at his own cost, any equipment/sub-system which of defective manufacture or defective design or defective material/ component or maintenance issues, becomes unworkable due to any cause whatsoever. The decision of railways in this regard shall be final and binding on the contractor.
10. During the CAMC, the intactness of the Earth and its resistance value shall be certified by the contractor and if this value is found to be more than the prescribed limits it shall be informed to the SSE/Signal in writing. Failing this, the contractor will be responsible for failure due to lightning and any other failure occurring due to earth resistance/intactness. Railways will arrange to bring down the Earth value under intimation to the contractor.
11. The CAMC does not cover any damage to the equipment either whole or part of the system due to external reasons such as floods, earthquake, sabotage, terrorist activity, fire etc. For such cases, restoration shall be done by the CAMC staff as expediently as possible and within the time period as advised by site engineer.

II. Penalties

i. Penalty for Delayed Preventive Maintenance Visit

Delay Beyond Scheduled Date	Penalty
0 to 5 days (grace period)	No penalty
6th to 10th day	10% of monthly CAMC charge of that LC Gate per day of delay
Beyond 10 days	No CAMC charge shall be paid for that LC Gate for that month + Additional penalty of ₹1,000/- per day until the PM is actually carried out

Note: The Schedule for PM may be changed as per the zonal maintenance policies or as per the discretion of Sr.DSTE/MDU. Duration of month shall be considered as 30 days.

ii. Penalty for Attending Failures

(a) Major Failures: Any failure of EOLB/ESB affecting Rail or Road traffic are treated as major failures

Response Time from Notification	Penalty
0 – 3 hours	No penalty
> 3 to 6 hours	2.5% of monthly CAMC charge per hour or part thereof beyond 3 hours
> 6 to 12 hours	5% of monthly CAMC charge per hour or part thereof beyond 6 hours
> 12 hours	No CAMC payment for that quarter for that LC Gate

(b) Minor Failures: Failures of EOLB/ESB of minor nature which do not affect rail or road traffic.

Response Time from Notification	Penalty
0 – 24 hours	No penalty
24 – 72 hours	₹ 500/- per hour for each hour beyond 24 hours
> 72 hours	No CAMC payment for that quarter for that LC Gate

(c) MTTR & System Downtime Penalty

- **Mean Time to Repair (MTTR):** If average MTTR for a given LC Gate in a month exceeds 6 hours, **10% of monthly CAMC charges shall be recovered per hour or part thereof over and above 6 hours**, in addition to the penalties specified above.
- **Uptime / Downtime:** If monthly average uptime falls below 99.9% (i.e., downtime > 0.1%), **1% of monthly CAMC charge shall be deducted for every 0.1% or part thereof of downtime beyond 0.1%.**
- **UP TIME:** Duration for which the system is working and available for its designated operation.
- **DOWN TIME:** The time the contractor's representative has been informed by means of Telephone, SMS, FAX, or any other method at the address as specified

by Contractor within geographical jurisdiction of Railway to the time the system is restored and offered back to operations.

- **SYSTEM:** System in this context refers to EOLB,ESB ,Control panel and other peripheral equipment required for the safe operation of LC Gate or as directed by the Sr.DSTE/MDU.

III. Maximum Penalty Cap

The **total penalty** imposed on any LC Gate in a quarter shall be **restricted to the quarterly CAMC charge (Yearly CAMC ÷ 4)** for that LC Gate.

IV. Failure to maintain minimum spares

A penalty to the tune of Rs 500/- per day will be imposed in case of non-compliance.

V. Failure to Attend Maintenance / Violation of CAMC Conditions

In addition to the above penalties, if the contractor fails to:

- Attend failures or breakdowns, or
- Carry out PM as per schedule, or
- Comply with any CAMC obligation under this contract

Railways shall impose an additional lump sum penalty of up to ₹10,000 per occasion at the discretion of Sr. DSTE/MDU. The decision of Sr.DSTE/MDU shall be final and binding.

7. PAYMENT TERMS

- a. **Quarterly Payments** – Payment shall be made only after all CAMC obligations are fully discharged, verified, and certified by SSE/Signal and countersigned by ADSTE/DSTE.
- b. Bills shall be accompanied by:
 - I. Certified monthly maintenance reports.
 - II. Breakdown restoration records.
 - III. Uptime compliance statement.
 - IV. Certificate that rates claimed are not higher than those charged to any other government organization.

8. WARRANTY & GUARANTEE

- a. Any part replaced shall carry a **minimum 12-month warranty** from date of replacement or up to two months after CAMC expiry, whichever is later.

- b. Any failure of replaced/ repaired modules within this warranty period shall be attended by the contractor free of cost.

9. SAFETY & PROTECTION AT WORKSITE

Contractor shall strictly adhere to all safety protocols as per GCC 2022, including:

- a. Use of certified tools and equipment.
- b. Personal protective equipment (PPE) for all workers and adequate safety harness and ladders for handling the equipment.
- c. Compliance with Railway safety instructions for working near tracks.
- d. The contractor's employee and workmen shall not for any reason operate any appliances or installation of the Railway concerning the safety of train movement, but they should whenever necessarily notify the qualified staff who will then take necessary steps.
- e. No terms or provision hereof shall be deemed waived and no breach excused unless such waiver or consent requested by one party shall be in writing and signed as agreed by the other party.
- f. In case of any dispute of any nature arising out of the execution of this contract, the decision of the Railways in this regard shall be final and binding on both parties.
- g. Any of the above conditions does not overrule or alter any of the provisions contained in Manuals or General conditions of contract or Railway board directives. Any clarification required by the contractor may be obtained from Chief Signal and Telecommunication Engineer, Southern Railway or Senior Divisional Signal and Telecom Engineer, Madurai Division or Authorized representatives. In case of any disputes the decision of the Railways in this regard shall be final and binding on both parties.
- h. This service support shall be governed by the laws of India and shall be subject to the jurisdiction of Kerala, Tamilnadu & Karnataka only.

10. RAILWAY'S RESPONSIBILITIES

- a. Issue of identity cards for contractor staff.
- b. Facilitation of site access and coordination during troubleshooting.
- c. Supervision of Replacement, Maintenance and Troubleshooting.
- d. Verification and certification of contractor's bills.

11. TERMINATION AND FORECLOSURE

Railways may foreclose this contract at any time without compensation, except for work completed up to the date of notice. The contractor shall not claim loss of profit.

12. DISPUTE RESOLUTION

Any dispute shall be resolved as per the Arbitration Clause of GCC 2022. Jurisdiction shall lie with courts having jurisdiction over Tamil Nadu.

13. SITE FACILITIES & SUPPORT

- a. To enable the contractor to discharge their obligations under this contract, Railway shall provide required assistance to the contractor for free and easy access to equipment.
- b. For necessary co-ordination during trouble shooting or faults, Railways shall make available to the contractor free of charge appropriate staff familiar with Railways.
- c. If at site any item is to be physically moved in connection with the carrying out of contracted maintenance service, then for this purpose Railway may provide to the contractor on request necessary help and man power without charge.
- d. No Railway free passes shall be issued to the contractor or his workmen for travel by trains. Only identification letters shall be issued to individuals employed on the work.

14. POLICE VERIFICATION

The contractor shall ensure police verification of all personnel deployed under this CAMC. Workers with adverse antecedents shall not be engaged. The contractor shall be solely responsible for all acts of commission/omission of his employees.

15. ANNEXURES

- **Annexure A** – Monthly Maintenance Checklist for EOLB
- **Annexure B** – Monthly Maintenance Checklist for ESB
- **Annexure C** – Minimum Spares to be Maintained
- **Annexure D** – Items not covered in the scope of CAMC

Annexure A: Monthly Maintenance Check List for EOLB Maintenance schedule

1. Ensure the smooth operation of the gate barrier and check for auto stop of barrier in fully open (within 85°-90) & closed (within 0°-5) position. Adjust circuit controllers / limit switches, if required.

2. Cleaning the inside & outside of mechanism, booms, channels & hand Generator. Checking & cleaning of contacts, proper adjustment & condition of Limit switch/Circuit controller/contactors.
3. Check tightness of all fixing nuts & bolts of the mechanism counterbalance channels & adjust screws of base, gear box, clutch assembly, motor, pulleys, boom, machine foundation & the circuit controllers. Along with this, any cracks on boom should also be checked.
4. Check all the indications on the gate panel, Button & LC Gate key. To be replaced if found defective.
5. Checking and cleaning of operating panel, Road signals and retro reflective STOP board on both LB & hooter.
6. Checking of Audio-Visual alarm/hooter for approach warning/approach locking. Wherever provided.
7. Availability of lubrication to its level in the gear box.
8. For Motorized/Solenoidal boom Locking: Maintenance to be carried out as per the items in the maintenance checklist provided by Sr. DSTE/MDU.
9. Ensure that the boom hook falls properly into the Boom Lock Post. Adjust position of Boom Hook/lock unit if required. Boom balancing to be checked
10. Ensure EOLB interlocking is effective.
11. Apply a little grease to the cam surface which operates the limit switch.
12. Check Timing Belt tension for both barriers. Adjust if required.
13. Check Gear Box for any leakage of oil.
14. Check clutch slippage current (as per stipulation) and slippage of friction clutch and adjust (if required & feasible as directed by the railway representative).
15. Parallel operation/& Individual operation and opening of gate.
16. Gate operation to be tested with Crank handle. CH should be kept sealed in the box.
17. Replacement of limit switches as per the latest Zonal policy or as directed by the railway representative.

18. All cable terminations are tight and properly connected, attention if any is required.

Annexure B: Monthly Maintenance Check List for ESB

1. Ensure the Sliding boom is easy to operate and travels smoothly in its boom channel.
2. E type lock and other moving parts to be oiled and free movement to be ensured.
3. SBB E type key can be taken out only when a combination key is inserted.
4. The stop board has retro-reflective paint/tape. Stop board of approx. size 600 mm to be maintained.
5. EKT/KLCR for slot transmission is effective.
6. Ensure locking of slide covers on sliding booms.
7. Check and ensure that the aspect of both sides of the road signal should be the RED aspect before taking OFF of the Gate signal by using a sliding boom arrangement.
8. The foundation of the sliding boom channel and boom lock post should be intact so that the sliding boom is not obstructed.
9. Check the tightness of base nuts & bolts of the stand and jointing nuts & bolts of the sliding boom.
10. Ensure sliding boom Interlocking is effective.
11. Stay wire shall be maintained to required tension.
12. On opening the back cover, wiring shall be in good laid out condition without any openings to avoid entry of rodents.

Annexure C: Minimum Spares to be maintained

List of items to be maintained with the Gangs as spare for monthly maintenance and failures and emergency situations are mentioned below:

Sl. No.	Item Description	Quantity (minimum quantity to be maintained with gang at all times)
1	Limit Switches (no's)	18
2	Reflective tape (m)	7.04
3	Miscellaneous consumables (e.g. oil, nuts, bolts)	As per direction of the Railway representative.

NOTE: It is to be noted that:

- a. The terms SLB, Sliding Boom and ESB have been used interchangeably and can be assumed as ESB i.e. Emergency Sliding Boom throughout the document and schedule.
- b. The Maintenance template provided by the MDU Division for EOLB and ESB should be followed for the duration of CAMC. The items in Annexures A, B &C shall be updated to comply with the latest Headquarter policy and Guidelines from time to time, with the approval of Sr.DSTE/MDU.
- c. The Limit switches supplied by the contractor should be compatible to the make of the LC gate installed in the section covered by this CAMC. For the PTJ/WS Make LC gates the limit switches should be of the following makes: BCH, OMRON, HONEYWELL, CULTER and HAMMER, or as approved by Sr.DSTE/MDU.
- d. The painting of EOLB and ESB should be carried out annually or as directed by the railway representative. The paint of approved quality will be supplied by the contractor.

Annexure D: Items not covered under the scope of CAMC

- a. Relays, CT Racks, Batteries, Cables Terminations etc.,
- b. Any damage to the equipment either whole or part of the system due to external reasons such as natural disasters like floods, earthquake, sabotage, terrorist activity, fire etc.
- c. Damages due to high voltage/lightening shall not be covered under CAMC.

****** END OF CHAPTER – 5 ******

SOURCES FOR SPECIFICATIONS / DRAWINGS

- a) IRS Drawings and Specification including RDSO Specific – Director General, R.D.S.O., Lucknow.
- b) TEC Drawings & Specifications – Telecommunications Engineering Centre, KurshidLalBhawan, Janpath, New Delhi – 110 001.
- c) Standard Specifications (BSS & ISS, etc.) – Indian Standard Institution, 9, Mathura Road, New Delhi.
- d) Railway Publications such as Railway Rules, Codes and Practices, etc. – Government of India, Ministry of Railways, Rail Bhawan, New Delhi.
- e) Central Government Laws and Acts – Government of India, Ministry of Information, Publications Division, Tilak Road, New Delhi.
- f) Manual of Instructions for Installation of S&T Equipment 25KV 50 Hz, single phase Electrified section – Director General, R.D.S.O., Lucknow.
- g) General and Subsidiary Rules of Indian Railways and Southern Railways

Note: For bidding the list is not exhaustive and any specification /drawings as required can be obtained on request from the office of Dy. CSTE/Projects/TPJ

Documents Uploaded Separately in IREPS

1. GCC APRIL 2022
2. GCC CORRECTION SLIP 1 TO 10
3. SOR 2022 BOOKLET
4. RB letter for Local content
5. RB letter for tender value above 50Cr
6. RB letter for penalty for digging of cable
7. GUIDELINES FOR SPD EARTH
8. RDSO TAN for earthing
9. RDSO SPEC for SMPS
10. RDSO SPEC for Master and slave telephone
11. TAN 3006 ver 3
12. TAN 3009 Ver 1
13. letter for similar nature of work S&T
14. letter for similar nature of work Engg
15. letter for similar nature of work Elec
16. AFDASS CHECK LIST
17. ELECTRICAL DRAWINGS
18. ENGINEERING DRAWINGS
19. S AND T DRAWINGS

NOTE: For up-to-date details, please refer RDSO website.