

WESTERN RAILWAY
VADODARA DIVISION
ELECTRICAL (POWER) DEPARTMENT
TENDER DOCUMENT

Tender No. : BRC-EL-P-06-2482-26-27
Name of work : Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station.
Cost of Work : ₹ 1,12,67,561.00
Tender document cost : NIL
Bid Security : ₹ 2,25,400.00
Completion Period : Six (06) Months
Validity of offer : 60 days
Tender closing date and time : 17.06.2026 at 15.00 hours

NON - TRANSFERRABLE

**Issued by – Senior Divisional Electrical Engineer (Power) Vadodara,
Western Railway**

I N D E X

Sr. No.	Name of Document	Page No.
1	E-Tender Notice	3
2	Preamble	4 – 6
3	Part - I – Instructions to Tenderers (ITT)	7 – 13
4	Tender Form (First Sheet) – Annexure - I	14
5	Tender Form (Second Sheet) – Annexure - I (Contd.)	15 – 29
6	Contract Agreement of Works – Annexure - IV	30
7	Format for Certificate to be Submitted/Uploaded by Tenderer along with the Tender Documents – Annexure - V	31
8	Format for Certificate to be Submitted/Uploaded by attorney/authorized signatory/ each member of Partnership Firm/Joint Venture (JV)/Hindu Undivided Family (HUF)/ Limited Liability Partnership (LLP) – Annexure - VA	32
9	Tenderer's Credentials (Bid Capacity) – Annexure - VI	33
10	Bid Security – Bank Guarantee Bond from any scheduled commercial bank of India – Annexure - VIA	34 – 35
11	Annual Contractual Turnover data for the previous 3/4 years to be filled by each bidder or each member of a JV – Annexure - VIB	36
12	Part - II – Standard General Conditions of Contract	37 – 81
13	Proforma for Time Extension – Annexure - VII	82
14	Proforma of 14 days' Notice for offloading of part of Contract Work – Annexure - VIIA	83
15	Notice for part of Contract Work offloaded – Annexure - VIIB	84
16	Certificate of Fitness – Annexure - VIII	85
17	Proforma of 7 days' Notice for works as a whole/in parts – Annexure - IX	86
18	Proforma of 48 hours' Notice for whole work – Annexure - X	87
19	Proforma of Termination Notice – Annexure - XI	88
20	Proforma of 48 hours' Notice for part of the work – Annexure - XII	89
21	Proforma of Termination Notice for part of the work – Annexure - XIII	90
22	Final Supplementary Agreement – Annexure - XIV	91 – 92
23	Proforma of Agreement towards Waiver under Section 12(5) and Section 31A (5) of Arbitration and Conciliation (Amendment) Act – Annexure - XV	93
24	Certification by Arbitrators appointed under Clause 63 & 64 of Indian Railways General Conditions of Contract – Annexure - XVI	94
25	Insurance Surety Bond for Performance Security – Annexure - XVII	95 – 96
26	Special Conditions of Contract for Electrical Works	97 – 116
27	Indemnity Bond – Annexure - XVIII	117
28	Proforma for Bank Guarantee Bond for Performance Guarantee – Annexure - XIX	118
29	Bill(s) of Quantities for the work – Annexure - XX	119 – 123
30	Detailed Technical Specifications for items of work – Annexure - XXI	124 – 155

E-TENDER NOTICE

Sr. Divisional Electrical Engineer (Power), Western Railway, Vadodara for and on behalf of The President of Union of India invites E-tenders to the following electrical work –

Tender No.	: BRC-EL-P-06-2482-26-27
Name of work	: Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station.
Estimated cost of work	: ₹ 1,12,67,561.00
Earnest Money Deposit	: ₹ 2,25,400.00
Tender document cost	: NIL
Completion period	: Six (06) Months
Validity of offer	: 60 Days
Date and time of closing	: 17.06.2026 at 15.00 hours
Website details	: www.ireps.gov.in
Notice board location	: Office of Senior Divisional Electrical Engineer (Power), Western Railway, Pratapnagar, Vadodara – 390 004

TERMS AND CONDITIONS –

1. Contractors are allowed make payment against this tender towards tender document cost and earnest money only through payment modes available on IREPS portal like NET Banking, Debit card, Credit card etc. Any manual payments through Demand draft, Banker's cheque, Deposit receipts, FDR etc. are not allowed.
2. **The tendering firm must have valid Electrical Contractor's License issued by the Government in their own name. A copy of the license shall be uploaded along with the tender offer, failing which the offer shall be summarily rejected. The license must be valid as on the date of opening of the tender. If the Electrical Contractor's License has expired as on the date of opening of tender, the license renewal documents submitted to the license renewing authority must be uploaded along with the copy of the license.**
3. Tenderers may satisfy themselves before submission of tender regarding their financial status, previous experience and ability to execute work including by seeing the actual site and location of the work and all location liable to be encountered during execution of work and may be required to submit/demonstrate evidence.
4. The rate quoted by the tenderer should be inclusive of all taxes and duties.
5. The contract shall be governed by Indian Railways Standard General Conditions of Contract (GCC) April - 2022 (with latest amendment if any) of Engineering Department and Special Condition of Contract (SCC) given in the tender document.

PREAMBLE

- 1.0 Tender No.: - BRC-EL-P-06-2482-26-27**
- 2.0 Name of Work – Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station.**
- 3.0 Scope of Work –**
Scope of work included here is general electrical works as mentioned in the subject and tender schedule, descriptive note of the tender document.
- 4.0 Location of worksite –**
The proposed work is to be executed at stations under the jurisdiction of “Vadodara Division of Western Railway” in the State of Gujarat.
- 5.0 Cost of work –**
The estimated cost of the above work is ₹ 1,12,67,561.00 (Rupees One Crore Twelve Lakh Sixty-Seven Thousand Five Hundred and Sixty-One only).
- 6.0 Period of completion –**
The works in all respects shall be completed within period of **six (06) months** from the date of issue of letter of acceptance.
- 6.1 Imposition of token penalty for delay in the completion of work –**
The existing clause 17 (B) of GCC provides for recovery of liquidated damages from the contractor for delay in completion of work. It has now been decided that the competent authority while granting extension to the currency of contract under clause 17 (B) of GCC may also consider levy of token penalty as deemed fit best on the merit of the case.
- 7.0 ELIGIBILITY CRITERIA FOR TENDERERS – The eligibility criteria as mentioned in Railway Board's letter No. 2007/CE.1/CT/18 Pt. XII dated 31/12/2010 (Para 4) is applicable for tenders costing above ₹ 50.0 Lakh.**
- A. Technical Eligibility Criteria – As per Clause 10.1 of Tender Form (Second Sheet).**
- B. Financial Eligibility Criteria – As per Clause 10.2 of Tender Form (Second Sheet).**
- C. Credentials of the Tenderers (for low value Tenders i.e. up to ₹ 50.0 Lakh) –**
In terms of Railway Board's letter No. 2013/CE-I/CT/O/25/VOC dated 05/08/13, financial capacity, capability and past performance of the tenderer shall be examined. In support of their credentials, the tenderers should submit following document along with their tenders –
- (i) List of Personnel, Organization available on hand and proposed to be engaged for the subject work.
 - (ii) List of Plant and Machinery available on hand (own/hired) and proposed to be inducted (own/hired) to be given separately for the subject work.
 - (iii) List of works completed in the last three financial years giving description of work, organization for whom executed, approximate value of contract at the time of award, date of award and date of scheduled completion of work, date of actual start, actual completion and final value of contract. Supportive documents/certificates from the organizations with whom worked/are working should be enclosed. A proper balance sheet for turn over from the paying/contracting authorities with list of contractual payment made to the party during qualifying period should be enclosed along with offer for verification.
Total contract amount received during the last three years as per current ITCC filled in Form16-A should also be submitted along with offer.
 - (iv) List of works on hand indicating description of work, date of award, contract values, approximate value of balance work yet to be done along with supportive documents/certificates from the organizations working with should be enclosed.

- (v) List of works on hand indicating description of work, date of award, contract values, approximate value of balance work yet to be done along with supportive documents/ certificates from the organizations working with should be enclosed.
 - (vi) Work experience certificate issued by Central Government/State Government/Semi Government Organizations/Authorities, PSUs Government of India/State Government shall only be considered. Certificate issued from Private Individual/ Private firms will not be considered.
 - (vii) Offers of the firms not complying with the above stipulations are liable to be rejected.
- 8.0** For the works tenders, it has been decided to adopt the affidavit-based system of credential verification. The tenderer shall submit along with the tender document, documents in support of his/their claim to fulfill the eligibility criteria as mentioned in the tender document. Each page of the copy of documents/certificates in support of credentials, submitted by the tenderer, shall be self-attested/digitally signed by the tenderer or authorized representative of the tendering firm, self-attestation shall include signature, stamp and date (on each page). Only those documents which are declared explicitly by the tenderer as “documents supporting the claim of qualifying the laid down eligibility criteria”, will be considered for evaluating his/their tender.
- 8.1 It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned. With the submission of the affidavit as mentioned above, the practice of verification of tenderer's documents by the Railways may be dispensed with.
- 8.2 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.
- 8.3 In case of any wrong information submitted by tenderer, the contract shall be terminated. Earnest Money Deposit (EMD), Performance Guarantee (PG) and Security Deposit (SD) of contract forfeited and agency barred for doing business on entire Indian Railways for 5 (five) years.
- 9.0 Electrical Contractors' License – The tendering firm must have valid Electrical Contractor's License issued by the Government in their own name. A copy of the license shall be uploaded along with the tender offer, failing which the offer shall be summarily rejected. The license must be valid as on the date of opening of the tender. If the Electrical Contractor's License has expired as on the date of opening of tender, the license renewal documents submitted to the license renewing authority must be uploaded along with the copy of the license.**
- 10.0 Validity period of 60 days from the date of opening of Tender –**
Tender Notice enclosed as Notice Inviting Tender.
- 11.0 Terms and Conditions –**
Enclosed Special Conditions of Contract for electrical, prices and payments, specifications, schedule of work, explanatory notes, drawings and annexures including instructions to tenderers and General Conditions of Contract etc. shall be treated as part of tender document.
- 12.0 Guarantee/ Defect Liability –**
The contractor shall furnish guarantee for all the material supplied and replaced for twelve months from the date of commissioning and Security Deposit shall be released accordingly or as per condition specified in terms and general conditions with Annexure "D" of Technical Specifications.
- 13.0 Mobilization advance – Not admissible –**
The mobilization advance clause henceforth is restricted only to high value tenders of value ₹ 10.0 Crore and above each.

14.0 Addresses –

Sr. No.	Purpose	Addressee
A	General correspondence and tender dealing	Sr. Divisional Electrical Engineer (Power), DRM Office, Western Railway, Vadodara
B	Cash Deposit	Sr. Divisional Finance Manager, Western Railway, Vadodara
C	Matter relating to field work	Any location on Vadodara division in supervision of concerned depot in-charge.
D	Earnest Money and Security deposit	Sr. Divisional Finance Manager, Western Railway, Vadodara
E	Bill passing Officer	Sr. Divisional Electrical Engineer (Power), Western Railway, Vadodara
F	Bill passing Officer	Sr. Divisional Finance Manager, Western Railway, Vadodara

PART I

Instructions to Tenderers (ITT)

1.0 Applicability: These instructions and conditions of contract shall be applicable for all the tenders and contracts of railways for execution of 'Works' as defined in GFR 2017.

1.0.1 Order of Precedence of Documents: In a contract agreement, in case of any difference, contradiction, discrepancy, with regard to conditions of tender/contract, specifications, drawings, Bill(s) of Quantities etc., forming part of the tender/contract, the following shall be the order of precedence:

- i. Letter of Award/Acceptance (LOA)
- ii. Bill(s) of Quantities
- iii. Special Conditions of Contract
- iv. Technical Specifications as given in tender documents
- v. Drawings
- vi. Indian Railways Standard General Conditions of Contract updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
- vii. Indian Railways Unified Standard Specification (IRUSS-2019) updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract.
- viii. CPWD Specifications 2019 Vol. I & II updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract.
- ix. Indian Railways Unified Standard Specifications (Works and Material) 2010 updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents, if applicable in the contract.
- x. IR Specifications/Guidelines updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
- xi. Relevant B.I.S. Codes updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.

1.1 Interpretation: These Instructions to Tenderers shall be read in conjunction with the Standard General Conditions of Contract which are referred to herein and shall be subject to modifications additions or suppression by Special Conditions of Contract and/or Special Specifications, if any, annexed to the Tender Forms.

1.2 Definition: In these Instructions to Tenderers, the following terms shall have the meanings assigned hereunder except where the context otherwise requires:

- (a) "Railway" shall mean the President of the Republic of India or the administrative officers of the Railway or Successor Railway authorized to deal with any matter, which these presents are concerned on his behalf.
- (b) "General Manager" shall mean the Officer-in-Charge of the general superintendence and control of the Zonal Railway/Production Unit and shall also include Addl. General Manager, General Manager (Construction) and shall mean and include their successors of the Successor Railway.
- (c) "Chief Engineer" shall mean the Officer-in-Charge of the Engineering Department of Railway and shall also include Chief Engineer (Construction), Chief Electrical Engineer, Chief Electrical Engineer (Construction), Chief Signal & Telecom Engineer, Chief Signal & Telecom Engineer (Construction), Chief Mechanical Engineer and shall mean and include their successors of the Successor Railway.
- (d) "Divisional Railway Manager" shall mean the Officer-in-Charge of a Division of Zonal Railway

and shall mean and include Divisional Railway Manager of the Successor Railway.

- (e) “Engineer” shall mean the Divisional Engineer or Executive Engineer, Divisional Signal & Telecom Engineer, Divisional Electrical Engineer, Divisional Mechanical Engineer in executive charge of the works and shall include the superior officers, both Open Line and Construction Organizations, of Engineering, Signal & Telecom, Mechanical and Electrical Departments, i.e. the Senior Divisional Engineer/Deputy Chief Engineer, Senior Divisional Signal & Telecom Engineer / Dy. Chief Signal & Telecom Engineer, Senior Divisional Electrical Engineer / Deputy Chief Electrical Engineer, Senior Divisional Mechanical Engineer and shall mean & include the Engineers of the Successor Railway.
 - (f) “Tenderer” shall mean the person / firm / co-operative or company whether incorporated or not who tenders for the works with a view to execute the works on contract with the Railway and shall include their representatives, successors and permitted assigns.
 - (g) “Limited Tenders” shall mean tenders invited from all or some contractors on the approved or select list of contractors with the Railway.
 - (h) “Open Tenders” shall mean the tenders invited in open and public manner and with adequate notice.
 - (i) “Works” shall mean the works contemplated in the drawings and Bill(s) of Quantities set forth in the tender forms and required to be executed according to the specifications.
 - (j) “Specifications” shall mean the Specifications for Materials and Works of the Railway as specified under the authority of the Ministry of Railways or Chief Engineer or as amplified, added to or superseded by special specifications if any, appended to the Tender Forms.
 - (k) Standard Schedule of Rates (SSOR) shall mean the schedule of Rates adopted by the Railway, which includes –
 - 1. “Unified Standard Schedule of Rates of the Railway (USSOR)” i.e. the Standard Schedule of Rates of the Railway issued under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents;
 - 2. “Delhi Schedule Of Rates (DSR)” i.e. the Standard Schedule of Rates published by Director General/ Central Public Works Department, Government of India, New Delhi, as adopted and modified by the Railway under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
 - (l) “Drawings” shall mean the maps, drawings, plans and tracings, or prints thereof annexed to the Tender Forms.
 - (m) “Contractor’s authorized Engineer” shall mean a graduate engineer or equivalent, having more than three years’ experience in the relevant field of construction work involved in the contract, duly approved by the Engineer.
 - (n) Date of inviting tender shall be the date of publishing tender notice on IREPS website if tender is published on website or the date of publication in newspaper in case tender is not published on website.
 - (o) “Bill of Quantities” shall mean Schedule of Item(s) included in the tender document along with respective quantities.
- 1.3** Words importing the singular number shall also include the plural and vice versa where the context requires.

CREDENTIALS OF CONTRACTORS

2. Application for Registration and Approved list of contractors:

- 2.1 Works of construction and of supply of material shall be entrusted for execution to contractors whose capabilities and financial status have been investigated and approved to the satisfaction of the Railway. A list of approved contractors may also be maintained by the Railway. The said list be revised periodically once in a year or so by giving wide publicity through advertisements etc. For registration, the contractor including a contractor who is already on the approved list shall apply to the concerned General Manager (Construction) / Chief Administrative Officer (Construction) / Principal Chief Engineer / Principal Chief Signal & Telecommunication Engineer / Principal Chief Mechanical Engineer / Principal Chief Electrical Engineer/ Divisional Railway Manager, furnishing particulars regarding:
- (a) his position as an independent contractor specifying engineering organization available with details of partners / staff / engineers employed with qualifications and experience;
 - (b) his capacity to undertake and carry out works satisfactorily as vouched for by a responsible official or firm; details about the transport equipment, construction tools and plants etc. required for the work, maintained by him;
 - (c) his previous experience of works similar to that to be contracted for, in proof of which original certificates or testimonials may be called for and their genuineness verified, if needs be, by reference to the signatories thereof;
 - (d) his knowledge from actual personal investigation of the resources of the area/zone or zones in which he offers to work;
 - (e) his ability to supervise the work personally or by competent and duly authorized agent;
 - (f) his financial position;
- 2.2 An applicant shall clearly state the categories of works and the area/zone/division(s)/district(s) in which he desires registration in the list of approved contractors.
- 2.3 The selection of contractors for enlistment in the approved list would be done by a committee for different value of slabs as notified by Railway.
- 2.4 An annual fee as prescribed by the Railway from time to time would be charged from such approved contractors to cover the cost of sending notices to them and clerkage for tenders etc. Notices shall be sent to them on registered e-mail address and registered postal address.

TENDERS FOR WORKS

3. **Tender Form:** Tender Forms shall embody the contents of the contract documents either directly or by reference and shall be as per specimen form, Annexure-I. E-Tender Forms shall be issued free of cost to all tenderers.
4. **Omissions and Discrepancies:** Should a tenderer find discrepancies in or omissions from the drawings or any of the Tender Forms or should he be in doubt as to their meaning, he should at once notify the authority inviting tenders. The tender inviting authority may, if deemed necessary, clarify the same to all tenderers. It shall be understood that every endeavor has been made to avoid any error which can materially affect the basis of tender and successful tenderer shall take upon himself and provide for the risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.
5. **Bid Security:**
- (1) (a) The tenderer shall be required to submit the Bid Security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender. The Bid Security shall be as under:

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

Note:

- (i) The Bid Security shall be rounded off to the nearest ₹100. This Bid Security shall be applicable for all modes of tendering.
 - (ii) Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of Bid Security detailed above.
 - (iii) Labour Cooperative Societies shall submit only 50% of above Bid Security detailed above.
- (b) It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited to the Railway.
- (c) If his tender is accepted, this Bid Security mentioned in sub para (a) above will be retained as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.
- (2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as mentioned in tender documents. The Bank Guarantee bond shall be as per Annexure - VIA and shall be valid for a period of 90 days beyond the bid validity period.
- (3) **In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:**
- i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
 - ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document before closing date for submission of bids (**i.e. excluding the last date of submission of bids**).
 - iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non-submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.
 - iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.
 - v. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected.
 - vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification **"Bid for the ***** Project"** and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right-hand top corner of the envelope.
 - vii. The envelope shall be addressed to the officer and address as mentioned in the tender document.

- viii. If the envelope is not sealed and marked as instructed above, the Railway assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.

6. Care in Submission of Tenders:

- (a)(i) Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates he enters in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the Standard General Conditions of Contract for the completion of works to the entire satisfaction of the Engineer.
- (a)(ii) Tenderers will examine the various provisions of The Central Goods and Services Tax Act, 2017(CGST)/ Integrated Goods and Services Tax Act, 2017(IGST)/ Union Territory Goods and Services Tax Act, 2017(UTGST)/ respective state's State Goods and Services Tax Act (SGST) also, as notified by Central/State Govt.& as amended from time to time and applicable taxes before bidding. Tenderers will ensure that full benefit of Input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.
- (a)(iii) The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to railway immediately after the award of contract, without which no payment shall be released to the Contractor. The Contractor shall be responsible for deposition of applicable GST to the concerned authority.
- (a)(iv) In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, the railway shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned authority.
- (a)(v) Contractor shall be liable to pay/refund the amount collected as GST to the Indian Railways along with interest and penalties, if any imposed by the authorities, in case GST input tax credit of Indian Railways is denied/rejected by the tax authorities due to reasons mentioned below but not limited to:
- Wrong/incorrect invoices issued by Contractor;
 - No-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.

- (b) When work is tendered for by a firm or company, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.
- (c) The Railway will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however, recognize such power of attorney and changes after obtaining proper legal advice,

the cost of which will be chargeable to the Contractor.

- 6.1** The tenderers shall submit a copy of certificate stating that all their statements/documents submitted along with bid are true and factual. Standard format of certificate to be submitted by the bidder is enclosed as **Annexure-V**. In addition to Annexure-V, in case of other than Company/Proprietary firm, Annexure-V(A) shall also be submitted by each member of a Partnership Firm / Joint Venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc., as the case may be. Non submission of above certificate(s) by the bidder shall result in **summarily** rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested/digitally signed by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document.

CONSIDERATION OF TENDERS

- 7. Right of Railway to Deal with Tenders:** The Railway reserves the right of not to invite tenders for any of Railway work or works or to invite open or limited tenders and when tenders are called to accept a tender in whole or in part or reject any tender or all tenders without assigning reasons for any such action. 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.
- 7A. Two Packets System of Tendering:** With a view to assess the tenders technically without being influenced by the financial bids, 'Two Packets System of tendering' shall be adopted wherein tender documents provide for the same.
- 7B. Pre-Bid Conference:** Intenders having advertised value more than ₹ 50 Crore or as mentioned in the tender document, Railway shall conduct Pre-Bid Conference(s) with the prospective bidders.
- 7C. Make in India Policy:** 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.
- 7D. Permission to Bid for a bidder from a country which shares Land boundary with India:** Any bidder from the countries sharing a land border with India will be eligible to bid in any procurement of works (including turnkey projects) only if the bidder is registered with the Competent Authority. The Competent Authority for registration will be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT), Government of India. For interpretation of this Para, Department of Expenditure, Ministry of Finance, Government of India letter F.No.6/18/2019-PPD dated 23/07/2020 shall be referred.
- 7E. Clarification of Bids:** To assist in the examination, evaluation and comparison and prequalification 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.
- 8. Execution of Contract Document:** The Tenderer whose tender is accepted shall be required to appear in person at the office of General Manager/General Manager (Construction), Chief Administrative Officer (Construction), Divisional Railway Manager or concerned Engineer, as the case may be, or if tenderer is a firm or corporation, a duly authorized representative shall appear (there would be no need for appear in person if agreement is signed digitally) and execute the contract agreement within seven days of notice from Railways that the Contract Agreement is ready. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. The Contract Agreement shall be entered into by Railway only after submission of valid Performance Guarantee by the Contractor. In such cases the Railway may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the Railway shall be entitled to forfeit the full amount of the Bid Security and other dues

payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.

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

- (a) For Zone Contracts, awarded on the basis of the percentage above or below the applicable chapter(s) of Standard Schedule of Rates (SSOR) for the whole or part of financial year, the contract agreement required to be executed by the tenderer whose tender is accepted shall be as per specimen form, Annexure - II. During the currency of the Zone Contract, work orders as per specimen form Annexure - III, for works not exceeding ₹ 5,00,000 each, shall be issued by the Divisional Railway Manager / Executive Engineer under the agreement for Zone Contract.
- (b) For contracts for specific works, the contract document required to be executed by the tenderer whose tender is accepted shall be an agreement as per specimen form Annexure - IV.

WESTERN RAILWAY**TENDER FORM (First Sheet)**

Tender No. : BRC-EL-P-06-2482-26-27

Name of work : Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station.

To,

The President of India,
Acting through the Divisional Railway Manager (Electrical)
Western Railway, Vadodara.

1. I I/We M/s have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of **60** days from the date fixed for closing tender and in default thereof, I/We will be liable for forfeiture of my/our "Earnest Money". I/We offer to do the work for **Vadodara Division, Western Railway**, at the rates quoted in the attached schedule and hereby bind myself/ourselves to complete the work in all respects within **six (06) 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 **₹ 2,25,400.00** has already been deposited online/submitted as Bank Guarantee bond. Full value of the Earnest Money shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if –
 - (a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
 - (b) I/We do not execute the contract documents within seven days after receipt of notice issued by the Railway that such documents are ready; and
 - (c) I/We do not commence the work within fifteen days after receipt of orders to that effect.
4. I/We am/are a Startup firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid up to (Copy enclosed) and hence exempted from submission of Bid Security.
5. We are a Labour Cooperative Society and our Registration No. is withand hence required to deposit only 50% of Bid Security.
6. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Tenderer(s) – _____

Date – _____

Address of the Tenderer(s) – _____

TENDER FORM (Second Sheet)

1. **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) Bills of quantities (enclosed)
 - (d) 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 Sr. Divisional Electrical Engineer (Power) Vadodara or obtained from the office on payment of prescribed charges.
 - (e) Standard Schedule of Rates (SSOR) as amended/corrected up to latest correction slips, copies of which can be seen in the office of Sr. Divisional Electrical Engineer (Power) Vadodara or obtained from the office on payment of prescribed charges.
 - (f) All general and detailed drawings pertaining to this work which 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 Sr. Divisional Electrical Engineer (Power) Vadodara 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 rates as a percentage above or below the Standard Schedule of Rates (SSOR) of Western Railway as applicable to Vadodara Division except where he/they are required to quote item rates and must tender for all the items shown in the Schedule of approximate quantities attached. The quantities shown in the attached Schedule 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 Schedule. 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 **six (06) months** from the date of issue of acceptance letter.
6. **Bid Security:**

Subject to exemptions provided under para 5(1) (a) of Part-1 (ITT) of this document, the tender must be accompanied by a Bid Security as mentioned in tender documents, failing which the tender shall be summarily rejected.

 - (a) The Tenderer(s) shall keep the offer open for a minimum period of 60 days (in case of two packet system of tendering 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 Sr. Divisional Electrical Engineer (Power) Western Railway, Vadodara. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposited or Bank guarantee bond submitted as Bid Security for the due performance

of the above stipulation, shall be forfeited to the Railway.

- (b) If his tender is accepted,
- (i) the 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 fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.
 - (ii) the Bid Security mentioned in sub para (a) above submitted as Bank guarantee bond, will be encashed as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract.

The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation to the Bid Security that may happen thereto while in their possession, nor be liable to pay interest thereon.

- (c) In case Contractor submits the Term Deposit Receipt/Bank Guarantee Bond towards either the Full Security Deposit or Part Security Deposit equal to or more than Bid Security, the Railway shall return the 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.
- 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 the partner(s) of a partnership firm expire(s) after the submission of its tender or after the acceptance of its tender, the Railway shall deem such tender as cancelled/contract as terminated under clause 61 of the Standard General Conditions of Contract, unless the firm retains its character as per partnership agreement. If a sole proprietor expires after the submission of tender or after the acceptance of tender, the Railway shall deem such tender as cancelled / contract as terminated under clause 61 of the Standard General Conditions of Contract.

10. Eligibility Criteria:

10.1 Technical Eligibility Criteria:

- (a) The tenderer must have successfully completed or substantially completed any of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:
- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or
 - (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or
 - (iii) One similar work costing not less than the amount equal to 60% of advertised value of the tender.
- (b) (1) In case of tenders for composite works (e.g. works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges – substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:
- (i) Three similar works each costing not less than the amount equal to 30% of advertised value of

each component of tender, or

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

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

- (b)(2) In such cases, what constitutes a component in a composite work shall be clearly pre-defined with estimated tender cost of it, as part of the tender documents without any ambiguity.
- (b) (3) To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in clause 7 of the Standard General Conditions of Contractor through subcontractor fulfilling the requirements as per clause 7 of the Standard General Conditions of Contract or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Chief Engineer in writing.

However, if required in tender documents by way of Special Conditions, a formal agreement duly notarized, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfillment 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 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.

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

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

Note for Item 10.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Government Organization, work experience certificate issued by Public listed company having average annual turnover of ₹ 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.

NOTE – Similar Nature of Work in this case is “Wiring/ Re-wiring in buildings with associated electrical works like control gear and protection arrangements in residential buildings or service buildings or railway stations/yards or colony/highway lightings. OR Lighting arrangement in buildings, circulating area, yard, street etc. with associated electrical works. OR Wiring/Rewiring, Lighting arrangement in buildings with associated electrical works.”

- 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 balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.

The tenderers shall submit requisite information as per **Annexure-VI-B**, 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 bid capacity formula detailed as Annexure-VI.

- 10.4 No Technical and Financial credentials are required for tenders having value up to ₹ 50.0 Lakh.**

- 10.5** 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 10.5 - Eligibility Criteria]:

1. *Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.*
2. *In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfillment 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 fulfillment of credentials.*
4. *In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.*

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.

5. *If a bidder has successfully completed a work as subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organization or public listed company as defined in Note for Item 10.1 Para 10 of the Tender Form (Second Sheet), the same shall be considered for the purpose of fulfillment of credentials.*
6. *In case a work is considered similar in nature for fulfillment of technical credentials, the overall cost including PVC amount (if paid) of that completed work or substantially completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.*
7. *In case of newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of $0.3 \times 0.2 \times \text{value of the work done in the previous entity}$. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.*
8. *In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm (e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of ₹ 10 Crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as ₹ 6 Crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.*
9. *In case of existing partnership firm if any other partner(s) joins the firm without any modification in the name and PAN/TAN number 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 copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.*
10. *Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.*
11. *In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.*
12. *If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.*
13. *In a partnership firm "AB" of A&B partners, in case A also works as propriety firm "P" or partner in some other partnership firm "AX", credentials of A in propriety firm "P" or in other partnership firm "AX" earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.*
14. *In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.*

15. *In case company A is merged with company B, then company B would get the credentials of company A also.]*

11. Tenderer's 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 Western Railway shall submit along with his / their tender –

- (i) Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.
- (ii) Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past.
- (iii) The list of personnel/organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- (iv) A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Annexure-V. In addition to Annexure-V. in case of other than Company/Proprietary firm, Annexure-V(A) shall also be submitted by each member of a Partnership Firm / Joint Venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc., as the case may be. Non submission of 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 Bid Security besides banning of business for a period of up to two years.
- (vi)(b) In case of any information submitted by tenderer is found to be false forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the railway shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of up to two years.

12. Non-compliance with any of the conditions set forth therein 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 **Divisional Railway Manager (Electrical) Vadodara, Western Railway** for carrying out the work according to Standard General Conditions of Contract, Special Conditions/Specifications annexed to the tender and Standard Specifications (Works and Materials) of Railway as amended/corrected up to latest correction slips, mentioned in tender form (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 Firm) or on behalf of a Partnership Firm/Company/Joint Venture (JV)/Registered Society/Registered Trust/Hindu Undivided Family (HUF)/Limited Liability Partnership LLP etc. The tenderer(s) shall enclose the attested copies of the constitution of their concern, and copy of PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the firm, company, association, trust or society, as the case may be.
- (ii) Following documents shall be submitted by the tenderer –
 - (a) **Sole Proprietorship Firm:**
 - (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 Firm:**
 - (i) All documents as mentioned in Para 18 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 Act, 2013:**
 - (i) The copies of **MOA (Memorandum of Association)/AOA (Articles of Association)** of the company.
 - (ii) A copy of Certificate of Incorporation.
 - (iii) A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
 - (iv) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.
 - (f) **LLP (Limited Liability Partnership) Firm:**
 - (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 Firm.
 - (iv) An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
 - (v) All other documents in terms of Para 10 of the Tender Form (Second Sheet).
 - (g) **Registered Society and Registered Trust:**
 - (i) A copy of the 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 tender is being submitted on behalf of a Sole Proprietorship firm / Partnership firm/Joint Venture/Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender.
- (iv) After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm/Partnership Firm/Registered Company/Registered Trust/ Registered Society/HUF 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 firm made subsequent to the submission of tender. Railway 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 firm/registered society/registered trust/HUF/LLP etc. if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement except in case where such specific person is authorized for above purposes through a provision made in the partnership deed/ Memorandum of Understanding/Article of Association /Board Resolution, failing which tender shall be summarily rejected.

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

AND

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

THEN

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

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

Note: - If information as required as per 16 (a), (b), (c) above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of Standard General Condition of contract.

JOINT VENTURE (JV) IN WORKS TENDERS

- 17. 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 JV with foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.
 - 17.3 A member of 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 member or any person authorized by JV through Power of Attorney to submit tender.
 - 17.5 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 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. 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 allowed to be altered during the currency of contract except when modification become 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 Firm) 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, contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit the full amount of the 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 firm(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 firm, 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 firm and create liability against the firm.
- (iv) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders/contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment/wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

17.14.2 In case one or more members is/are Proprietary Firm 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 firm, 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 firm, permitting the Firm to enter into a JV agreement
- (iv) A copy of Authorization /copy of Power of Attorney issued by the LLP firm (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 firm/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.

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 and Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfillment 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 value of two or more component of work is 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 partner of 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 requirement of "Bid Capacity" requirement mentioned at Para 10.3 above. 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 Firms in works tenders:

- 18.1 The Partnership Firms participating in the tender should be legally valid under the provisions of the Indian Partnership Act.
- 18.2 The partnership firm should have been in existence or should have been formed prior to submission of tender. Partnership firm 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 firm. The partnership firm 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 firm shall be called partners.
- 18.4 Once the tender has been submitted, the constitution of the firm 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 firm in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the firm, 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 firm 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 Bid Security shall be forfeited.

If any Partner/s withdraws from the firm after submission of the tender and before the award of the contract, the offer shall be rejected and Bid Security of the tenderer will be forfeited. If any new partner joins the firm 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 firm. 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 firm, 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 firm shall not be permitted to participate either in his individual capacity or as a partner of any other firm in the same tender.

- 18.6 The tender form shall be submitted only in the name of partnership firm. The Bid Security shall be submitted by partnership firm. The 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 firm, all the guarantees like Performance Guarantee, Guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership firm and no splitting of guarantees among the partners shall be acceptable.
- 18.8 On issue of Letter of Acceptance (LOA), contract agreement with partnership firm shall be executed in the name of the firm only and not in the name of any individual partner.
- 18.9 In case the Letter of Acceptance (LOA) is issued to a partnership firm, 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 firm 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 firm agreement:**
The partnership deed/partnership firm 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 firm 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 firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.
 - (d) No partner of the firm 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 firm. The following documents shall be submitted by the partnership firm, with the tender:
- (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
 - (ii) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the firm.
 - (iii) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Government of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.
 - (iv) All other documents in terms of Para 10 of the Tender Form (Second Sheet) above.
- 18.11 **Evaluation of eligibility of a partnership firm:**
Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfillment of the eligibility criteria laid down in Para 10 of the Tender Form (Second Sheet) above.
- 19.0 Advances to Contractor:**
If specifically provided in Tender Documents of tender having advertised value more than ₹ 50 Crores, Railway shall make payment, as an Interest-bearing advances, as per Contractor's request.

These advances shall carry a simple interest _____ as indicated in the Tender documents. 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.

Signature of Tenderer(s)

(Signature)

(Designation)

_____ Railway

Date _____

Date _____

WESTERN RAILWAY**CONTRACT AGREEMENT OF WORKS****CONTRACT AGREEMENT No. _____ DATED _____**

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

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

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

Contractor _____ (Signature)

Railway: Designation _____

Address _____

(For President of India)

Date _____

Date _____

Signature of Witnesses (to Signature of Contractor) with address

Witnesses:

ANNEXURE – V

Reference - Para 6.1 of ITT

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

I(Name and designation) ** appointed as the attorney/authorized signatory of the tenderer (including its constituents), M/s (hereinafter called the tenderer) for the purpose of the Tender documents for the work of **“Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station”** as per the **Tender No. BRC-EL-P-06-2482-26-27 of Western Railway**, do hereby solemnly affirm and state on the 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 conditions of the tender and have signed all the pages in confirmation thereof.
3. I/We hereby declare that I/we have downloaded the tender documents from Indian Railway web site www.ireps.gov.in. I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. 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 requirement.
5. **I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.**
6. **I/We 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 firm/LLP/JV/Society/Trust.
8. I/We understand that if the contents of the certificate submitted by me/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 up to two years. 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 me/us are found to be false/forged at any time after the award of the contract, it will lead to termination of 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 up to two years.
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 fulfill all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed).

SEAL AND SIGNATURE OF THE TENDERER

Place - _____

Date - _____

**** The contents in italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer.**

ANNEXURE – V(A)

Reference - Para 6.1 of ITT

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

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

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

Place: _____

Dated: _____

ANNEXURE – VI

Reference - Para 10.3 & 17.15.3 of Tender Form (Second Sheet) of Annexure I of ITT

TENDERER'S CREDENTIALS (BID CAPACITY)**WESTERN RAILWAY**

For tenders having advertised value more than ₹ 20 Crore wherein eligibility criteria include 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 has been invited.

B = Existing commitments and balance amount of ongoing works with the 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 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.

- (c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned bid capacity in the tender under consideration.
- (d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".
- (e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected **summarily**.
- (f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

ANNEXURE – VIA

Para 5 of the Instructions to Tenderers

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 _____,

Western Railway,

Beneficiary: _____ Railway

Date: _____

Bank Guarantee Bond No.:

Date: _____

In consideration of the President of India acting through **Senior Divisional Electrical Engineer (Power), Western Railway, Vadodara Division** (hereinafter called "The Railway") having invited the bid for _____ through Notice Inviting Tender (NIT) No. _____, We have been informed that . . . **[Insert name of the Bidder]** (hereinafter called "**the Bidder**") intends to submit its bid (hereinafter called "**the Bid**").

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

AND

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

1. KNOW ALL MEN that by these present that I/We the undersigned **[Insert name(s) of authorized representatives of the Bank]**, being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Railway full amount in the sum of **[Insert required Value of Bid Security]** as above stated.
2. The Bank undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
3. The Bank shall pay the amount as demanded immediately on presentation of the demand by Railway without any reference to the Bidder and without the Railway being required to show grounds or give reasons for its demand of the amount so demanded.
4. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
5. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the Railway and the Bidder, will in any way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by Railway at any time.

6. This guarantee will remain valid and effective from..... *[insert date of issue]* till *[insert date, which should be minimum 90 days beyond the expiry of validity of Bid]*. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
7. The Bank Guarantee is unconditional and irrevocable.
8. The expressions Bank and Railway herein before used shall include their respective successors and assigns.
9. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the Railway. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.
10. The Bank hereby confirms that it is on the SFMS (Structured Financial Messaging System) and shall invariably send the advice of this Bank Guarantee to the following bank details –

IFSC CODE	SBIN00RAIL
IFSC TYPE	BRANCH
BANK NAME	STATE BANK OF INDIA
BRANCH NAME	RAIL
CITY NAME	NAVI MUMBAI
ADDRESS	SECTOR-11, CBD BELAPUR, NAVI MUMBAI
DISTRICT	NAVI MUMBAI
STATE	MAHARASHTRA
BG ENABLED	YES

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

Date _____

Place _____

_____ Bank's Seal and authorized signature (s)

[Name in Block letters] _____

[Designation with Code No.] _____

[P/Attorney] No.

Witness:

1. Signature, Name, Address and Seal

Bank's Seal

2. Signature, Name, Address and 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 – VIB

Reference -Para 10.2 & 17.15.2 of Tender Form (Second Sheet) of Annexure I of ITT

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	Indian National Rupees Equivalent
Average Annual Contractual Turnover for last 3 years			

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

SEAL AND SIGNATURE OF THE BIDDER

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

(Signature of Chartered Accountant)

Name of CA: _____

Registration No: _____

(Seal)

PART - II

STANDARD GENERAL CONDITIONS OF CONTRACT

1.(1) Definitions: In these Standard General Conditions of Contract, the following terms shall have the meaning assigned hereunder except where the context otherwise requires:

- (a) "Railway" shall mean the President of the Republic of India or the Administrative Officers of the Railway or of the Successor Railway authorized to deal with any matters which these presents are concerned on his behalf.
- (b) "General Manager" shall mean the Officer in-charge of the General Superintendence and Control of the Railway and shall also include Addl. General Manager, the General Manager (Construction) and shall mean and include their successors, of the successor Railway.
- (c) "Chief Engineer" shall mean the Officer in-charge of the Engineering Department of Railway and shall also include Chief Engineer (Construction), Chief Signal and Telecommunication Engineer, Chief Signal and Telecommunication Engineer (Construction), Chief Electrical Engineer, Chief Electrical Engineer (Construction), Chief Mechanical Engineer and shall mean & include their successors, of the Successor Railway.
- (d) "Divisional Railway Manager" shall mean the Officer in-charge of a Division of the Railway and shall mean and include the Divisional Railway Manager of the Successor Railway.
- (e) "Engineer" shall mean the Divisional Engineer or the Executive Engineer, Divisional Signal and Telecom Engineer, Divisional Electrical Engineer, Divisional Mechanical Engineer in executive charge of the works and shall include the superior officers of Open Line and Construction organizations on the Railway of the Engineering, Signal and Telecom, Electrical and Mechanical Departments, i.e. the Senior Divisional Engineer/Deputy Chief Engineer/Chief Engineer, Senior Divisional Signal and Telecom Engineer / Dy. Chief Signal and Telecom Engineer, Senior Divisional Electrical Engineer / Deputy Chief Electrical Engineer, Senior Divisional Mechanical Engineer and shall mean and include the Engineers of the Successors Railway.
- (f) "Engineer's Representative" shall mean the Assistant Engineer, Assistant Signal and Telecommunication Engineer and Assistant Electrical Engineer, Assistant Mechanical Engineer in direct charge of the works and shall include any Sr. Section/Junior Engineer of Civil Engineering/ Signal and Telecommunication Engineering/Mechanical Engineering/Electrical Engineering Departments appointed by the Railway and shall mean and include the Engineer's Representative of the Successor Railway.
- (g) "Contractor" shall mean the Person/Firm/LLP/Trust/Co-operative Society or Company whether incorporated or not who enters into the contract with the Railway and shall include their executors, administrators, successors and permitted assigns.
- (h) "Contract" shall mean and include the Agreement, the Work Order, the accepted Bill(s) of Quantities or Chapter(s) of Standard Schedule of Rates (SSOR) of the Railway modified by the tender percentage for items of works quantified, or not quantified, the Standard General Conditions of Contract, the Special Conditions of Contracts, if any; the Drawing, the Specifications, the Special Specifications, if any and Tender Forms, if any.
- (i) "Works" shall mean the works to be executed in accordance with the contract.
- (j) "Specifications" shall mean the Standard Specifications for Materials and Works of Railway as specified by Railway under the authority of the Chief Engineer or as amplified, added to or superseded by Special Specifications, if any.
- (k) "Standard Schedule of Rates (SSOR)" shall mean the Schedule of Rates adopted by the Railway, which includes:
 - (i) "Unified Standard Schedule of Rates of the Railway (USSOR)" i.e. the Standard Schedule of Rates of the Railway issued under the authority of the Chief Engineer from

time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents;

- (ii) "Delhi Schedule Of Rates (DSR)" i.e. the Standard Schedule of Rates published by Director General/ Central Public Works Department, Government of India, New Delhi, as adopted and modified by the Railway under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.
 - (l) "Drawing" shall mean the maps, drawings, plans and tracings or prints there of annexed to the contract and shall include any modifications of such drawings and further drawings as may be issued by the Engineer from time to time.
 - (m) "Constructional Plant" shall mean all appliances or things of whatsoever nature required for the execution, completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work.
 - (n) "Temporary Works" shall mean all temporary works of every kind required for the execution completion and/or maintenance of the works.
 - (o) "Site" shall mean the lands and other places on, under, in or through which the works are to be carried out and any other lands or places provided by the Railway for the purpose of the contract.
 - (p) "Period of Maintenance" shall mean the specified period of maintenance from the date of completion of the works, as certified by the Engineer.
 - (q) 'Contractor's authorized Engineer' shall mean a graduate Engineer or equivalent having more than three years' experience in the relevant field of construction work involved in the contract, duly approved by Engineer.
 - (r) Date of inviting tender shall be the date of publishing tender notice on IREPS website if tender is published on website or the date of publication in newspaper in case tender is not published on website.
 - (s) "Bill of Quantities" shall mean Schedule of Item(s) included in the tender document along with respective quantities and rates, accepted by the Railway.
- 1.(2) Singular and Plural:** Words importing the singular number shall also include the plural and vice versa where the context requires.
- 1.(3) Headings and Marginal Headings:** The headings and marginal headings in these Standard General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof the contract.

GENERAL OBLIGATIONS

- 2.(1) Execution Co-Relation and Intent of Contract Documents:** The contract documents shall be signed in triplicate by the Railway and the Contractor. The contract documents are complementary and what is called for by anyone shall be as binding as if called for by all, the intention of the documents is to include all labour and materials, equipment and transportation necessary for proper execution of work. Materials or works not covered by or properly inferable from any heading or class of the specifications shall not be supplied by the Railway to the Contractors unless distinctly specified in the contract documents. Materials or works described in words which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.
- 2.(2)** If a work is transferred from the jurisdiction of one Railway to another Railway or to a Project authority or vice versa while contract is in subsistence, the contract shall be binding on the Contractor and the Successor Railway/Project in the same manner and take effect in all respects as if the Contractor and the Successor Railway/Project were parties thereto from the inception and the

corresponding officer or the Competent Authority in the Successor Railway/Project will exercise the same powers and enjoy the same authority as conferred to the Predecessor Railway/Project under the original contract/agreement entered into.

- 2.(3) If for administrative or other reasons the contract is transferred to the Successor Railway, the contract shall, notwithstanding any things contained herein contrary there to, be binding on the Contractor and the Successor Railway in the same manner and take effect in all respects as if the Contractor and the Successor Railway had been parties thereto from the date of this contract.

- 3.(1) **Law Governing the Contract:** The contract shall be governed by the law for the time being in force in the Republic of India.

- 3.(2) **Compliance to Regulations and Bye-Laws:** The Contractor shall conform to the provision of any statute relating to the works and regulations and bye-laws of any local authority and of any water and lighting companies or undertakings, with whose system the work is proposed to be connected and shall before making any variation from the drawings or the specifications that may be necessitated by so confirming give to the Engineer notice specifying the variation proposed to be made and the reason for making the variation and shall not carry out such variation until he has received instructions from the Engineer in respect thereof. The Contractor shall be bound to give all notices required by statute, regulations or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

- 3.(3) **Environmental and Forest clearances:**

The Railway represents and warrants that the environmental and forest clearances pertaining to the work commensurate with the progress of work/agreed programme will be obtained by Engineer. In the event of any delay in securing respective clearances leading to delay in execution of work, the Contractor shall be entitled to Extension of Time for the period of such delay in accordance with the provisions of Clause-17A (ii).

4. **Communications to be in Writing:** All notices, communications, reference and complaints made by the Railway or the Engineer or the Engineer's Representative or the Contractor inter-se concerning the works shall be in writing or e-mail on registered e-mail IDs i.e. the e mail id provided for correspondence in the contract agreement, otherwise email id registered with IREPS and no notice, communication, reference or complaint not in writing or through e-mail, shall be recognized.
5. **Service of Notices on Contractors:** The Contractor shall furnish to the Engineer the name, designation and address of his authorized agent and all complaints, notices, communications and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorized agent or left at or posted to the address so given and shall be deemed to have been so given in the case of posting on day on which they would have reached such address in the ordinary course of post/ e-mail or on the day on which they were so delivered or left. In the case of contract by partners, any change in the constitution of the firm shall be forthwith notified by the Contractor to the Engineer.
6. **Occupation and Use of Land:** No land belonging to or in the possession of the Railway shall be occupied by the Contractor without the permission of the Railway. The Contractor shall not use, or allow to be used the site for any purposes other than that of executing the works. Whenever non-railway bodies/persons are permitted to use railway premises with competent authority's approval, conservancy charges as applicable from time to time may be levied.
7. **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 subcontractor shall have successfully completed at least one work similar to work proposed for subcontract in last 5 years, ending date of submission of proposal by Contractor to Railway, costing not less than 35% value of work to be subletted, through a works contract. For fulfillment of above, Work Experience Certificate issued by a Govt. Department/Organization shall be considered. Further, Work Experience Certificate issued by a Public listed company shall be considered provided the company is having average annual turnover of ₹ 500 Crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, registered at least 5 years back from the date of submission of proposal by Contractor to Railway and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates.

Note: for subletting of work costing up to ₹ 50 Lakh no previous work experience shall be asked for by the Railway.

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

- (iii) There is no banning of business with the sub-contractor in force over IR.
- (b) The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be permitted without a formal agreement between Contractor and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractor and the terms of payment in clear & unambiguous manner.
- (c) On receipt of approval from Chief Engineer, Contractor shall enter into a formal agreement legally enforceable in Court of Law with subcontractor and submit a copy of the same to the Engineer.
- (d) The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.
- (e) Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of Railway, with prior intimation to Chief Engineer.
- (f) The Contractor shall indemnify railway against any claim of subcontractor.
- (g) The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavor 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 subletted work for the fulfilment of eligibility for further subletting of work to the subcontractor in the same contract. When the contractor's work is complete and contractor is entitled for the issuance of work experience certificate, the subcontractor shall be issued one Work Experience Certificate for the total scope of work executed by the subcontractor in the contract.

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

- 8. Assistance by Railway for the Stores to be obtained by the Contractor:** Owing to difficulty in obtaining certain materials (including Tools & Plant) in the market, the Railway may have agreed without any liability therefore to endeavor to obtain or assist the Contractor in obtaining the required quantities of such materials as may be specified in the Tender. In the event of delay or failure in obtaining the required quantities of the aforesaid material, the Contractor shall not be deemed absolved of his own responsibility and shall keep in touch with the day to day position regarding their availability and accordingly adjust progress of works including employment of labour and the Railway shall not in any way be liable for the supply of materials or for the non-supply thereof for any reasons whatsoever nor for any loss or damage arising in consequence of such delay or non-supply.
- 9. Railway Passes:** No free railway passes shall be issued by the Railway to the Contractor or any of his employee/worker.
- 10. Carriage of Materials:** No forwarding orders shall be issued by the Railway for the conveyance of Contractor's materials, tools and plant by train which may be required for use in the works and the Contractor shall pay full freight charges at public tariff rates thereof.
- 11. Use of Ballast Trains:** The Railway may agree to allow the Contractor use of the ballast or material trains under such conditions as shall be specially prescribed, provided that the Contractor shall pay for the use thereof charges calculated at public tariff rates on the marked carrying capacity of each vehicle subject to specified minimum charge per day or part of day and provided further that the Contractor shall indemnify the Railway against any claims or damages arising out of the use or misuse thereof and against any liabilities under the Workmen's Compensation Act, 1923 or any statutory amendments thereto.
- 12. Representation on Works:** The Contractor shall, when he is not personally present on the site of the works place, keep a responsible agent at the works during working hours who shall on receiving reasonable notice, present himself to the Engineer and orders given by the Engineer or the Engineer's representative to the agent shall be deemed to have the same force as if they had been given to the Contractor. Before absenting himself, the Contractor shall furnish the name and address of his agent for the purpose of this clause and failure on the part of the Contractor to comply with this provision at any time will entitle the Railway to rescind the contract under Clause 62 of these Conditions.
- 13. Relics and Treasures:** All gold, silver, oil, other minerals of any description, all precious stones, coins, treasures relics antiquities and other similar things which shall be found in or upon the site shall be the property of the Railway and the Contractor shall duly preserve the same to the

satisfaction of the Railway and shall from time to time deliver the same to such person or persons as the Railway may appoint to receive the same.

- 14. Excavated Material:** The Contractor shall not sell or otherwise dispose of or remove except for the purpose of this contract, the sand, stone, clay ballast, earth, rock or other substances or materials which may be obtained from any excavation made for the purpose of the works or any building or produced upon the site at the time of delivery of the possession thereof but all the substances, materials, buildings and produce shall be the property of the Railway provided that the Contractor may, with the permission of the Engineer, use the same for the purpose of the works either free of cost or pay the cost of the same at such rates as may be determined by the Engineer.
- 15. Indemnity by Contractors:** The Contractor shall indemnify and save harmless the Railway from and against all actions, suit, proceedings, losses, costs, damages, charges, 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 the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.
- 16.(1) Security Deposit:** The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the Railways as part of security for the due and faithful fulfillment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Depositor the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to the Contractor.

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

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

Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than ₹ 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 ₹ 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

- 16.(2) (i) Refund of Security Deposit:** Security Deposit mentioned in sub clause (1) above shall be returned to the Contractor after the following:
- (a) Final Payment of the Contract as per clause 51.(1) **and**
 - (b) Execution of Final Supplementary Agreement or Certification by Engineer that Railway has No Claim on Contractor **and**
 - (c) Maintenance Certificate Issued, on expiry of the maintenance period as per clause 50.(1), in case applicable.

- 16.(2) (ii) Forfeiture of Security Deposit:** Whenever the contract is rescinded as a whole under clause 62 (1) of these conditions, the Security Deposit already with railways under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of these conditions, the Security Deposit shall not be forfeited
- 16.(3)** No interest shall be payable upon the Bid Security and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16. (4)(b) of this clause will be payable with interest accrued thereon.

16.(4) Performance Guarantee:

The procedure for obtaining Performance Guarantee is outlined below:

- (a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty-one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty-one) days and 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 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. In case contract is terminated railway shall be entitled to forfeit Bid Security and other dues payable to the contractor against that particular contract, subject to maximum of PG amount. In case a tenderer has not submitted Bid Security on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

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

- (b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the contract value –
- (i) A deposit of cash;
 - (ii) Irrevocable Bank Guarantee;
 - (iii) Insurance Surety Bond as per Annexure-XVII.

Note:

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

- (x) Ten years Defence Deposits;
- (xi) National Defence Bonds and
- (xii) Unit Trust Certificates at 5% below market value or at the face value whichever is less. Also, FDR in favour of FA&CAO (free from any encumbrance) may be accepted.
- (c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value.
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.
- (g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
 - (i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
 - (ii) Failure by the Contractor to pay President of India any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.
 - (iii) The Contract being determined or rescinded under clause 62 of these conditions.
- 17. Force Majeure Clause:** If at any time, during the 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, acts of public enemy, civil commotion, sabotage, serious loss or damage by fire, explosions, epidemics/pandemics, strikes, lockouts or acts of God (hereinafter, referred to 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 the 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.
- 17.A Extension of Time in Contracts:** Subject to any requirement in the contract as to completion of any portion or portions of the works before completion of the whole, the Contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:
 - (i) **Extension due to Modification:** If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting

such extension of the date as may be considered necessary as soon as the cause thereof shall arise.

- (ii) **Extension for Delay not due to Railway or Contractor:** If in the opinion of the Engineer, the progress of work has any time been delayed by any act or neglect of Railway's employees or by other Contractor employed by the Railway under Sub-Clause (4) of Clause 20 of these Conditions or in executing the work not forming part of the contract but on which Contractor's performance necessarily depends or by reason of proceeding taken or threatened by or dispute with adjoining or to neighboring owners or public authority arising otherwise through the Contractor's own default etc. or by the delay authorized by the Engineer pending arbitration or in consequences of the Contractor not having received in due time necessary instructions from the Railway for which he shall have specially applied in writing to the Engineer or his authorized representative then upon happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer within 15 days of such happening, but shall nevertheless make constantly his best endeavours to bring down or make good the delay and shall do all that may be reasonably required of him to the satisfaction of the Engineer to proceed with the works. The Contractor may also indicate the period for which the work is likely to be delayed and shall be bound to ask for necessary extension of time.
- (iii) **Extension for Delay due to Railways:** In the event of any failure or delay by the Railway to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the Railway due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the Contractor to damages or compensation therefore, but in any such case, the Railway 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 so 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.

- 17.B Extension of Time with Liquidated Damage (LD) for delay due to Contractor –:** The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the Contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in Clause 17 and 17A, the Railway may, if satisfied that the works can be completed by the Contractor within reasonable short time thereafter, allow the Contractor for further extension of time (Proforma at Annexure-VII) as the Engineer may decide. On such extension the Railway will be entitled without prejudice to any other right and remedy available on that behalf, to recover from the Contractor as agreed damages and not by way of penalty for each week or part of the week, a sum calculated at the rate Liquidated Damages as decided by Engineer, between 0.05% to 0.30% of contract value of the works for each week or part of the week.

For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued. Provided

also, that the total amount of liquidated damages under this condition shall not exceed 5% of the contract value or of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.

Provided further, that if the Railway is not satisfied that the works can be completed by the Contractor and in the event of failure on the part of the contractor to complete the work within further extension of time allowed as aforesaid, the Railway shall be entitled without prejudice to any other right or remedy available in that behalf, to appropriate the contractor's Security Deposit and rescind the contract under Clause 62 of these Conditions, whether or not actual damage is caused by such default.

NOTE:

In a contract, where extension(s) of time have been allowed once under clause 17B, further request(s) for extension of time under clause 17A can also be considered under exceptional circumstances. Such extension(s) of time under clause 17A shall be without any Liquidated damages, but the Liquidated Damages already recovered during extension(s) of time granted previously under clause 17B shall not be waived. However, Price variation during such extension(s) shall be dealt as applicable for extension(s) of time under clause 17B.

17.C Bonus for Early Completion of Work: In case of open tenders having value more than ₹ 50 Crore and original period of completion 12 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 bonus. The maximum bonus shall be limited to 5% of original contract value. The completion date shall be reckoned as the date of issuance of completion certificate by engineer.

18.(1) Illegal Gratification: Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner or agent or servant or anyone on his behalf, to any officer or employee of the Railway or to any person on his behalf in relation to obtaining or execution of this or any other contract with the Railway shall, in addition to any criminal liability which he may incur, subject Contractor to the rescission of the contract and all other contracts with the Railway and to the payment of any loss or damage resulting from such decision and the Railway shall be entitled to deduct the amounts so payable from the Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.

18.(2) The Contractor shall not lend or borrow from or have or enter into any monetary dealings or transactions either directly or indirectly with any employee of the Railway and if he shall do so, the Railway shall be entitled forthwith to rescind the contract and all other contracts with the Railway. Any question or dispute as to the commission of any such offence or compensation payable to the Railway under this Clause shall be settled by the General Manager of the Railway, in such a manner as he shall consider fit & sufficient and his decision shall be final and conclusive. In the event of rescission of the contract under this Clause, the Contractor will not be paid any compensation whatsoever except payments for the work done up to the date of rescission.

EXECUTION OF WORKS

19.(1) Contractor's understanding: It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the progress of the works, the general and local conditions, the labour conditions prevailing therein and all other matters which can in any way affect the works under the contract.

19.(2) Commencement of Works: The Contractor shall commence the works within 15 days after the receipt by him of an order in writing to this effect from the Engineer and shall proceed with the same with due expedition and without delay.

19.(3) Accepted Programme of Work: The Contractor who has been awarded the work shall as soon as possible but not later than 30 days after the date of receipt of the acceptance letter in respect of contracts with initial completion period of two years or less or not later than 90 days for other contracts have to submit the detailed programme of work indicating the time schedule of various items of works in the form of Bar Chart/PERT/CPM. He shall also submit the details of organization (in terms of labour and supervisors), plant and machinery that he intends to utilize (from time to time) for execution of the work within stipulated date of completion. The programme of work amended as necessary by discussions with the Engineer, shall be treated as the agreed programme of the work for the purpose of this contract and the Contractor shall endeavor to fulfill this programme of work. The progress of work will be watched accordingly and the liquidated damages will be with reference to the overall completion date. Nothing stated herein shall preclude the Contractor in achieving earlier completion of item or whole of the works than indicated in the programme.

In Contracts for works of New Line/Gauge Conversion/Doubling/Railway Electrification, finalized through Tenders having advertised value more than **₹ 100 Crores**, the Contractor shall submit a detailed time programme to the Engineer within 30 days after issue of LOA. The program shall include the physical and Financial Progress vis-à-vis program and forecast cash flow adopting Project Management Software such as **Primavera/Sure Track/MS Project etc.** The program must identify the milestones, interface requirements and program reporting elements. The Contractor shall supply, free of cost one set of authorized software to the Engineer and the soft copy of structured program for the project. This shall be updated every month. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress. Each programme shall include:

The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage, Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing, each of these stages for work by each Subcontractor, if any, the sequence and timing of inspections and tests specified in the Contract, and a supporting report which includes:

a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and

details showing the Contractor's reasonable estimate for the number of each class of Contractor's Personnel & Equipment, required on the Site for each major stage.

Unless the Engineer, within 21 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Engineer shall be entitled to rely upon the programme when planning their activities.

If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer within 15 days in accordance with this Sub-Clause.

19.(4) 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 co-operate 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 appear or arise in any part of the work, the Contractor, on being required so to do 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 bench marks, sight rails, pegs and

other things used in setting out the work.

- 20.(1) Compliance to Engineer's Instructions:** The Engineer shall direct the order in which the several parts of the works shall be executed and the Contractor shall execute without delay all orders given by the Engineer from time to time; but the Contractor shall not be relieved thereby from responsibility for the due performance of the works in all respects.
- 20.(2) Alterations to be Authorized:** No alterations in or additions to or omissions or abandonment of any part of the works shall be deemed authorized, except under written instructions from the Engineer.
- 20.(3) Extra Works:** Should works over and above those included in the contract require to be executed at the site, the Contractor shall have no right to be entrusted with the execution of such works which may be carried out by another Contractor or Contractors or by other means at the option of the Railway.
- 20.(4) Separate Contracts in Connection with Works:** The Railway shall have the right to let other contracts in connection with the works. The Contractor shall afford other Contractors reasonable opportunity for the storage of their materials and the execution of their works and shall properly connect and coordinate his work with theirs. If any part of the Contractor's work depends upon proper execution or result upon the work of another Contractor(s), the Contractor shall inspect and promptly report to the Engineer any defects in such works that render it unsuitable for such proper execution and results. The Contractor's failure so-to inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper for the reception of his work, except as to defects which may develop in the other Contractor's work after the execution of his work.
- 21. Instruction of Engineer's Representative:** Any instructions or approval given by the Engineer's representative to Contractor in connection with the works shall bind the Contractor as though it had been given by the Engineer provided always as follows:
- (a) Failure of the Engineer's representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or material and to order the removal or breaking up thereof.
 - (b) If the Contractor shall be dissatisfied by reason of any decision of the Engineer's representative, he shall be entitled to refer the matter to the Engineer who shall there upon confirm or vary such decision.
- 22.(1) Adherence to Specifications and Drawings:** The site and the detailed drawings shall be made available to the contractor commensurate with the accepted programme of work submitted under clause 19(3). The whole of the works shall be executed in perfect conformity with the specifications and drawings of the contract. If Contractor performs any works in a manner contrary to the specifications or drawings or any of them and without such reference to the Engineer, he shall bear all the costs arising or ensuing therefrom and shall be responsible for all loss to the Railway.
- 22.(2) Drawings and Specifications of the Works:** The Contractor shall keep one copy of Drawings and Specifications at the site, in good order, and such contract documents as may be necessary, available to the Engineer or the Engineer's Representative.
- 22.(3) Ownership of Drawings and Specifications:** All Drawings and Specifications and copies thereof furnished by the Railway to the Contractor are deemed to be the property of the Railway. They shall not be used on other works and with the exception of the signed contract set, shall be returned by the Contractor to the Railway on completion of the work or termination of the Contract.
- 22.(4) Compliance with Contractor's Request for Details:** The Engineer shall furnish with reasonable promptness, after receipt by him of the Contractor's request, additional instructions by means of drawings or otherwise, necessary for the proper execution of the works or any part thereof. All such drawings and instructions shall be consistent with the Contract Documents and reasonably inferable there from.
- 22.(5) Meaning and Intent of Specification and Drawings:** If any ambiguity arises as to the meaning and

intent of any portion of the Specifications and Drawings or as to execution or quality of any work or material, or as to the measurements of the works the decision of the Engineer thereon shall be final subject to the appeal (within 7 days of such decision being intimated to the Contractor) to the Chief Engineer who shall have the power to correct any errors, omissions, or discrepancies in aforementioned items and whose decision in the matter in dispute or doubt shall be final and conclusive.

23. **Working during Night:** The Contractor shall not carry out any work between sun-set and sun-rise without the previous permission of the Engineer. However, 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 same without confirming any right on the Contractor for claiming any extra payment for the same.
24. **Damage to Railway Property or Private Life and Property:** The Contractor shall be responsible for all risk to the work and for trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the Railway or the lives, persons or property of others from whatsoever cause in connection with the works until they are taken over by the Railway, although all reasonable and proper precautions may have been taken by the Contractor. In case the Railway shall be called upon to make good any costs, loss or damages, or to pay any compensation, including that payable under the provisions of the Workmen's Compensation Act or any statutory amendments thereof to any person or persons sustaining damages as aforesaid by reason of any act, or any negligence or omissions on the part of the Contractor; the amount of any costs or charges including costs and charges in connection with legal proceedings, which the Railway may incur in reference thereto, shall be charged to the Contractor. The Railway shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings or in anticipation of legal proceedings being instituted consequent on the action or default of the Contractor, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Contractor, as aforesaid; any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expenses shall not be called in question by the Contractor.
25. **Sheds, Storehouses and Yards:** The Contractor shall at his own expense provide himself with sheds, storehouses and yards in such situations and in such numbers as in the opinion of the Engineer is requisite for carrying on the works and the Contractor shall keep at each such sheds, storehouses and yards a sufficient quantity of materials and plant in stock as not to delay the carrying out of the works with due expedition and the Engineer and the Engineer's representative shall have free access to the said sheds, store houses and yards at any time for the purpose of inspecting the stock of materials or plant so kept in hand, and any materials or plant which the Engineer may object to shall not be brought upon or used in the works, but shall be forthwith removed from the sheds, storehouses or yards by the Contractor. The Contractor shall at his own expenses provide and maintain suitable mortar mills, soaking vats or any other equipment necessary for the execution of the works.
26. **Provision of Efficient and Competent Staff at Work Sites by the Contractor:**
 - 26.1 The Contractor shall place and keep on the works at all times efficient and competent staff to give the necessary directions to his workmen and to see that they execute their work in sound and proper manner and shall employ only such supervisors, workmen and labourers in or about the execution of any of these works as are careful and skilled in the various trades.
 - 26.2 The Contractor shall at once remove from the works any agents, permitted sub-contractor, supervisor, workman or labourer who shall be objected to by the Engineer and if and whenever required by the Engineer, he shall submit a correct return showing the names of all staff and workmen employed by him.
 - 26.3 In the event of the Engineer being of the opinion that the Contractor is not employing on the works a sufficient number of staff and workmen as is necessary for proper completion of the works within the time prescribed, the Contractor shall forthwith on receiving intimation to this effect deploy the

additional number of staff and labour as specified by the Engineer within seven days of being so required and failure on the part of the Contractor to comply with such instructions will entitle the Railway to rescind the contract under Clause 62 of these conditions.

26A. Deployment of Qualified Engineers at Work Sites by the Contractor:

26A.1 The Contractor shall also employ qualified Graduate Engineer(s) or equivalent or qualified Diploma Engineer(s) as prescribed in the tender documents.

26A.2 In case the Contractor fails to employ the Engineer, as aforesaid in Para 26A.1, he shall be liable to pay liquidated damages at the rates, as prescribed in the tender documents.

26A.3 Number of qualified Engineers required to be deployed by the Contractor for various activities contained in the works contract shall be specified in the tender documents as 'Special Condition of Contract'.

27.(1) Workmanship and Testing: The whole of the works and/or supply of materials specified and provided in the contract or that may be necessary to be done in order to form and complete any part thereof shall be executed in the best and most substantial workman like manner with materials of the best and most approved quality of their respective kinds, agreeable to the particulars contained in or implied by the specifications and as referred to in and represented by the drawings or in such other additional particulars, instructions and drawings given during the carrying on of the works and to the entire satisfaction of the Engineer according to the instructions and directions which the Contractors may from time to time receive from the Engineer. The materials may be subjected to tests by means of such machines, instruments and appliances as the Engineer may direct and wholly at the expense of the Contractor.

27.(2) Removal of Improper Work and Materials: The Engineer or the Engineer's Representative shall be entitled to order from time to time:

- (a) The removal from the site, within the time specified in the order, of any materials which in his opinion are not in accordance with the specifications or drawings.
- (b) The substitution of proper and suitable materials, and
- (c) the removal and proper re-execution, notwithstanding any previous tests thereof or on account payments thereof, of any work which in respect of materials or workmanship is not in his opinion in accordance with the specifications and in case of default on the part of the Contractor in carrying out such order, the Railway shall be entitled to rescind the contract under Clause 62 of these conditions.
- (d) The provision of Construction and Demolition Waste Management Rule 2016 issued by Ministry of Environment Forest and Climate Change dated 29.03.2016 and published in the Gazette of India, Part - II, Section - 3, Sub-section (ii) are binding upon the Contractor. Contractor shall implement these provisions at worksites, for which no extra payment will be payable.

28. Facilities for Inspection: The Contractor shall afford the Engineer and the Engineer's Representative every facility for entering in and upon every portion of the work at all hours for the purpose of inspection or otherwise and shall provide all labour, materials, planks, ladders, pumps, appliances and things of every kind required for the purpose and the Engineer and the Engineer's Representative shall at all times have free access to every part of the works and to all places at which materials for the works are stored or being prepared.

29. Examination of Work before Covering Up: The Contractor shall give seven days' notice to the Engineer or the Engineer's Representative whenever any work or materials are intended to be covered up in the earth, in bodies or walls or otherwise to be placed beyond the reach of measurements in order that the work may be inspected or that correct dimensions may be taken before being so covered, placed beyond the reach of measurement in default whereof, the same shall at the option of the Engineer or the Engineer's Representative be uncovered and measured at

the Contractor's expense or no allowance shall be made for such work or materials.

- 30. Temporary Works:** All temporary works necessary for the proper execution of the works shall be provided and maintained by the Contractor and subject to the consent of the Engineer shall be removed by him at his expenses when they are no longer required and in such manner as the Engineer shall direct. In the event of failure on the part of the Contractor to remove the temporary works, the Engineer will cause them to be removed and cost as increased by supervision and other incidental charges shall be recovered from the Contractor. If temporary huts are provided by the Contractor on the Railway land for labour engaged by him for the execution of works, the Contractor shall arrange for handing over vacant possession of the said land after the work is completed; if the Contractor's labour refuse to vacate, and have to be evicted by the Railway, necessary expenses incurred by the Railway in connection therewith shall be borne by the Contractor.
- 31.(1) Contractor to Supply Water for Works:** Unless otherwise provided in the Contract, the Contractor shall be responsible for the arrangements to obtain supply of water necessary for the works.
- 31.(2) Water Supply from Railway System:** The Railway may supply to the Contractor part or whole of the quantity of the water required for the execution of works from the Railway's existing water supply system at or near the site of works on specified terms and conditions and at such charges as shall be determined by the Railway and payable by the Contractor, provided that the Contractor shall arrange, at his own expense, to effect the connections and lay additional pipelines and accessories on the site and that the Contractor shall not be entitled to any compensation for interruption or failure of the water supply.
- 31.(3) Water Supply by Railway Transport:** In the event of the Railway arranging supply of water to the Contractor at or near the site of works by travelling water tanks or other means, the freight and other charges incurred thereby, including demurrage charges that may be levied, shall be paid by the Contractor in addition to the charges referred to in Sub-Clause (2) of the Clause provided that the Contractor shall not be entitled to any compensation for interruption or failure of the water supply.
- 31.(4) (a) Contractor to Arrange Supply of Electric Power for Works:** Unless otherwise provided in the contract, the Contractor shall be responsible for arrangements to obtain supply of Electric Power for the works.
- (b) Electric Supply from the Railway System:** The Railway may supply to the Contractor part or whole of the electric power wherever available and possible, required for execution of works from the Railway's existing electric supply systems at or near the site of works on specified terms and conditions and such charges as shall be determined by the Railway and payable by the Contractor provided the cost of arranging necessary connections to the Railway's Electric Supply systems and laying of underground/overhead conductor, circuit protection, electric power meters, transmission structure, shall be borne by the Contractor and that the Contractor shall not be entitled to any compensation for interruption or failure of the Electric supply system.
- 32. Property in Materials and Plant:** The materials and plant brought by the Contractor upon the site or on the land occupied by the Contractor in connection with the works and intended to be used for the execution thereof shall immediately be deemed to be the property of the Railway. Such of them as during the progress of the works are rejected by the Engineer under Clause 25 of these conditions or are declared by him not to be needed for the execution of the works or such as on the grant of the certificate of completion remain unused shall immediately on such rejection, declaration or grant cease to be deemed the property of the Railway and the Contractor may then (but not before) remove them from the site or the said land. This clause shall not in any way diminish the liability of the Contractor nor shall the Railway be in any way answerable for any loss or damage which may happen to or in respect of any such materials or plant either by the same being lost, stolen, injured or destroyed by fire, tempest or otherwise.
- 33.(1) Tools, Plant and Materials Supplied by Railway:** The Contractor shall take all reasonable care of all tools, plant and materials or other property whether of a like description or not belonging to the Railway and committed to his charge for the purpose of the works and shall be responsible for all

damage or loss caused by him, his agents, permitted sub-contractor, or his workmen or others while they are in his charge. The Contractors shall sign accountable receipts for tools, plants and materials made over to him by the Engineer and on completion of the works shall hand over the unused balance of the same to the Engineer in good order and repair, fair wear and tear excepted, and shall be responsible for any failure to account for the same or any damage done thereto.

- 33.(2) Hire of Railway's Plant:** The Railway may hire to the Contractor such plant as concrete mixers, compressors and portable engines for use during execution of the works on such terms as may be specified in the special conditions or in a separate agreement for Hire of Plant.
- 34.(1) Precaution During Progress of Works:** During the execution of works, unless otherwise specified, the Contractor shall at his own cost provide the materials for and execute all shoring, timbering and strutting works as is necessary for the stability and safety of all structures, excavations and works and shall ensure that no damage, injury or loss is caused or likely to be caused to any person or property.
- 34.(2) Roads and Water Courses:** Existing roads or water courses shall not be blocked cut through, altered, diverted or obstructed in any way by the Contractor, except with the permission of the Engineer. All compensations claimed for any unauthorized closure, cutting through, alteration, diversion or obstruction to such roads or water courses by the Contractor or his agent or his staff shall be recoverable from the Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.
- 34.(3) Provision of Access to Premises:** During progress of work in any street or thoroughfare, the Contractor shall make adequate provision for the passage of traffic, for securing safe access to all premises approached from such street or thoroughfare and for any drainage, water supply or means of lighting which may be interrupted by reasons of the execution of the works and shall react and maintain at his own cost barriers, lights and other safeguards as prescribed by the Engineer, for the regulation of the traffic, and provide watchmen necessary to prevent accidents. The works shall in such cases be executed night and day, if so, ordered by the Engineer and with such vigour so that the traffic way be impeded for as short a time as possible.
- 34.(4) Safety of Public:** The Contractor shall be responsible to take all precautions to ensure the safety of the public whether on public or railway property and shall post such look out men as may, in the opinion of the Engineer, be required to comply with regulations appertaining to the work. Contractor shall ensure placement of barricading / partitions at the place of work to ensure safety of habitants of adjacent area, failing which Engineer may advise stoppage of work as per his discretion.
- 34.(5) Display Board:** The Contractor shall be responsible for displaying the details of works i.e. name of work, approximate cost, expected date of completion, name and address of the Contractor and address of Engineer on a proper steel Board of size not less than 1.0 m x 1.0 m.
- 35. Use of Explosives:** Explosives shall not be used on the works or on the site by the Contractor without the permission of the Engineer and then also only in the manner and to the extent to which such permission is given. Where explosives are required for the works, they shall be stored in a special magazine to be provided by and at the cost of the Contractor in accordance with the Explosive Rules. The Contractor shall obtain the necessary license for the storage and the use of explosives. All operations in which or for which explosives are employed shall be at the sole risk and responsibility of the Contractor and the Contractor shall indemnify the Railway in respect thereof.
- 36.(1) Suspension of Works:** The Contractor shall on the order of the Engineer, suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Engineer. If such suspension is –
- (a) Provided for in the contract, or
 - (b) Necessary for the proper execution of the works or by the reason of weather conditions or by some default on the part of the Contractor, and or

- (c) Necessary for the safety of the works or any part thereof or
- (d) Necessary for the safety of adjoining public or other property or safety of the public or workmen or those who have to be at the site, or
- (e) Necessary to avoid disruption of traffic and utilities, as also to permit fast repair and restoration of any damaged utilities, or
- (f) Due to instruction of The National Green Tribunal or any other statutory authority due to high level of pollution in the city of worksite.

36.(2) The Contractor shall not be entitled to the extra costs, if any, incurred by him during the period of suspension of the works, but in the event of any suspension ordered by the Engineer for reasons other than aforementioned and when each such period of suspension exceeds 14 days, the Contractor shall be entitled to such extension of time for completion of the works as the Engineer may consider proper having regard to the period or periods of such suspensions and to such compensations as the Engineer may consider reasonable in respect of salaries or wages paid by the Contractor to his employees during the periods of such suspension.

36.(3) Suspension Lasting More than 3 Months: If the progress of the works or any part thereof is suspended on the order of the Engineer for more than three months at a time, the Contractor may serve a written notice on the Engineer requiring permission within 15 days from the receipt thereof to proceed with the works or that part thereof in regard to which progress is suspended and if such permission is not granted within that time the Contractor by further written notice so served may, but is not bound to, elect to treat the suspension where it affects part only of the works as an omission of such part or where it affects the whole of the works, as an abandonment of the contract by the Railway.

37. Rates for Items of Works:

- (i) The rates, entered in the accepted Bill(s) of Quantities of the Contract are intended to provide for works duly and properly completed in accordance with the General and Special (if any) Conditions of the Contract and the Specifications and drawings together with such enlargements, extensions, diminutions, reductions, alterations or additions as may be ordered in terms of Clause 42 of these conditions and without prejudice to the generality thereof and shall be deemed to include and cover superintendence and labour, supply, including full freight of materials, stores, patterns, profiles, moulds, fittings, centerings, scaffolding, shoring props, timber, machinery, barracks, tackle, roads, pegs, posts, tools and all apparatus and plant required on the works, except such tools, plant or materials as may be specified in the contract to be supplied to the Contractor by the Railway, the erection, maintenance and removal of all temporary works and buildings, all watching, lighting, bailing, pumping and draining, all prevention of or compensation for trespass, all barriers and arrangements for the safety of the public or of employees during the execution of works, all sanitary and medical arrangements for labour camps as may be prescribed by the Railway, the setting of all work and of the construction, repair and upkeep of all center lines, bench marks and level pegs thereon, site clearance, all fees duties, royalties, rent and compensation to owners for surface damage or taxes and impositions payable to local authorities in respect of land, structures and all material supplied for the work or other duties or expenses for which the Contractor may become liable or may be put to under any provision of law for the purpose of or in connection with the execution of the contract and all such other incidental charges or contingencies as may have been specially provided for in the Specifications.

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 and 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.

- 38. Demurrage and Wharfage Dues:** Demurrage charges calculated in accordance with the scale in force for the time being on the Railway and incurred by the Contractor failing to load or unload any goods or materials within the time allowed by the Railway for loading as also wharfage charges, of materials not removed in time, as also charges due on consignments booked by or to him shall be paid by the Contractor, failing which such charges shall be debited to the Contractor's account in the hands of the Railway and shall be deducted from any sums which may become due to him in terms of the contracts.

39.(1) Rates for Extra Items of Works:

- (a) Standard Schedule of Rates (SSOR) Items: Any item of work carried out by the Contractor on the instructions of the Engineer which is not included in the accepted Bill(s) of Quantities but figures in the Standard Schedule of Rates (SSOR), shall be executed at the rates set forth in the "Standard Schedule of Rates (SSOR)" modified by the tender percentage as accepted in the contract for that chapter of Standard Schedule of Rates (SSOR).

For item(s) not covered in this sub clause, the rate shall be decided as agreed upon between the Engineer and the Contractor before the execution of such items of work as per sub clause (b).

- (b) Other Items: For any item of work to be carried out by the Contractor but not included in the accepted Bill(s) of Quantities and also not covered under sub clause (a) above, the Contractor shall be bound to notify the Engineer at least seven days before the necessity arises for the execution of such items of works that the accepted Bill(s) of Quantities does not include rate or rates for such extra work involved. The rates payable for such items shall be decided at the meeting to be held between the Engineer and Contractor, in as short a period as possible after the need for the special item has come to the notice. In case the Contractor fails to attend the meeting after being notified to do so or in the event of no settlement being arrived at, the Railway shall be entitled to execute the extra works by other means and the Contractor shall have no claim for loss or damage that may result from such procedure.

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) Analysis of Rates for "Unified Standard Schedule of Rates of Indian Railways (USSOR)"
- (ii) Analysis of Rates for "Delhi Schedule of Rates issued by CPWD (DSR)"
- (iii) Market Analysis

- 39.(2)** Provided that if the Contractor commences work or incurs any expenditure in regard thereto before the rates as determined and agreed upon as lastly hereunto fore-mentioned, then and in such a case the Contractor shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of determination of the rates as aforesaid according to the rates as shall be fixed by the Engineer. However, if the Contractor is not satisfied with the decision of the Engineer in this respect, he may appeal to the Chief Engineer within 30 days of getting the decision of the Engineer, supported by analysis of the rates claimed. The Chief Engineer's decision after hearing both the parties in the matter would be final and binding on the Contractor and the Railway.

- 40.(1) Handing over of Works:** The Contractor shall be bound to hand over the works executed under the contract to the Railway complete in all respects to the satisfaction of the Engineer. The Engineer shall determine the date on which the work is considered to have been completed, in support of which his certificate shall be regarded as sufficient evidence for all purposes. The Engineer shall determine from time to time, the date on which any particular section of the work shall have been

completed, and the Contractor shall be bound to observe any such determination of the Engineer.

- 40.(2) Clearance of Site on Completion:** On completion of the works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the Engineer. No final payment in settlement of the accounts for the works shall be paid, held to be due or shall be made to the, Contractor till, in addition to any other condition necessary for final payment, site clearance shall have been affected by him, and such clearance may be made by the Engineer at the expense of the Contractor in the event of his failure to comply with this provision within seven days after receiving notice to that effect. Should it become necessary for the Engineer to have the site cleared at the expenses of the Contractor, the Railway shall not be held liable for any loss or damage to such of the Contractor's property as may be on the site and due to such removal, there from which removal may be affected by means of public sales of such materials and property or in such a way as deemed fit and convenient to the Engineer.

40A 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), if the Engineer is of the opinion that:

- (i) Such Offloading of works (up to 5% of original contract value) would enable successful completion of contract/work,
- (ii) Termination/ Part termination of the contract at this stage is not be in the interest of the Railway/work; and
- (iii) 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;

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). The extra expenditure so 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.

VARIATIONS IN EXTENT OF CONTRACT

- 41. Modification to Contract to be in Writing:** In the event of any of the provisions of the contract required to be modified after the contract documents have been signed, the modifications shall be made in writing and signed by the Railway and the Contractor and no work shall proceed under such modifications until this has been done. Any verbal or written arrangement abandoning, modifying, extending, reducing or supplementing the contract or any of the terms thereof shall be deemed conditional and shall not be binding on the Railway unless and until the same is incorporated in a formal instrument and signed by the Railway and the Contractor, and till then the Railway shall have the right to repudiate such arrangements.
- 42.(1) Powers of Modification to Contract:** The Engineer on behalf of the Railway shall be entitled by order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character position, site, quantities, dimensions or in the method of their execution or in the combination and use of materials for the execution thereof or to order any additional work to be done or any works not to be done and the Contractor will not be entitled, to any compensation for any increase/reduction in the quantities of work but will be paid only for the actual amount of work done and for approved materials supplied against a specific order.
- 42.(2) (i)** Unless otherwise specified in the special conditions of the contract, the accepted variation in quantity of each individual item of the contract would be up to 25% of the quantity originally contracted, except in case of foundation work (in which no variation limit shall apply).

However, the rates for the increased quantities shall be as per sub- para (iii) below.

- (ii) 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 item of works.
- (iii) In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, then same shall be executed at following rates:
 - (a) 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;
 - (b) 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;
 - (c) Variation in quantities of individual items beyond 150% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
 - (d) Variation to quantities of Minor Value Item:

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

 - (d)(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;
 - (d)(ii) Quantities operated in excess of 100% but up to 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;
 - (d)(iii) Variation in quantities of individual minor value item beyond 200% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.
- (iv) In case of earthwork, the variation limit of 25% shall apply to the gross quantity of earthwork and variation in the quantities of individual classifications of soil shall not be subject to this limit.
- (v) As far as Standard Schedule of Rates (SSOR) items are concerned, the variation limit of 25% would apply to the value of SSOR schedule(s) as a whole and not on individual SSOR items. However, in case of Non-Standard Schedule of Rates (SSOR) items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).

42.(3) Valuation of Variations: The enlargements, extensions, diminution, reduction, alterations or additions referred to in Sub-Clause (2) of this Clause shall in no degree affect the validity of the contract; but shall be performed by the Contractor as provided therein and be subject to the same conditions, stipulations and obligations as if they had been originally and expressly included and provided for in the Specifications and Drawings and the amounts to be paid thereof shall be calculated in accordance with the accepted Schedule of Rates. Any extra items/quantities of work falling outside the purview of the provisions of Sub-Clause (2) above shall be paid for at the rates determined under Clause-39 of these Conditions.

CLAIMS

43.(1) Quarterly Statement of Claims: The Contractor shall prepare and furnish to the Engineer once in

every quarter commencing from the month following the month of issue of Letter of Acceptance, an account giving full and detailed particulars of all claims for any additional expenses to which the Contractor may consider himself entitled to and of all extra or additional works ordered by the Engineer which he has executed during the preceding quarter and no claim for payment for such work will be considered which has not been included in such particulars.

- 43.(2) Signing of "No Claim" Certificate:** The Contractor shall not be entitled to make any claim whatsoever against the Railway under or by virtue of or arising out of this contract, nor shall the Railway entertain or consider any such claim, if made by the Contractor, after he shall have signed a "No Claim" Certificate in favour of the Railway in such form as shall be required by the Railway after the works are finally measured up. The Contractor shall be debarred from disputing the correctness of the items covered by "No Claim" Certificate or demanding a clearance to arbitration in respect thereof.

MEASUREMENTS, CERTIFICATES AND PAYMENTS

- 44. Quantities in Bill(s) of Quantities Annexed to Contract:** The quantities set out in the accepted Bill(s) of Quantities with items of works quantified are the estimated quantities of the works and they shall not be taken as the actual and correct quantities of the work to be executed by the Contractor in fulfillment of his obligations under the contract.
- 45.(i) Measurement of Works by Railway:** The Contractor shall be paid for the works at the rates in the accepted Bill(s) of Quantities and for extra works at rates determined under Clause 39 of these Conditions on the measurements taken by the Engineer or the Engineer's representative in accordance with the rules prescribed for the purpose by the Railway. The quantities for items the unit of which in the accepted Bill(s) of Quantities is 100 or 1000 shall be calculated to the nearest whole number, any fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted Bill(s) of Quantities is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time and at such intervals as in the opinion of the Engineer shall be proper having regard to the progress of works. 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.
- 45.(ii) Measurement of Works by Contractor's Authorized Representative (in case the contract provides for the same):**
- (a) The Contractor shall be paid for the works at the rates in the accepted Bill(s) of Quantities and for extra works at rates determined under Clause 39 of these Conditions on the measurements taken by the Contractor's authorized Engineer in accordance with the rules prescribed for the purpose by the Railway. The quantities for items the unit of which in the

accepted Bill(s) of Quantities is 100 or 1000 shall be calculated to the nearest whole number, any fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted Bill(s) of Quantities is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time. The date and time on which 'on account' or 'final' measurements are to be made shall be communicated to the Engineer.

The date and time of test checks shall be communicated to the Contractor who shall be present at the site and shall witness the test checks, failing the Contractor's attendance the test checks may be conducted in his absence and such test checks shall notwithstanding such absence be binding upon Contractor provided always that any objection made by Contractor to test check shall be duly investigated and considered in the manner set out below:

- (i) It shall be open to the Contractor to take specific objection to test checks of any recorded measurement within 7 days of date of such test checks. Any re-test check done by the concerned Railway's authority in the presence of the Contractor or in his absence after due notice given to him in consequent 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.
 - (ii) 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.
- (b) **Incorrect measurement, actions to be taken:** If in case during test check or otherwise, it is detected by the Engineer that agency has claimed any exaggerated measurement or has claimed any false measurement for the works which have not been executed; amounting to variation of 5% or more of claimed gross bill amount, action shall be taken as following:
- (i) On first occasion of noticing exaggerated/ false measurement, Engineer shall recover liquidated damages equal to 10% of claimed gross bill value.
 - (ii) On any next occasion of noticing any exaggerated/false measurement, railway shall recover liquidated damages equal to 15% of claimed gross bill value. In addition, the facility of recording of measurements by Contractor as well as release of provisional payment shall be withdrawn. Once withdrawn, measurements shall be done by railway as per clause 45(i) above.

46.(1) "On-Account" Payments: The Contractor shall be entitled to be paid from time to time by way of "On-Account" payment only for such works as in the opinion of the Engineer he has executed in terms of the contract. All payments due on the Engineer's/Engineer's Representative's certificates of measurements or Engineer's certified "Contractor's authorized Engineer's measurements" shall be subject to any deductions which may be made under these presents and shall further be subject to, unless otherwise required by Clause 16 of these Conditions, a retention of six percent by way of Security Deposits, until the amount of Security Deposit by way of such retentions shall amount to 5% of the total value of the contract provided always that the Engineer may by any certificate make any correction or modification in any previous certificate which shall have been issued by him and that the Engineer may withhold any certificate, if the works or any part thereof are not being carried out to his satisfaction.

46.(2) Rounding off Amounts: The total amount due on each certificate shall be rounded off to the nearest rupee, i.e. sum less than 50 paise shall be omitted and sums of 50 paise and more up to ₹ 1 will be reckoned as ₹ 1.

46.(3) On Account Payments not Prejudicial to Final Settlement: "On-Account" payments made to the Contractor shall be without prejudice to the final making up of the accounts (except where measurements are specifically noted in the Measurement Book as "Final Measurements" and as such have been signed by the Contractor and Engineer/Engineer's Representative) and shall in no

respect be considered or used as evidence of any facts stated in or to be inferred from such accounts nor of any particular quantity of work having been executed nor of the manner of its execution being satisfactory.

- 46.(4)** If payment(s) of Advances are applicable in the contract, as mentioned in the Tender Documents, Railway shall make payment(s) of Interest-bearing advances, on the request of contractor. The payment and recovery of such Advances shall be made as under:

(a) Mobilisation Advance:

This shall be limited to 10% of the Contract value and shall be paid in 2 stages:

Stage 1– 5% of Contract Value on signing of the contract agreement.

Stage 2 – 5% on mobilization of site-establishment, setting up offices, bringing in equipment and actual commencement of work.

The stage 1 of advance shall be payable immediately after signing of contract agreement.

The stage 2 of advance shall be payable at the time of mobilisation, only after submission of a utilization certificate by the contractor that the Stage 1 advance has been properly utilized in the contract.

These Advances shall be payable against irrevocable guarantee (Bank Guarantee, FDRs) from a scheduled commercial bank of India of at least 110% of the value of the sanctioned advance amount (covering principal plus interest).

(b) Advance Against Machinery and Equipment:

This advance shall be limited to a maximum of 10% of the contract value against new Machinery & Equipment, involving substantial outlay, brought to site and essentially required for the work. This advance shall not exceed 75% of the purchase price of such Equipment and shall be payable when Equipment is hypothecated to the President of India by a suitable bond or alternatively covered by an irrevocable Bank Guarantee from a scheduled commercial bank of India for full cost of the Plant & Equipment in a form acceptable to Railways. The Plant & Equipment shall be insured for the full value and for the entire period, they are required for the work. This Plant & Equipment shall not be removed from the site of work without prior written permission of the Engineer. No advance should be given against old Plant & Machinery.

The advances under sub clause (a) and (b) above, are subject to the following conditions:

- (i) The full amount of Advances shall be recovered from contractor dues. The recovery shall commence when the value of contract executed reaches 15% of original contract value and shall be completed when the value of work executed reaches 85% of the original contract value. The installments on each "on account bill" will be on pro-rata basis.

Interest shall be recovered on the advance outstanding for the period commencing from the date of payment of advance till date of particular on-account bill (through which recovery of principal is affected) and adjusted fully against on-account bill along with pro-rata principal recovery. In the event of any short-fall, the same shall be carried forward to the next on-account bill and shall attract interest.

- (ii) The advances shall be used by the Contractor for the purpose of the Contract, and for the purpose for which they are paid. Under no circumstances, shall the advances be diverted for other purposes. Any such diversion shall be construed as a breach of the Contract and the Contractor shall be asked to return the advance at once and pay interest at 15% per annum till the advance is recovered back from him. The Contractor shall return the advance and pay the interest in one go without demur. The Contractor, if required by the Engineer shall provide the details of utilization of Mobilisation advance.
- (iii) If the Contractor is found to have contravened the provision, it will constitute a breach of contract and Railway shall be entitled to terminate the contract and forfeit his Performance

Guarantee as well as Security Deposit.

- (iv) In cases, where the Contract is rescinded as per clause 62 of the contract or short closed under any other condition(s) of the contract, without making full recovery of advances and accrued interest thereon, by the Railway, such balance of advances and accrued interest thereon shall immediately become due and payable by the Contractor to the Railway. The same shall be recovered from any due of Contractor with the Government of India.

46.(5) Manner of Payment: Unless otherwise specified payments to the Contractor will be transferred electronically to his bank account.

46A. PRICE VARIATION CLAUSE (PVC):

46A.1 Applicability:

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

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

46A.2 Base Month: The Base Month for 'Price Variation Clause' shall be taken as one month prior to opening of tender, unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following Base the month. The Price Variation shall be based on the average Price Index of the quarter under consideration.

46A.3 Validity:

Rates accepted by Railway Administration shall hold good till completion of work and no additional individual claim shall be admissible except –

- Payment/recovery for increase/decrease in GST on works contract or imposition/removal of any tax/cess on Works Contract as per Clause 37,
- Payment/recovery for overall market situation as per Price Variation Clause given hereunder.

46A.4 Components of various items in a contract on which variation in prices be admissible, shall be steel, cement, ferrous material, non-ferrous material, insulators, zinc and other materials, labour, plant & machinery, fuel, explosives, detonators etc. Adjustment for variation in prices of these items shall be determined in the manner prescribed.

46A.5 No price variation shall be admissible for fixed components.

46A.6 The percentages of various components in various type of works shall be as specified for all item (s)/ Bill(s) of Quantities in tender document and the same shall be fixed as per table & classifications given below:

(I) For Civil Engineering Works:

S N	Classification		1A, 2 & 3A	4A	5A	6A	7	8A	9A	1B, 3B, 4B, 5B, 8B & 9B	1C, 3C, 4C, 5C, 6C, 8C & 9C	3D, 4D, 5D, 6D, 8D & 9D	3E, 4E, 5E, 6E, 8E & 9E
	Components												
1	Fixed	*	15	15	15	15	15	15	15	15	15	15	15
2	Labour	L _C	20	25	30	20	50	20	20	0	0	10	25
3	Steel	S _C	0	0	0	0	0	0	0	85	0	50	0
4	Cement	C _C	0	0	15	0	0	0	0	0	85	0	0

5	Plant Machinery & Spares	PM _C	30	15	5	20	15	20	30	0	0	10	30
6	Fuel & Lubricants	F _C	25	15	5	15	15	20	15	0	0	10	20
7	Other materials	M _C	10	15	30	30	5	25	20	0	0	5	10
8	Detonators & Explosives	E _C	0	15	0	0	0	0	0	0	0	0	0
	Total		100	100	100	100	100	100	100	100	100	100	100

* It shall not be considered for any price variation.

The classification mentioned in the table above represents following type of item(s) in the work(s) –

1. Earthwork in Formation

1A – All Item(s) excluding 1B or/and 1C

1B – Item(s) for supply of Steel

1C – Item(s) for supply of Cement

2. Ballast Supply Works

3. Tunnelling Works (Without Explosives)

3A – All Item(s) excluding 3B or/and 3C or/and 3D or/and 3E

3B – Item(s) for supply of Steel

3C – Item(s) for supply of Cement or/and Grout

3D – Item(s) for Fabrication & Erection of Structures including supply of Steel

3E – Item(s) for Fabrication & Erection of Structures excluding supply of Steel.

4. Tunnelling Works (With explosives)

4A – All Item(s) excluding 4B or/and 4C or/and 4D or/and 4E

4B – Item(s) for supply of Steel

4C – Item(s) for supply of Cement or/and Grout

4D – Item(s) for Fabrication & Erection of Structures including supply of Steel

4E – Item(s) for Fabrication & Erection of Structures excluding supply of Steel.

5. Building Works

5A – All Item(s) excluding 5B or/and 5C or/and 5D or/and 5E

5B – Item(s) for supply of Steel

5C – Item(s) for supply of Cement

5D – Item(s) for Fabrication & Erection of Structures including supply of Steel

5E – Item(s) for Fabrication & Erection of Structures excluding supply of Steel.

6. Bridges & Protection work

6A – All Item(s) excluding 6B or/and 6C or/and 6D or/and 6E

6B – Item(s) for supply of Steel

6C – Item(s) for supply of Cement

6D – Item(s) for Fabrication, Assembly, Erection & Launching of Girders including supply of Steel

6E – Item(s) for Fabrication, Assembly, Erection & Launching of Girders excluding supply of Steel

7. Permanent Way linking

8. Platform, Passenger Amenities

8A – All Item(s) excluding 8B or/and 8C or/and 8D or/and 8E

8B – Item(s) for supply of Steel item/fittings

8C – Item(s) for supply of Cement Item

8D – Item(s) for Fabrication & Erection of Structures including supply of Steel

8E – Item(s) for Fabrication & Erection of Structures excluding supply of Steel

9. Any Other Works not covered in Classification 1 to 8

9A – All Item(s) excluding 9B or/and 9C or/and 9D or/and 9E

9B – Item(s) for supply of Steel

9C – Item(s) for supply of Cement or/and Grout

9D – Item(s) for Fabrication & Erection of Structures including supply of Steel

9E – Item(s) for Fabrication & Erection of Structures excluding supply of Steel

46A.7 Formulae: The amount of variation in price in several components (Labor, material etc.) shall be worked out by the following formulae –

$$(i) \quad L = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (L_Q - L_B) \times L_C}{L_B \times 100}$$

$$(ii) \quad M = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (M_Q - M_B) \times M_C}{M_B \times 100}$$

$$(iii) \quad F = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (F_Q - F_B) \times F_C}{F_B \times 100}$$

$$(iv) \quad E = \frac{(W) \times (E_Q - E_B) \times E_C}{E_B \times 100}$$

$$(v) \quad PM = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (PM_Q - PM_B) \times PM_C}{PM_B \times 100}$$

$$(vi) \quad S = \frac{(W \text{ or } W_S \text{ or } W_{SF}) \times (S_Q - S_B) \times S_C}{S_B \times 100}$$

$$(vii) \quad C = \frac{(W \text{ or } W_C) \times (C_Q - C_B) \times C_C}{C_B \times 100}$$

(II) For Railway Electrification Works:

$$(viii) \quad T = [0.4136 \times (C_Q - C_B) / C_B] \times 85$$

$$(ix) \quad R = [0.94 \times (R_T - R_O) / R_O + 0.06 \times (Z_T - Z_O) / Z_O] \times 85$$

$$(x) \quad N = [(P_T - P_O) / P_O] \times 85$$

$$(xi) \quad I = [(I_T - I_O) / I_O] \times 85$$

$$(xii) \quad G = [(M_Q - M_B) / M_B] \times 85$$

$$(xiii) \quad E_R = [(L_Q - L_B) / L_B] \times 85$$

Where,

L Amount of price variation in Labour.

M Amount of Price variation in Materials.

F Amount of price variation in Fuels.

E Amount of price variation in Explosives.

PM Amount of price variation in Plant, Machinery and Spares.

S Amount of price variation in Steel supply item.

C Amount of price variation in Cement supply item.

T Percentage variation payable on the gross value of bill of Concreting (Bill(s) of Quantities for concrete items).

R Percentage variation payable on the gross value of bill of Ferrous Items (Bill(s) of

	Quantities for concrete items).
N	Percentage variation payable on the gross value of bill of Non-Ferrous Items (Bill(s) of Quantities for concrete items)
I	Percentage variation payable on the gross value of bill of Insulator (Bill(s) of Quantities for concrete items).
G	Percentage variation payable on the gross value of bill of General Works (Bill(s) of Quantities for concrete items).
E _r	Percentage variation payable on the gross value of erection (Bill(s) of Quantities for erection items).
L _C	% of Labour Component in the item(s).
M _C	% of Material Component in the item(s).
F _C	% of Fuel Component in the item(s).
E _C	% of Explosive Component in the item(s).
PM _C	% of Plant, Machinery and Spares Components in the item(s).
S _C	% of Steel Supply item Component in the item(s).
C _C	% of Cement Supply item Component in the item(s).
W	Gross value of work done by Contractor as per on-account bill(s) excluding the Gross value of work under W _S or/and W _C or/and W _{SF} or/and W _F or/and W _{SFL} or/and W _{FL} and cost of materials supplied by Railway either free or at fixed rate.
W _S	Gross value of work done by Contractor for item(s) of supply of steel.
W _C	Gross value of work done by Contractor for item(s) of supply of cement and /or supply of grout material.
W _{SF}	Gross value of work done by Contractor for item(s) of Fabrication & Erection of Structures including supply of Steel.
W _F	Gross value of work done by Contractor for Fabrication & Erection of Structures excluding supply of Steel.
W _{SFL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders including supply of Steel.
W _{FL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders excluding supply of Steel.
L _B	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the base period.
L _Q	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration.
M _B	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the base period.
M _Q	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration.
F _B	The average of official prices of Diesel available on the official website of 'Petroleum Planning and Analysis cell' under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai & Chennai, for the base period.
F _Q	The average of official prices of Diesel available on the official website of 'Petroleum Planning and Analysis cell' under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai & Chennai, for the 3 months of the quarter under consideration.

E _B	Index number of Monthly Whole Sale Price Index for the category ‘Explosive’ of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
E _Q	Index number of Monthly Whole Sale Price Index for the category ‘Explosive’ of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
PM _B	Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for ‘Manufacture of machinery for mining, quarrying and construction’– published in RBI (Reserve Bank of India) Bulletin, for the base period.
PM _Q	Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for ‘Manufacture of machinery for mining, quarrying and construction’– published in RBI (Reserve Bank of India) Bulletin, for the average price index of 3 months of the quarter under consideration.
S _B	The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the base period.
S _Q	The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the 3 months of the quarter under consideration.
C _B	Index No. of Wholesale Price Index of sub-group Cement, Lime and Plaster as published in RBI Bulletin for the base period.
C _Q	No. of Wholesale Price Index of sub-group Cement, Lime and Plaster as published in RBI Bulletin for the average price index of the 3 months of the quarter under consideration.
R _T	IEEMA price index for Steel Blooms (size 150mmx150mm) for the month which is two months prior to date of inspection of material.
R _O	IEEMA price index for Steel Blooms (size 150 mm x 150 mm) for the month which is one month prior to date of opening of tender.
P _T	IEEMA price index for copper wire rods for the month which is two months prior to date of inspection of material.
P _O	IEEMA price index for copper wire rods for the month which is one month prior to date of opening of tender.
Z _T	IEEMA price index for Zinc for the month which is two months prior to date of inspection of material.
Z _O	IEEMA price index for Zinc for the month which is one month prior to date of opening of tender.
I _T	RBI wholesale price index for the sub-group “Insulators” for the month which is two months prior to date of inspection of material.
I _O	RBI wholesale price index for the sub-group “Insulators” for the month which is one month prior to date of opening of tender.

46A.8 The demands for escalation of cost shall be allowed on the basis of provisional indices as mentioned above in Clause 46A.7. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.

- 46A.9** (1) Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this clause shall be as under:

SN	Classification	Rates to be used for calculating S_Q or S_B
1	Reinforcement bars and other rounds	Average of per ton rates of 10 mm diameter TMT & 25 mm diameter TMT; confirming IS1786; Fe 500
2	All types and sizes of angles, channels and joists	Average of per ton rates of 'Angle 75 x 75 x 6 mm, Mild Steel Plate 10 mm thickness and Channel 150 x 75 mm; confirming IS2062, E250 Gr. "A"
3	All types and sizes of plates	Average of per ton rates of 'MS Plates 10 mm thickness and 25 mm thickness; confirming IS: 2062, E250 Gr "A"
4	Any other section of steel not covered in the above categories	Average of price for the three categories covered under Sr. Nos. 1, 2 and 3 in this table.

- (2) Relevant city for referring "JPC (Joint Plant Committee)" rates of steel items (SQ/SB) in different Zonal Railways shall be as under:

SN	City	Railway
1.	Delhi	Northern, North Central, North Eastern and North Western
2.	Kolkata	Eastern, East Central, East Coast, Northeast Frontier, South Eastern and Southeast Central
3.	Mumbai	Central, Western and West Central
4.	Chennai	Southern, South Central and South Western

46A.10 Price Variation during Extended Period of Contract:

The price adjustments as worked out above, i.e. either increase or decrease shall be applicable up to the stipulated date of completion of the work including the extended period of completion where such extension has been granted under Clause 17A of the Standard General Conditions of contract. However, where extension of the time has been granted due to the contractor's failure under Clause 17B of the Standard General Conditions of Contract, price adjustment shall be done as follows:

- In case of indices increase above indices applicable to the last month of the original completion period or the extended period under Clause 17A the price adjustment for the period of extension granted under Clause 17B shall be limited to the amount payable as per the indices applicable to the last month of the original completion period or the extended period under clause 17-A of the General Conditions of Contract, as the case may be.
- In case the indices fall below the indices applicable to the last month of the original / extended period of completion under Clause 17A, as the case may be then the lower indices shall be adopted for price adjustment for the period of extension under Clause 17B of the Standard General Condition of Contract.

- 47. Maintenance of Works:** The Contractor shall at all times during the progress and continuance of the works and also for the period of maintenance specified in the Tender Form after the date of issue of the certificate of completion by the Engineer or any other earlier date subsequent to the completion of the works that may be fixed by the Engineer, be responsible for and effectively maintain and uphold in good substantial, sound and perfect condition all and every part of the works and shall make good from time to time and at all times as often as the Engineer shall require, any damage or defect that may during the above period arise in or be discovered or be in any way connected with the works, provided that such damage or defect is not directly caused by errors in the contract documents, act of providence or insurrection or civil riot, and the Contractor

shall be liable for and shall pay and make good to the Railway or other persons legally entitled thereto whenever required by the Engineer so to do, all losses, damages, costs and expenses they or any of them may incur or be put or be liable to by reasons or in consequence of the operations of the Contractor or of his failure in any respect.

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

The Engineer may also issue such a certificate indicating date of completion with respect to any part of the work (before the completion of the whole of work), which has been both completed to the satisfaction of the Engineer and occupied or used by the Railway. When any such certificate is given in respect of part of a work, such part shall be considered as completed and the period of maintenance of such part shall commence from the date of completion mentioned in the completion certificate issued for that part of the work.

- 48.(2) Contractor not Absolved by Completion Certificate:** The Certificate of Completion in respect of the works referred to in Sub-Clause (1) of this Clause 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.

- 48.(3) Final Supplementary Agreement:** After the work is completed or otherwise concluded by the parties with mutual consent, and taken over by the Railway as per terms and conditions of the contract agreement, and there is unequivocal no claim on either side under the Contract other than as mentioned in item 4 of Annexure XIV, the parties shall execute the Final Supplementary Agreement as per Annexure XIV

- 49. Approval only by Maintenance Certificate:** No certificate other than maintenance certificate referred to in Clause 50 of the Conditions shall be deemed to constitute approval of any work or other matter in respect of which it is issued or shall be taken as an admission of the due performance of the contract or any part thereof.

- 50.(1) Maintenance Certificate:** The Contract shall not be considered as completed until a Maintenance Certificate shall have been signed by the Engineer stating that the works have been completed and maintained to his satisfaction. The Maintenance Certificate shall be given by the Engineer upon the expiration of the period of maintenance or as soon thereafter as any works ordered during such period pursuant to Sub Clause (2) to Clause 48 of these Conditions shall have been completed to the satisfaction of the Engineer, and full effect shall be given to this Clause notwithstanding the taking possession of or using the works or any part thereof by the Railway.

The Competent Authority to issue above Maintenance Certificate shall normally be the authority who is competent to sign the contract. If this Competent Authority is of the rank lower than JA Grade, then a JA Grade Officer (concerned with the work) should issue the certificate. The certificate, inter alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the Contractor and that there is no due from the

Contractor to Railways against the contract concerned.

- 50.(2) Cessation of Railway's Liability:** The Railway shall not be liable to the Contractor for any matter arising out of or in connection with the contract for execution of the works unless the Contractor has made a claim in writing in respect thereof before the issue of the Maintenance Certificate under this clause.
- 50.(3) Unfulfilled Obligations:** Notwithstanding the issue of the Maintenance Certificate the Contractor and (subject to Sub-Clause (2) of this Clause) the Railway shall remain liable for the fulfillment of any obligation incurred under the provision of the contract prior to the issue of the Maintenance Certificate which remains unperformed at the time such certificate is issued and for the purposes of determining the nature and extent of any such obligations, the contract shall be deemed to remain in force between the parties thereto.
- 51.(1) Final Payment:** 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(s) of Quantities and for extra works on rates determined under Clause 39 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 the Standard General Conditions of Contract or in any Clause (stated as excepted matter) 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.
- 51.(2) 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 over-payment 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.

51-A Production of Vouchers etc. by the Contractor:

- (i) For a contract of more than One Crore of Rupees, the Contractor shall, whenever required, produce or cause to be produced for examination by the Engineer any quotation, invoice, cost or other account, book of accounts, voucher, receipt, letter, memorandum, paper of writing or any copy of or extract from any such document and also furnish information and returns verified in such manner as may be required in any way relating to the execution of this contract or relevant for verifying or ascertaining cost of execution of this contract (the decision of the Engineer on the question of relevancy of any documents, information or return being final and binding in the parties). The Contractor shall similarly produce vouchers etc., if required to prove to the Engineer, that materials supplied by him, are in accordance with the specifications laid down in the contract.
- (ii) If any portion of the work in a contract of value more than One Crore of Rupees be carried out by a sub-contractor or any subsidiary or allied firm or company (as per Clause 7 of the Standard General Conditions of Contract), the Engineer shall have power to secure the

books of such sub-contract or any subsidiary or allied firm or company, through the Contractor, and such books shall be open to his inspection.

- (iii) The obligations imposed by Sub Clause (i) and (ii) above are without prejudice to the obligations of the Contractor under any statute rules or orders binding on the Contractor.

- 52. Withholding and Lien in Respect of Sums Claimed:** Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the Contractor, the Railway shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any, deposited by the Contractor and for the purpose aforesaid, the Railway shall be entitled to withhold the said cash Security Deposit or the Security if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the Contractor, the Railway shall be entitled to withhold and have a lien to the extent of the such claimed amount or amounts referred to supra, from any sum or sums found payable or which at any time thereafter may become payable to the Contractor under the same contract or any other contract with this or any other Railway or any Department of the Central Government pending finalization or adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above, by the Railway will be kept withheld or retained as such by the Railways till the claim arising out of or under the contract is determined by the arbitrator (if the contract governed by the Arbitration Clause) or by the competent court as the case may be and that the Contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to supra and duly notified as such to the Contractor. For the purpose of this clause, where the Contractor is a partnership firm or a company, the Railway shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner / company, as the case may be whether in his individual capacity or otherwise.

52-A Lien in Respect of Claims in other Contracts:

- (i) Any sum of money due and payable to the Contractor (including the Security Deposit returnable to him) under the contract may be withheld or retained by way of lien by the Railway, against any claim of this or any other Railway or any other Department of the Central Government in respect of payment of a sum of money arising out of or under any other contract made by the Contractor with this or any other Department of the Central Government.
- (ii) However, recovery of claims of Railway in regard to terminated contracts may be made from the Final Bills, Security Deposits and Performance Guarantees of other contract or contracts, executed by the Contractor. The Performance Guarantees submitted by the Contractor against other contracts, if required, may be withheld and encashed. In addition, 10% of each subsequent 'on-account bill' may be withheld, if required, for recovery of Railway's dues against the terminated contract.
- (iii) It is an agreed term of the contract that the sum of money so withheld or retained under this Clause by the Railway will be kept withheld or retained as such by the Railway till the claim arising out of or under any other contract is either mutually settled or determined by arbitration, if the other contract is governed by Arbitration Clause or by the competent court as the case may be and Contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this Clause and duly notified as such to the Contractor.
- 53. Signature on Receipts for Amounts:** Every receipt for money which may become payable or for any security which may become transferable to the Contractors under these presents, shall, if signed in the partnership name by anyone of the partners of a Contractor's firm be a good and sufficient discharge to the Railway in respect of the moneys or security purported to be

acknowledged thereby and in the event of death of any of the Contractor, partners during the pendency of the contract, it is hereby expressly agreed that every receipt by anyone of the surviving Contractor partners shall if so signed as aforesaid be good and sufficient discharge as aforesaid provided that nothing in this Clause contained shall be deemed to prejudice or effect any claim which the Railway may hereafter have against the legal representative of any Contractor partner so dying for or in respect to any breach of any of the conditions of the contract, provided also that nothing in this clause contained shall be deemed to prejudice or effect the respective rights or obligations of the Contractor partners and of the legal representatives of any deceased Contractor partners inter se.

LABOUR

- 54. Wages to Labour:** The Contractor shall be responsible to ensure compliance with the provision of the Minimum Wages Act, 1948 (hereinafter referred to as the “said Act”) and the Rules made there under in respect of any employees directly or through petty Contractors or sub-contractors employed by him for the purpose of carrying out this contract.

If, in compliance with the terms of the contract, the Contractor supplied any labour to be used wholly or partly under the direct orders and control of the Railways whether in connection with any work being executed by the Contractor or otherwise for the purpose of the Railway such labour shall, for the purpose of this Clause, still be deemed to be persons employed by the Contractor.

If any moneys shall, as a result of any claim or application made under the said Act be directed to be paid by the Railway, such money shall be deemed to be moneys payable to the Railway by the Contractor and on failure by the Contractor to repay the Railway any moneys paid by it as aforesaid within seven days after the same shall have been demanded, the Railways shall be entitled to recover the same from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India.

- 54-A. Apprentices Act:** The Contractor shall be responsible to ensure compliance with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued there under from time to time in respect of apprentices directly or through petty Contractors or sub-contractors employed by him for the purpose of carrying out the Contract.

If the Contractor directly or through petty Contractors or sub-contractors fails to do so, his failure will be a breach of the contract and the Railway may, in its discretion, rescind the contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation of the provisions of the Act.

- 55. Provisions of Payments of Wages Act:** The Contractor shall comply with the provisions of the Payment of Wages Act, 1936 and the rules made there under in respect of all employees employed by him either directly or through petty Contractors or sub-contractors in the works. If in compliance with the terms of the contract, the Contractor directly or through petty Contractors or sub-contractors shall supply any labour to be used wholly or partly under the direct orders and control of the Engineer whether in connection with the works to be executed hereunder or otherwise for the purpose of the Engineer, such labour shall nevertheless be deemed to comprise persons employed by the Contractor and any moneys which may be ordered to be paid by the Engineer shall be deemed to be moneys payable by the Engineer on behalf of the Contractor and the Engineer may on failure of the Contractor to repay such money to the Railways deduct the same from any moneys due to the Contractor in terms of the contract. The Railway shall be entitled to recover the same from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India all moneys paid or payable by the Railway by way of compensation of aforesaid or for costs of expenses in connection with any claim thereto and the decision of the Engineer upon any question arising out of the effect or force of this Clause shall be final and binding upon the Contractor.

- 55-A. Provisions of Contract Labour (Regulation and Abolition) Act, 1970:**

- 55-A.(1)** The Contractor shall comply with the provision of the contract labour (Regulation and Abolition) Act, 1970 and the Contract labour (Regulation and Abolition) Central Rules 1971 as modified from time to time, wherever applicable and shall also indemnify the Railway from and against any claims under the aforesaid Act and the Rules.
- 55-A.(2)** The Contractor shall obtain a valid license under the aforesaid Act as modified from time to time before the commencement of the work and continue to have a valid license until the completion of the work. Any failure to fulfill the requirement shall attract the penal provision of the Act.
- 55-A.(3)** The Contractor shall pay to the labour employed by him directly or through sub-contractors the wages as per provision of the aforesaid Act and the Rules wherever applicable. The Contractor shall notwithstanding the provisions of the contract to the contrary, cause to be paid the wages to labour, indirectly engaged on the works including any engaged by sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- 55-A.(4)** In respect of all labour directly or indirectly employed in the work for performance of the Contractor's part of the contract, the Contractor shall comply with or cause to be complied with the provisions of the aforesaid Act and Rules wherever applicable.
- 55-A.(5)** In every case in which, by virtue of the provisions of the aforesaid Act or the rules, the Railway is obliged to pay any amount of wages to a workman employed by the Contractor or his sub-contractor in execution of the work or to incur any expenditure on account of the contingent, liability of the Railway due to the Contractor's failure to fulfill his statutory obligations under the aforesaid Act or the rules, the Railway will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred and without prejudice to the rights of the Railway under the Section 20, Sub-Section (2) and Section 2, Sub-Section (4) of the aforesaid Act, the Railway shall be at liberty to recover such amount or part thereof from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India. The Railway shall not be bound to contest any claim made against it under Sub-Section (1) of Section 20 and Sub-Section (4) of Section 21 of the aforesaid Act except on the written request of the Contractor and upon his giving to the Railway full security for all costs for which the Railway might become liable in contesting such claim. The decision of the Chief Engineer regarding the amount actually recoverable from the Contractor as stated above shall be final and binding on the Contractor.
- 55-B. Provisions of Employees Provident Fund and Miscellaneous Provisions Act, 1952:** The Contractor shall comply with the provisions of Para 30 and 36-B of the Employees Provident Fund Scheme, 1952; Para 3 and 4 of Employees' Pension Scheme, 1995; and Para 7 and 8 of Employees Deposit Linked Insurance Scheme, 1976; as modified from time to time through enactment of "Employees Provident Fund and Miscellaneous Provisions Act, 1952", wherever applicable and shall also indemnify the Railway from and against any claims under the aforesaid Act and the Rules.
- 55-C** (i) Contractor is to abide by the provisions of various labour laws in terms of above clause 54, 55, 55-A and 55-B of the Standard General Conditions of Contract. In order to ensure the same, an application has been developed and hosted on website 'www.shramikkalyan.indianrailways.gov.in'. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/updation in Portal shall be done as under:
- (a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all Letter of Acceptances (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 concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.

- (d) After approval of LoA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.
- (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.
- (ii) While processing payment of any 'On Account bill' or 'Final bill' or release of 'Advances' or 'Performance Guarantee / Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

55-D. Provisions of "The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996" and "The Building and Other Construction Workers' Welfare Cess Act, 1996":

The tenderers, for carrying out any construction work, shall get themselves registered with the Registering Officer under Section-7 of the Building and Other Construction Workers Act, 1996 and rules made thereto by the concerned State Govt., and submit certificate of Registration issued from the Registering Officer of the concerned State Govt. (Labour Dept.). The Cess shall be deducted from contractor's bills as per provisions of the Act.

- 56. Reporting of Accidents:** The Contractor shall be responsible for the safety of all employees directly or through petty Contractors or sub-contractor employed by him on the works and shall report serious accidents to any of them however and wherever occurring on the works to the Engineer or the Engineers Representative and shall make every arrangement to render all possible assistance.
- 57. Provision of Workmen's Compensation Act:** In every case in which by virtue of the provisions of Section 12 Sub-Section (1) of the Workmen's Compensation Act 1923, Railway is obliged to pay compensation to a workman directly or through petty Contractor or sub-contractor employed by the Contractor in executing the work, Railway will recover from the Contractor the amount of the compensation so paid, and, without prejudice to the rights of Railway under Section 12 Sub-section (2) of the said Act, Railway shall be at liberty to recover such amount or any part thereof from Contractor's bills/Security Deposit or any other dues of Contractor with the Government of India. Railway shall not be bound to contest any claim made against it under Section 12 Sub-Section (1) of the said Act except on the written request of the Contractor and upon his giving to Railway full security for all costs for which Railway might become liable in consequence of contesting such claim.
- 57-A. Provision of Mines Act:** The Contractor shall observe and perform all the provisions of the Mines Act, 1952 or any statutory modifications or re-enactment thereof for the time being in force and any rules and regulations made there under in respect of all the persons directly or through the petty Contractors or sub-contractors employed by him under this contract and shall indemnify the Railway from and against any claims under the Mines Act, or the rules and regulations framed there under, by or on behalf of any persons employed by him or otherwise.
- 58. Railway not to Provide Quarters for Contractors:** No quarters shall normally be provided by the Railway for the accommodation of the Contractor or any of his staff employed on the work. In exceptional cases where accommodation is provided to the Contractor at the Railway's discretion, recoveries shall be made at such rates as may be fixed by the Railway for the full rent of the

buildings and equipment therein as well as charges for electric current, water supply and conservancy.

- 59.(1) Labour Camps:** The Contractor shall at his own expense make adequate arrangements for the housing, supply of drinking water and provision of latrines and urinals for his staff and workmen, directly or through the petty Contractors or sub-contractors and for temporary crèche (Bal-Mandir) where 50 or more women are employed at a time. Suitable sites on Railway land, if available, may be allotted to the Contractor for the erection of labour camps, either free of charge or on such terms and conditions that may be prescribed by the Railway. All camp sites shall be maintained in clean and sanitary conditions by the Contractor at his own cost.
- 59.(2) Compliance to Rules for Employment of Labour:** The Contractor(s) shall conform to all laws, bye-laws rules and regulations for the time being in force pertaining to the employment of local or imported labour and shall take all necessary precautions to ensure and preserve the health and safety of all staff employed directly or through petty contractors or sub-contractors on the works.
- 59.(3) Preservation of Peace:** The Contractor shall take requisite precautions and use his best endeavours to:
- (i) Prevent any riotous or unlawful behaviour by or amongst his workmen and other employed directly or through the petty Contractors or sub-contractors on the works and for the preservation of peace and protection of the inhabitants and
 - (ii) Security of property in the neighbourhood of the works. In the event of the Railway requiring the maintenance of a Special Police Force at or in the vicinity of the site during the tenure of works, the expenses thereof shall be borne by the Contractor and if paid by the Railway shall be recoverable from the Contractor.
- 59.(4) Sanitary Arrangements:** The Contractor shall obey all sanitary rules and carry out all sanitary measures that may from time to time be prescribed by the Railway Medical Authority and permit inspection of all sanitary arrangements at all times by the Engineer, the Engineer's Representative or the Medical Staff of the Railway. Should the Contractor fail to make the adequate sanitary arrangements, these will be provided by the Railway and the cost thereof recovered from the Contractor.
- 59.(5) Outbreak of Infectious Disease:** The Contractor shall remove from his camp such labour and their families as refuse protective inoculation and vaccination when called upon to do so by the Engineer or the Engineer's Representative on the advice of the Railway Medical Authority. Should cholera, plague, or other infectious disease break out, the Contractor shall burn the huts, beddings, clothes and other belongings of or used by the infected parties and promptly erect new huts on healthy sites as required by the Engineer, failing which within the time specified in the Engineer's requisition, the work may be done by the Railway and the cost thereof recovered from the Contractor.
- 59.(6) Treatment of Contractor's Staff in Railway Hospitals:** The Contractor and his staff, other than labourers and their families requiring medical aid from the railway hospital and dispensaries will be treated as private patients and charged accordingly. The Contractors' labourers and their Families will be granted free treatment in railway hospitals and dispensaries where no other hospitals or dispensaries are available provided the Contractor pays the cost of medicines, dressing and diet money according to the normal scale and additional charges for special examinations such as pathological and bacteriological examination, X-Ray, etc. and for surgical operation.
- 59.(7) Medical Facilities at Site:** The Contractor shall provide medical facilities at the site as may be prescribed by the Engineer on the advice of the Railway Medical Authority in relation to the strength of the Contractor's resident staff and workmen.
- 59.(8) Use of Intoxicants:** The sale of ardent spirits or other intoxicating beverages upon the work or in any of the buildings, encampments or tenements owned, occupied by or within the control of the

Contractor or any of his employees shall be forbidden and the Contractor shall exercise his influence and authority to the utmost extent to secure strict compliance with this condition.

- 59.(9) Restrictions on the Employment of Retired Engineers of Railway Services Within One Year of their Retirement:** The Contractor shall not, if he is a retired Government Engineer of Gazetted rank, himself engage in or employ or associate a retired Government Engineer of Gazetted rank, who has not completed one year from the date of retirement, in connection with this contract in any manner whatsoever without obtaining prior permission of the President and if the Contractor is found to have contravened this provision it will constitute a breach of contract and administration will be entitled to terminate the contract and forfeit his Performance Guarantee as well as Security Deposit.
- 60.(1) Non-Employment of Labourers below the age of 15:** The Contractor shall not employ children below the age of 15 as labourers directly or through petty Contractors or sub-contractors for the execution of work.
- 60.(2) Medical Certificate of Fitness for Labour:** It is agreed that the Contractor shall not employ a person above 15 and below 19 years of age for the purpose of execution of work under the contract unless a medical certificate of fitness in the prescribed form (Proforma at Annexure-VIII of GCC) granted to him by a certifying surgeon certifying that he is fit to work as an adult, is obtained and kept in the custody of the Contractor or a person nominated by him in this behalf and the person carries with him, while at work; a token giving a reference to such certificate. It is further agreed that the responsibility for having the adolescent examined medically at the time of appointment or periodically till he attains the age of 19 years shall devolve entirely on the Contractor and all the expenses to be incurred on this account shall be borne by him and no fee shall be charged from the adolescent or his parent for such medical examination.
- 60.(3) Period of Validity of Medical Fitness Certificate:** A certificate of fitness granted or renewed for the above said purposes shall be valid only for a period of one year at a time. The certifying surgeon shall revoke a certificate granted or renewed if in his opinion the holder of it, is no longer fit for work in the capacity stated therein. Where a certifying surgeon refuses to grant or renew a certificate or revoke a certificate, he shall, if so, required by the person concerned, state his reasons in writing for doing so.
- 60.(4) Medical Re-Examination of Labourer:** Where any official appointed in this behalf by the Ministry of Labour is of the opinion that any person employed in connection with the execution of any work under this contract in the age group 15 to 19 years is without a certificate of fitness or is having a certificate of fitness but no longer fit to work in the capacity stated in the certificate, he may serve on the Contractor, or on the person nominated by him in this regard, a notice requiring that such persons shall be examined by a certifying surgeon and such person shall not if the concerned official so directs, be employed or permitted to do any work under this contract unless he has been medically examined and certified that he is fit to work in the capacity stated in the certificate.

EXPLANATIONS:

- (1) Only Qualified Medical Practitioners can be appointed as "Certifying Surgeons" and the term "Qualified Medical Practitioners" means a person holding a qualification granted by an authority specified in the Schedule to the Indian Medical Degrees Act, 1916 (VII to 1916) or in the Schedule to the Indian Medical Council Act, 1933 (XXVII) of 1933.
- (2) The Certifying surgeon may be a medical officer in the service of State or Municipal Corporation.

DETERMINATION OF CONTRACT

- 61.(1) Right of Railway to Determine the Contract:** The Railway shall be entitled to determine and terminate the contract at any time should, in the Railway's opinion, the cessation of work becomes necessary owing to paucity of funds or from any other cause whatever, in which case the value of approved materials at site and of work done to date by the Contractor will be paid for in full at the

rate specified in the contract. Notice in writing from the Railway of such determination and the reasons therefor shall be conclusive evidence thereof.

61.(2) Payment on Determination of Contract: Should the contract be determined under sub clause (1) of this clause and the Contractor claims payment for expenditure incurred by him in the expectation of completing the whole of the work, the Railways shall admit and consider such claims as are deemed reasonable and are supported by vouchers to the satisfaction of the Engineer. The Railway's decision on the necessity and propriety of such expenditure shall be final and conclusive.

61.(3) The Contractor shall have no claim to any payment of compensation or otherwise, howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of determination of contract.

62.(1) Determination of Contract owing to Default of Contractor:

If the Contractor should:

- (i) Becomes bankrupt or insolvent, or
- (ii) Make an arrangement for assignment in favour of his creditors, or agree to carry out the contract under a Committee of Inspection of his creditors, or
- (iii) Being a Company or Corporation, go into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or
- (iv) Have an execution levied on his goods or property on the works, or
- (v) Assign the contract or any part thereof otherwise than as provided in Clause 7 of these Conditions, or
- (vi) Abandon the contract, or
- (vii) Persistently disregard the instructions of the Engineer, or contravene any provision of the contract, or
- (viii) Fail to adhere to the agreed programme of work by a margin of 10% of the stipulated period, or
- (ix) Fail to Execute the contract documents in terms of Clause 8 of the Regulations for Tenders and Contracts.
- (x) Fails to submit the documents pertaining to identity of JV and PAN in terms of Para 17.11 of Tender Form (Second Sheet) of Annexure-I available in the Instructions to Tenderers.
- (xi) Fail to remove materials from the site or to pull down and replace work after receiving from the Engineer notice to the effect that the said materials or works have been condemned or rejected under Clause 25 and 27 of these Conditions, or
- (xii) Fail to take steps to employ competent or additional staff and labour as required under Clause 26 of the Conditions, or
- (xiii) Fail to afford the Engineer or Engineer's representative proper facilities for inspecting the works or any part thereof as required under Clause 28 of the Conditions, or
- (xiv) Promise, offer or give any bribe, commission, gift or advantage either himself or through his partner, agent or servant to any officer or employee of the Railway or to any person on his or on their behalf in relation to the execution of this or any other contract with this Railway.
- (xv) Fail to adhere to the provisions of Para 16 of Tender Form (Second Sheet) of Annexure I of the Instructions to Tenderers, or provision of above Clause 59(9) of these Conditions.
- (xvi) Submits copy of fake documents / certificates in support of credentials, submitted by the tenderer.

Then and in any of the **said Clause**, the Engineer on behalf of the Railway may serve the Contractor with a notice (Proforma at Annexure-IX) in writing to that effect and if the Contractor does not within seven days after the delivery to him of such notice proceed to make good his default in so far as the same is capable of being made good and carry on the work or comply with such directions as aforesaid of the entire satisfaction of the Engineer, the Railway shall be entitled after giving 48 hours' notice (Proforma at Annexure-X or XII, as the case may be) in writing under the hand of the Engineer to rescind the contract as a whole or in part or parts (as may be specified in such notice) and after expiry of 48 hours' notice, a final termination notice (Proforma at Annexure-XI or XIII, as the case may be) should be issued.

Note: Engineer at his discretion may resort to the part termination of contract with notices (Proforma at Annexure- IX, XII and XIII), only in cases where progress of work is more than or equal to 80% of the original scope of work.

62.(2) Right of Railway after Rescission of Contract owing to Default of Contractor: In the event of any or several of the courses, referred to in Sub-Clause (1) of this Clause, being adopted:

- (a) The Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any commitments or made any advances on account of or with a view to the execution of the works or the performance of the contract and Contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under the contract unless and until the Engineer shall have certified the performance of such work and the value payable in respect thereof and the Contractor shall only be entitled to be paid the value so certified.
- (b) In the contract which has been rescinded as a whole, the Security Deposit already with railways under the contract shall be encashed/forfeited and the Performance Guarantee already submitted for the contract shall be encashed. The balance work shall be got done independently without risk & cost of the failed Contractor. The failed Contractor shall be debarred from participating in the tender for executing the balance work. If the failed Contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV /partnership firm.

Further the authorized representative of failed Contractor cannot be accepted as authorized representative in new contract.

- (c) In the contract rescinded in part or parts,
 - (i) The full Performance Guarantee available for the contract shall be recovered. No additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract. The contract value of part terminated contract stands reduced to the balance value of work under the contract.
 - (ii) The Security Deposit of part terminated contract shall be dealt as per clause 16(2) of GCC.
 - (iii) The defaulting Contractor shall not be issued any completion certificate for the contract.
 - (iv) The balance work shall be got done independently without risk and cost of the failed Contractor. The failed Contractor shall be debarred from participating in the tender for executing the balance work. If the failed Contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV/ partnership firm.
 - (v) Further the authorized representative of failed Contractor will not be accepted as authorized representative in new contract.
- (d) The Engineer or the Engineer's Representative shall be entitled to take possession of any

materials, tools, implements, machinery and buildings on the works or on the property on which these are being or ought to have been executed, and to retain and employ the same in the further execution of the works or any part thereof until the completion of the works without the Contractor being entitled to any compensation for the use and employment thereof or for wear and tear or destruction thereof.

- (e) The Engineer shall as soon as may be practicable after removal of the Contractor fix and determine ex-parte or by or after reference to the parties or after such investigation or enquiries as he may consider fit to make or institute and shall certify what amount (if any) had at the time of rescission of the contract been reasonably earned by or would reasonably accrue to the Contractor in respect of the work then actually done by him under the contract and what was the value of any unused, or partially used materials, any constructional plant and any temporary works upon the site. The legitimate amount due to the Contractor after making necessary deductions and certified by the Engineer should be released expeditiously.

SETTLEMENT OF DISPUTES – INDIAN RAILWAY ARBITRATION AND CONCILIATION RULES

63. Conciliation of disputes:

- (i) This clause is applicable in the tender having advertised value less than or equal to ₹ 50 Crore.
- (ii) 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 "Chief Engineer" or "Divisional Railway Manager" through "Notice of Dispute" provided that no such notice shall be served later than 30 days after the date of issue of Completion Certificate by the Engineer. Chief Engineer or Divisional Railway Manager shall, within 30 days after receipt of the Contractor's "Notice of Dispute", notify the name of conciliator(s) to the Contractor.
- (iii) The Conciliator(s) shall assist the parties to reach an amicable settlement in an independent and impartial manner within the terms of contract.
- (iv) If the parties reach agreement on a settlement of the dispute, they shall draw up and sign a written settlement agreement duly signed by Engineer In-charge, Contractor and conciliator(s). When the parties sign the settlement agreement, it shall be final and binding on the parties.
- (v) The parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.
- (vi) The conciliation proceedings shall be terminated as per section 76 of 'The Arbitration and Conciliation Act, 1996

63.1 Matters Finally Determined by the Railway: 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 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), 62(1), 63(iv) and 63.2.11 of Standard General Conditions of Contract or in any Clause (stated as excepted matter) of the Special Conditions of the Contract or in any Clause (stated as excepted matter) of the Special Conditions of the 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 Dispute Adjudication Board (DAB) and Arbitration.

63.2 Dispute Adjudication Board (DAB): This clause is applicable in the tender having advertised value more than ₹ 50 Crore.

63.2.1 Any dispute/s if not settled with the Engineer, shall be referred to DAB.

The DAB shall consist of a panel of three Retired Railway Officers, retired not below senior administrative grade (SAG). The DAB shall be formed within 90 days of signing of Contract Agreement. For this purpose, a panel of DAB members shall be maintained in the General Manager's office. The complete panel, which shall not be less than five members, shall be sent by Chief Engineer to the Contractor to nominate one member of the DAB from the panel as Contractor's nominee within two weeks of receipt of the panel. On receipt of Contractor's nominee, the Chief Engineer shall nominate one member from the same panel as Railway nominee for the DAB. Both above nominees shall jointly select presiding member of the DAB from the same panel.

63.2.2 The appointment of DAB shall be effectuated by way of a tri-partite agreement among the Railway, Contractor and the respective DAB members. The terms of the remuneration of each member shall be as fixed by Ministry of Railways from time to time. Each party shall be responsible for paying one-half of this remuneration.

63.2.3 If one or more of the members appointed refuses to act as DAB member, or is unable or unwilling to perform his functions as DAB member for any reason whatsoever or dies or in the opinion of the Chief Engineer fails to act without undue delay, the parties shall terminate the mandate of such DAB member and thereupon new DAB member shall be appointed in the same manner, as the outgoing DAB member had been appointed.

63.2.4 The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Railway or the Contractor acting alone. Unless otherwise agreed by both the Parties, the appointment of the DAB (including each member) shall expire upon expiry of this Contract Agreement.

63.2.5 Before start of DAB proceedings, each DAB member shall give the following certificate to the Railway and the Contractor:

"I have no any past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind. Further, I have no any past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality."

63.2.6 DAB proceedings shall be conducted as decided by the DAB. The DAB shall give its decision within 90 days of a Dispute referred to it by any of the Parties, duly recording the reasons before arriving at the decision. The DAB shall decide the issue within terms and conditions of the contract. This time limit shall be extendable subject to the Parties mutual agreement.

63.2.7 The DAB decision shall not be binding on both the Parties. In case any party is not satisfied by the decision of DAB, then the aggrieved party may approach Arbitral Tribunal for arbitration proceedings.

63.2.8 No dispute shall be referred to Arbitral Tribunal unless the same has been referred to DAB for adjudication. However, in case DAB is not formed due to any reason, the disputes can be directly referred to Arbitral Tribunal to adjudicate the dispute.

63.2.9 In the specific cases of any misconduct by any of the members of the DAB, the parties shall have the right to specifically bring it to the notice of the DAB such conduct, through a statement filed with necessary documents in proof of such misconduct and the DAB, after taking NOTICE of such conduct initiate the replacement of the member concerned, in the same manner the member to be replaced was appointed.

63.2.10 Once the decision is given by DAB, DAB cannot review the decision at its own or on the request of one party, unless both parties agree for review of decision by DAB.

- 63.2.11** In case DAB decision is not challenged by either party within 180 days of receipt of decision of DAB, the decision shall be considered as final and parties would be barred for referring the same to Arbitral Tribunal for adjudication.
- 63.2.12** The obligation of the Railway and the Contactor shall not be altered by reasons of issue being or under reference to DAB.
- 63.2.13** The DAB shall conduct the proceedings at any convenient venue which shall be decided by DAB in consultations with parties.
- 63.2.14** It is a term of this contract that the Parties shall not approach any Court of Law for settlement of such disputes or differences unless an attempt has first been made by the parties to settle such disputes or differences through DAB and Arbitral Tribunal.

64.(1) Demand for Arbitration:

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

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

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

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

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

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

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

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

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

64.(1)(iii)(d): Place of Arbitration: The place of arbitration would be within the geographical limits of the Division of the Railway where the cause of action arose or the Headquarters of the concerned Railway or any other place with the written consent of both the parties.

64.(1)(iv): No new claim shall be added during proceedings by either party. However, a party may

amend or supplement the original claim or defense thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

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

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

64.(3) Appointment of Arbitrator:

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

64.(3)(a)(i): If contractor wants to choose his nominee from Railway panel, the Railway will send a panel of at least four (4) names of retired Railway Officers empaneled to work as Arbitrator within 30 days from the day when a written and valid demand for arbitration is received by the General Manager/Additional General Manager. Contractor will be asked to suggest to General Manager/Additional General Manager at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by Railway. The General Manager/Additional General Manager shall appoint at least one out of them as the Contractor's nominee within 30 days from the receipt of the names of Contractor's nominees. The railway panel shall be provided free of cost to the contractor.

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

Some general guidelines of ICA Rules for Domestic Commercial Arbitration are as under –

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

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

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

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

64.(3)(c)(ii):

- (a) The Arbitral Tribunal shall have power to call for such evidence by way of affidavits or otherwise as the Arbitral Tribunal shall think proper, and it shall be the duty of the parties hereto to do or cause to be done all such things as may be necessary to enable the Arbitral Tribunal to make the award without any delay. The proceedings shall normally be conducted on the basis of documents and written statements.
- (b) Before proceeding into the merits of any dispute, the Arbitral Tribunal shall first decide and pass its orders over any plea submitted/objections raised by any party, if any, regarding appointment of Arbitral Tribunal, validity of arbitration agreement, jurisdiction and scope of the Tribunal to deal with the dispute (s) submitted to arbitration, applicability of time 'limitation' to any dispute, any violation of agreed procedure regarding conduct of the arbitral proceedings or plea for interim measures of protection and record its orders in day to day proceedings. A copy of the proceedings duly signed by all the members of tribunal should be provided to both the parties.

64.(3)(c)(iii):

(i) Qualification of Railway Empaneled Arbitrator(s):

- (a) Retired Railway Officers not below SA Grade level, one year after his date of retirement.
- (b) Age of arbitrator at the time of appointment shall be below 70 years.
- (c) Persons not involved in any current vigilance/CBI cases or against whom disciplinary or prosecution proceedings are not in process.
- (d) Persons who had not been imposed a major penalty or two or more minor penalties or against whom administrative action has not been taken three times or more or
- (e) Persons who have not been imposed one minor Penalty and against whom two administrative actions have not been taken as a result of vigilance/CBI action while in service on Railways.

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

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

course of his service, opportunity to deal with the matters to which the contract relates or who in the course of his/their duties expressed views on all or any of the matters under dispute.

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

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

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

- 64.(4)** Any ruling on award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.
- 64.(5)** Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.
- 64.(6)** The cost of arbitration shall be borne by the respective parties. If all the three arbitrators are selected from the Railway Panel, the fee of the arbitrators shall be determined as per the rates fixed/revised by Railway Board from time to time and the fee shall be borne equally by both the parties, provided parties sign an agreement in the format given at Annexure XV to these conditions after/ while referring these disputes to Arbitration. However, if any of the three arbitrators is selected from the Panel of Indian Council of Arbitration (ICA), the fee of the arbitrators shall be determined as per the rates fixed/revised by the Indian Council of Arbitration from time to time and the fee shall be borne equally by both the parties, provided parties sign an agreement in the format given at Annexure XV to these conditions after/ while referring these disputes to Arbitration.
- 64.(7)** Subject to the provisions of the aforesaid Arbitration and Conciliation Act 1996 and the rules there under and relevant Para of General Conditions of Contract (GCC) and any statutory modifications thereof shall apply to the appointment of arbitrators and arbitration proceedings under this Clause.
- 64.(8)** In case arbitration award is challenged by a party in the Court of Law, 75% of award amount, pending adjudication by Court of Law, shall be made by party to other party. In case payment is to be made by Railway to Contractor, the terms and conditions as incorporated in the Ministry of Railways letter No. 2016/CE(I)/CT/ARB/3(NITI Aayog)/Pt. dated 8th Mar, 2017 as amended from time to time, shall be followed. In case Contractor has to pay to the Railway, then 75% of the award amount shall be deducted by the Railway from the Contractor's bills, Performance Guarantee/ Security Deposit or any other dues of Contractor with the Government of India.

PART-II – ANNEXURES

ANNEXURE – VII

Reference Para 17B

Registered Acknowledgement Due

PROFORMA FOR TIME EXTENSION

No. _____ Dated: _____

Sub: (i) _____ (name of work).

(ii) Acceptance letter no. _____

(iii) Understanding/Agreement no. _____

Ref: _____ (Quote specific application of Contractor for extension to the date received) _____

Dear Sir,

1. The stipulated date for completion of the work mentioned above is _____. From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or 'However, the work was not completed on this date').
2. Expecting that you may be able to complete the work if some more time is given, the competent authority, although not bound to do so, hereby extends the time for completion from _____ to _____.
3. Please note that an amount equal to the liquidated damages for delay in the completion of the work after the expiry of _____ (give here the stipulated date for completion with/without any liquidated damage fixed earlier) will be recovered from you as mentioned in Clause 17B of the Standard General Conditions of Contract for the extended period, notwithstanding the grant of this extension. You may proceed with the work accordingly.
4. The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.
5. Please intimate within a week of the receipt of this letter your acceptance of the extension of the conditions stated above.
6. Please note that in the event of your declining to accept the extension on the above said conditions or in the event of your failure after accepting or acting up to this extension to complete the work by _____ (here mention the extended date), further action will be taken in terms of Clause 62 of the Standard General Conditions of Contract.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – VIIA
Reference Para 40(A)
Registered Acknowledgement Due

PROFORMA OF 14 DAYS NOTICE FOR OFFLOADING OF PART OF CONTRACT WORK
WESTERN RAILWAY
(Without Prejudice)

To,

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. In spite of repeated instructions to you by the subordinate offices as well as by this office through various letters of even no. _____, dated _____; you have failed to show adequate progress of work so as to complete the contract within the original/ extended date of completion of contract and part(s) of contract work are yet to be started/ still lagging behind the agreed program of work, listed as under:

(Details of part(s) of work which is delayed and can be executed independently, to be mentioned).

2. Your attention is invited to this office's letter No. _____, dated _____ in reference to your representation, dated _____.
3. As you have failed to abide by the instructions issued to commence the work /to show adequate progress of work, you are hereby given 14 days' notice in accordance with Clause 40A of the Standard General Conditions of Contract to deploy adequate resources i.e. (the details of resource requirement, to be mentioned) and commence / to make good the progress for part(s) of works detailed above, failing which action as provided in Clause 40A of the Standard General Conditions of Contract shall be commenced after expiry of 14 days' notice period viz. to offload few/ all part(s) of work mentioned above to any of the existing or new contractor without your participation and at your Risk & Cost, not exceeding the value of Performance Guarantee of this contract, which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – VIIB

Reference Para 17B

Registered Acknowledgement Due

NOTICE FOR PART OF CONTRACT WORK OFFLOADED

WESTERN RAILWAY

(Without Prejudice)

To,

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Fourteen days' notice under Clause 40A of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no/inadequate action to deploy adequate resources to commence the part(s) of work/show adequate progress of the part(s) of work, mentioned therein.

As you have failed to abide by the instructions issued to commence the part(s) of work/show adequate progress of the part(s) of work even at the lapse of 14 days' notice period under Clause 40A of the Standard General Conditions of Contract, few part(s) of the work under the contract have been offloaded and being executed by other mode(s) at the cost detailed below:

OR,

1. Please refer your request letter No..... dated, wherein it was requested under clause 40 A of the Standard General Conditions of Contract to offload part(s) of works at your risk & cost. The details of part(s) of the work under the contract which have been offloaded and being executed by other mode(s) at the cost detailed below:

(List of Part(s) of work offloaded, Details of mode of execution of such offloaded work along with approximate cost thereof to be mentioned).

2. The final measurement of work(s) already executed for above part(s) of work recorded as per clause 45 (A) or/and 45 (B) of the Standard General Conditions of Contract is enclosed herewith.
3. The Bill(s) of Quantities for Part(s) of work offloaded is enclosed herewith.
4. The additional cost in execution of offloaded work through mode(s) mentioned in para (1) above is determined as ₹ _____, over& above the cost of execution under this contract (including the PVC amount payable as per contract, as on the date of issue of this notice). This additional cost shall be recovered from your next on account bill(s) or any other dues payable to you under contract.
5. The Contract value gets reduced to ₹.....:
6. You are requested to continue with the balance work in the contract subsequent to offloading of above part(s) of work.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

SSEE (Tech) PRTN

ADEE (Power) BRC

Sr. DEE (Power) BRC

CERTIFICATE OF FITNESS

1. (a) Serial Number _____
(b) Date _____
2. Name of person examined _____
3. Father's Name: son/daughter of _____
Residing at _____
4. Sex _____
5. Residence _____
6. Physical fitness
7. Identification marks _____
8. Date of birth, if available, and/or certified age _____

I certify that I have personally examined (name) _____ who is desirous of being employed in a factory or on a work requiring manual labour and that his/her age as nearly as can be ascertained from my examination, is _____ years.

I certify that he/she is fit for employment in a factory or on a work requiring manual labour as an adult/child.

9. Reasons for:
(a) Refusal to grant certificate, or _____
(b) Revoking the certificate _____

Signature or left-hand thumb impression

Of the person examined.

Signature of Certifying Surgeon

Note: In case of physical disability, the exact details and cause of the physical disability should be clearly stated.

ANNEXURE – IX

Reference Clause 62. (1)

Registered Acknowledgement Due

PROFORMA OF 7 DAYS NOTICE FOR WORKS AS A WHOLE/IN PARTS

(DETAILS OF PART OF WORK TO BE MENTIONED)

WESTERN RAILWAY

(Without Prejudice)

To,

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. In spite of repeated instructions to you by the subordinate offices as well as by this office through various letters of even no. _____, dated _____; you have failed to start work/show adequate progress and/or submit detailed programme for completing the work/part of work (details of part of work to be mentioned).
2. Your attention is invited to this office's letter no. _____, dated _____ in reference to your representation, dated _____.
3. As you have failed to abide by the instructions issued to commence the work /to show adequate progress of work you are hereby given 7 days' notice in accordance with Clause 62 of the Standard General Conditions of Contract to commence works / to make good the progress, failing which further action as provided in Clause 62 of the Standard General Conditions of Contract viz. to terminate your Contract and complete the balance work without your participation will be taken.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – X

Reference Clause 62. (1)

Registered Acknowledgement Due

PROFORMA OF 48 HOURS' NOTICE FOR WHOLE WORK

WESTERN RAILWAY

(Without Prejudice)

To,

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Seven days' notice under Clause 62 of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the work.
2. You are hereby given 48 hours' notice in terms of Clause 62 of the Standard General Conditions of Contract to commence works / to make good the progress of works, failing which and on expiry of this period your above contract will be rescinded and the work under this contract will be carried out independently without your participation and your Security Deposit shall be forfeited and Performance Guarantee shall also be encashed and any other consequences which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – XI
Reference Clause 62. (1)
Registered Acknowledgement Due

PROFORMA OF TERMINATION NOTICE

WESTERN RAILWAY

(Without Prejudice)

No. _____

Dated _____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

Forty-eight hours (48 hours) notice was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the work.

Since the period of 48 hours' notice has already expired, the above contract stands rescinded in terms of Clause 62 of the Standard General Conditions of Contract and the balance work under this contract will be carried out independently without your participation. Your participation as well as participation of every member/partner in any manner as an individual or a partnership firm/JV is hereby debarred from participation in the tender for executing the balance work and your Security Deposit shall be forfeited and Performance Guarantee shall also be encashed.

The Final measurements of work executed by you against the said contract will be taken /started on _____ at _____ hours at site. The measurement will be continued till all the measurements are taken. You are advised to be present at site on the above mentioned date and time to witness the measurements, otherwise measurements will be taken ex-parte and thereafter, variation (addendum & corrigendum) and final bill of work executed till date of termination based on ex-parte final measurements shall also be processed ex-parte.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – XII

Reference Clause 62. (1)

Registered Acknowledgement Due

PROFORMA OF 48 HOURS' NOTICE FOR PART OF THE WORK

WESTERN RAILWAY

(Without Prejudice)

To,

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Seven days' notice under Clause 62 of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the part of work..... (details of part to be mentioned).
2. You are hereby given 48 hours' notice in terms of Clause 62 of the Standard General Conditions of Contract to commence works/to make good the progress of works, failing which and on expiry of this period your above part of work..... (details of part to be mentioned) in the contract will be rescinded and the work contract will be carried out independently without your participation.
3. Your full Performance Guarantee for the contract shall be forfeited and any you shall not be issued any completion certificate for the contract. However, no additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract.
4. The contract value of part terminated contract shall stands reduced to

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

ANNEXURE – XIII

Reference Clause 62. (1)

Registered Acknowledgement Due

**PROFORMA OF TERMINATION NOTICE FOR PART OF THE WORK
(DETAILS OF PART OF WORK TO BE MENTIONED)**

WESTERN RAILWAY

(Without Prejudice)

No. _____

Dated _____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Forty-eight hours (48 hours) notice was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the part of work..... (details of part to be mentioned).
2. Your above part of work in contract (details of part to be mentioned) stands rescinded in terms of Clause 62 of the Standard General Conditions of Contract and the same will be carried out independently without your participation. Your participation as well as participation of every member/partner in any manner as an individual or a partnership firm/JV is hereby debarred from participation in the tender for executing the balance work.
3. Your full Performance Guarantee for the contract shall be forfeited and you shall not be issued any completion certificate for the contract. However, no additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract.
4. The contract value of part terminated contract stands reduced to

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

FINAL SUPPLEMENTARY AGREEMENT

- Articles of agreement made this day _____ in the year _____ between the President of India, acting through the _____ Railway Administration having his office at _____ herein after called the Railway of the one part and _____ of the second part.
- Whereas the party hereto of the second part executed an agreement with the party hereto of the first part being agreement Number _____ dated _____ for the performance _____ herein after called the 'Principal Agreement'.
- And whereas it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on _____ date last extended and whereas the party hereto of the second part has executed the work to the entire satisfaction of the party hereto of the first part.
- And whereas the party hereto of the first part already made payment to the party hereto of the second part diverse sums from time to time aggregating to ₹ _____ including the Final Bill bearing voucher No. _____ dated _____ of value _____ duly adjusted as per price variation clause, if applicable (the receipt of which is hereby acknowledged by the party hereto of the second part in full and final settlement of all his /its claims under the principal agreement.

And whereas the party hereto of the second part have received sum of ₹ _____ through the Final Bill bearing voucher No. _____ dated _____ duly adjusted as per price variation clause (PVC), if applicable (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part in full and final settlement of all his/its disputed claims under principal agreement.

Now, it is hereby agreed by and between the parties in the consideration of sums already paid by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement excluding the Security Deposit, the party hereto of the second part have no further dues of claims against the party hereto of the first part under the said Principal Agreement. It is further agreed by and between the parties that the party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said Principal Agreement.

(Applicable in case Final Supplementary Agreement is signed after release of Final Payment)

Or

And whereas the party hereto of the first part already made payment to the party hereto of the second part diverse sums from time to time aggregating to ₹ _____ through various On Account Bills (the receipt of which is hereby acknowledged by the party hereto of the second part).

And whereas the party hereto of the second part have received sum of ₹ _____ through various On Account Bills (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part and party hereto of the second part have accepted final measurements recorded on Page No.... to Page No.... of Measurement Book No.....and corresponding Final Bill duly adjusted as per price variation clause (PVC), if applicable, for full and final settlement of all his/its disputed claims under principal agreement.

Now, it is hereby agreed by and between the parties in the consideration of sums already paid through various On Account Bills and sums to be paid through Final Bill duly adjusted as per price variation clause (PVC), if applicable, based on accepted final measurements including the Security Deposit by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement, the party hereto of the second part have no further dues of claims against the party hereto of the first part under the said Principal Agreement.

(Applicable in case Final Supplementary Agreement is signed before release of Final Payment).

5. It is further agreed and understood by and between the parties that the arbitration clause contained in the said principal agreement shall cease to have any effect and/or shall be deemed to be non-existent for all purposes.

Signature of the Contractor/s

For and on behalf of the President of India

Witnesses

ADDRESS: _____

ANNEXURE-XV

Reference Para 64.3 & 64.6

Agreement towards Waiver under Section 12(5) and Section 31A (5) of Arbitration and Conciliation (Amendment) Act

I/we..... (Name of agency/Contractor) with reference to agreement no..... raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims:

Brief of claim:

- (i) Claim 1- Detailed at Annexure –
- (ii) Claim 2 –
- (iii) Claim 3 –

I/we..... (post of Engineer) with reference to agreement no..... hereby raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims:

I/we.....do/do not agree to waive off applicability of section 12(5) of Arbitration and Conciliation (Amendment) Act.

Signature of Claimant_____

Signature of Respondent_____

Agreement under Section 31(5)

I/we..... (Name of claimant) with reference to agreement no..... hereby waive off the applicability of sub section 31-A (2) to 31-A (4) of the Arbitration and Conciliation (Amendment) Act. We further agree that the cost of arbitration will be shared by the parties as per Clause 64(6) of the Standard General Conditions of Contract.

Signature of Claimant_____

Signature of Respondent_____

**Strike out whichever is not applicable.*

**Certification by Arbitrators appointed under Clause 63 & 64 of Indian Railways General
Conditions of Contract**

1. Name:
2. Contact Details:
3. Prior experience (Including Experience with Arbitrations):
4. **I do not have more than ten on-going Arbitration cases with me.**
5. I hereby certify that I have retired from Railways w.e.f. _____ and empanelled as Railway Arbitrator as per 'The Arbitration and Conciliation Act- 1996'.
6. I have no any past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind.

Or

I have past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind. The list of such interests is as under:

7. I have no any past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality in terms of The Arbitration and Conciliation Act-1996.

Or

I have past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality in terms of The Arbitration and Conciliation Act-1996. The details of such relationship or interests are as under:

8. There are no concurrent Circumstances which are likely to affect my ability to devote sufficient time to the arbitration and in particular to finish the entire arbitration within twelve months.

Or

There are Circumstances which are likely to affect my ability to devote sufficient time to the arbitration and in particular to finish the entire arbitration within twelve months. The list of such circumstances is as under:

Insurance Surety Bond for Performance Security

Name of the issuer of surety bond:

President of India,

Acting through.....,

Western Railway.

Date -

Surety Bond No.:.....

Issue Date:

Amount of Bond:

Expiry Date:

WHEREAS, in consideration of the President of India acting through (Sr. Divisional Electrical Engineer (Power) Vadodara), Western Railway (hereinafter called "The Railway") having accepted the bid of M/s XXXXXXXXXX hereinafter called the contractor, for the work of "xxxx" under invitation for bids No. XXXXX dated XXXXXXXX, vide Letter of Acceptance No.....

AND

WHEREAS, the contractor is required to furnish Performance Security for the sum of Rs. XXXXXX (Rupees .XXXXXX 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 **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 **Rs. XXXX (Rupees XXXX Only)** as above stated.
2. The Surety undertakes to immediately pay on presentation of demand by the Railway any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway on the Surety shall be final, conclusive and binding, absolute and unequivocal 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 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 XXXX (*Expiry Date*). All demands for payment under the Bond must be received by us on or before that date.
9. The Surety agrees that the Railways right to demand payment of aforementioned full amount in one instance or demand payments in parts totaling 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 **Rs. XXXX (*Rupees XXXX Only*)**.
- b. This Surety Bond shall be valid up to **XXXX (*being the date of expiry*)**;
- c. Unless the bank is served a written claim or demand on or before **XXXX (*date of expiry*)** all rights under this Bond shall be forfeited and the Surety shall be relieved and discharged from all liabilities under this Bond irrespective of whether or not the original Surety bond is returned to the Surety.

Dated – the day of 202

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

Place.....

Bank's Seal and authorized signatures(s)

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

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

[*P/Attorney*] No.....

Witnesses

- 1.
- 2.

* * * * *

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

SPECIAL CONDITIONS OF CONTRACT FOR ELECTRICAL WORKS

1.0 GENERAL:

- 1.1 The contract shall be governed by Standard General Conditions of Contract (GCC) (with latest amendment if any) of Engineering Department and Special Condition of Contract (SCC) given below. The following Special Conditions shall supplement and be read in conjunction together with above Standard General Conditions of Contract (GCC) (with latest amendment if any), General/technical specifications, schedule of quantities, explanatory notes, drawings and any other document forming part of this tender. The General Conditions of Contract are available on Indian Railways' website www.indianrailways.gov.in.
- 1.2 Work under this contract shall be executed as given in this tender document and as required at site whether specifically shown or not. The Contractor shall carry out and complete the work under this contract in every respect in conformity with the contract documents, as per directions of and to the satisfaction of the Purchasers' Representative.
- 1.3 SCC for electrical work is generic in nature and shall apply in general unless modified/specified otherwise in schedule of quantities.

2.0 INTERPRETATION:

In all matters of clarifications or dispute of interpretation the decision of the "engineer "in-charge of the work, shall be final and binding.

3.0 SCOPE OF WORK:

- 3.1 Scope of work under this contract shall include the supply of spares, overhauling of machines/assemblies, testing at site / manufacturers' works, storage, erection, site testing and commissioning of the works and other provisions as specified in schedule of work, specification as per GCC, SCC and other documents comprising of tender document but not restricted to.
- 3.2 Tenderer shall go through the specifications, related standards, requirement schedule and other contract conditions and shall include in his quote all the provision whether specified clearly or not for successful testing and commissioning. All such provisions are deemed as included unless pointed out while quoting of the offer.
- 3.3 The contractor shall include the supply of entire materials in accordance with specification and the whole of the work necessary for the complete installation as set down in this specification and with the accompanying schedules and drawings. Materials and components not specifically stated in the specifications and/or bill of materials or noted on the drawings or anywhere in tender document but which are necessary for satisfactory installation /commissioning and operation of the system shall be deemed to have been included in the scope of work.

4.0 STANDARDS AND DESIGN:

4.1 STANDARDS:

The system offered shall be based on the latest relevant standards and specifications as indicated in **Specification Parts** of the tender document.

4.2 DESIGN:

- 4.2.1 Tenderer shall design the system for Design, Manufacture, Supply, Installation, Testing and Commissioning of the work *as specified* in the schedule of work but not limited to. It shall include all the designs as may be required for successful contractual obligations.
- 4.2.2 Details of specific system requirements are specified in the specification enclosed. Design of system being offered by tenderer including characteristics shall be fully furnished in the offer giving supporting documents, calculations, drawings and schematic diagrams.
- 4.2.3 The successful tenderer, after the award of contract shall submit the detailed final Design / calculations / other technical particulars/information of the entire system within a period of 4 to 6 weeks or less as desired by the engineer, along with individual design, technical particulars of each

equipment for the purchaser's approval. Orders for procurement of equipment should only be placed after the receipt of purchaser's approval.

5.0 SPECIFICATIONS AND SCHEDULES:

- 5.1 Technical specifications forming a part of this contract are intended to cover work referred herein enclosed. It is not the intent to specify completely herein all aspects of design, constructional features of equipment and details of the work to be carried out, but nevertheless the intent of the specification is to ensure that the equipment and work shall conform in all respects to the relevant RDSO, CORE, Bureau of Indian Standard Specifications, CEE/Western Railways' Specification, Codes of Practice, Indian Electricity Act, Indian Electricity Rules and other Statutory Regulations as may be applicable and to high standards of engineering, design and workmanship. The equipment and work shall perform in continuous operation in a manner acceptable to the Purchaser's Representative who will interpret the meaning of the specifications and drawings and shall have the right to reject or accept any equipment or work, which in their assessment is not complete to meet the requirements of this specification and/or applicable Codes and Standards. Any item specially mentioned or not in the scope of work as per approved design, drawing and specification, but required to complete the work shall be deemed to be in the scope.
- 5.2 The work shall conform to all provisions of the relevant Government Legislation, Regulations and Bye- laws of the Central/Local Authorities and of any State Electricity Boards/Companies to whose system the installation is proposed to be connected. The Contractor shall arrange to give all necessary notices required under the said Acts, Regulations and/or Bye- laws.
- 5.3 The contractor shall examine the installations' specifications, drawings and schedule of quantities for feasibility and safety and may suggest or ask for change required if any to provide satisfactory and safe services of the equipment designated for the station but the decision of the engineer in-charge of the work shall be final and binding.
- 5.4 The Technical specifications and schedule of quantities and rates shall be considered as part of this contract and any work or materials shown in schedule and not called for in the specifications or vice versa, shall be executed as if specifically called for in both. The drawings if any are for the guidance of the contractor. Exact locations, distances and levels will be governed by the site conditions.
- 5.5 The quantities indicated in Schedule are approximate. The successful tenderer will place the order for materials only after carrying out survey jointly with railways as per site requirement after obtaining the approval to the design and drawings.
- 5.6 Special Condition of Contract (SCC) shall be read in conjunction with the general conditions of the contract, technical specifications, schedule of quantities, drawings and any other document forming part of this tender/contract. For any discrepancy between the general conditions and special conditions, provisions of special conditions shall prevail. For any discrepancy between technical specifications and schedule of quantities, the provisions of schedule of quantities shall prevail. The decision of the Engineer in-charge of the work shall be final and binding in the regard.
- 5.7 Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that the Contractor shall do so at his own cost.
- 5.8 Contractor shall get the arranged material inspected/tested as required before use and shall not move/ dispose off the material so arranged without the written permission of authorized representative of Purchaser.

6.0 SITE WORKING CONDITIONS:

- 6.1 Tenderers, if they so desire, can, before submitting the tender, inspect the site of the work after obtaining prior approval from Purchasers' Representative in order to familiarize themselves of the conditions of work prevailing at site as also quantum of statutory levies (taxes, duties etc.) applicable. No extra claim on account of lack of such knowledge shall be entertained after award of

contract.

- 6.2 All equipment and work covered by this contract shall be capable of operating continuously and delivering the rated output at ambient conditions prevailing at site. The anticipated maximum and minimum extremes of temperatures and Relative humidity at site are as specified in Specifications.
- 6.3 Contractor shall make all arrangements of power distribution and lighting etc at site as required for night working if any.
- 6.4 The contractor is required to flexibly plan activity and mobilize staff so as to complete the planned activity during available power block. It may be noted that the contractor is liable for penalty on overshooting of such power block affecting train punctuality or any inconvenience to railways as deemed fit in the opinion of the engineer and may be recoverable from dues payable to the contractor.

7.0 MATERIALS AND EQUIPMENTS:

7.1 Procurement of Material –

All materials and equipment shall be new and of the approved make and design and as per schedule of quantities. Contractor shall identify the sources and order for the approved make of material only and shall progressively forward the copy of order placed and test certificates of the material to the Engineer/Purchaser's Representative.

- 7.1.1 Also following guidelines for inspection/testing of the electrical equipment/components used in works contract shall be adhered to (circulated vide RB's letter No. 2005/Elect (G) 180/Misc. Instruction/1/08-09 dated 20/06/2008).

- a. Where testing of materials as stores supplied by Contractor is required, it shall be got done in laboratories in workshops of Railways or in Govt. approved test labs with CEE's approval.
- b. For other items, sources shall be as approved by CEE of Zonal Railway and the list of approved manufactures/brands will be available on website of Railways. For such items Railway may accept manufacture's test certificate with sample checks to ensure proper quality of goods.
- c. For all items which are granted star rating by BEE (Bureau of Energy Efficiency) sources will be strictly to BEE's guidelines/approvals.

7.2 APPROVED MAKE:

Successful tenderer has to procure the material from latest list of RDSO/CEE-WR's approved supplier only where available. The Contractor shall arrange to provide all equipment/ accessories as required for the work as per the approved list of the makes as specified in the specifications unless the change is approved by the Engineer, in case of non-availability or better substitute in writing. Contractor shall arrange/ provide best material best suitable to the application duty and to the specification requirement out of the listed make and contractor shall be deemed to have taken such consideration while quoting the offer. However, the purchaser's engineer reserves the right to choose any of the make out of the listed make. Where such list of approved makes is not available, the makes of items shall be approved by the engineer.

7.3 SAMPLES:

A list of items of materials and equipment together with samples, as required, shall be submitted to 'Engineer' as per agreed schedule, for approval, before being used on work. No change in samples and deviations from drawings of equipment shall be made from without the written instructions of the Purchasers' representative. Approvals given by the Purchasers' representative to any samples or drawings submitted by the Contractor shall not in any way exonerate the Contractor from his liability to carry out the work in accordance with the terms of the contract and serving the purpose as per the standards. No extra payment shall be made for arranging samples.

7.4 MOBILIZATION OF MATERIAL AND RESOURCES:

The contractor is required to mobilize all the material, resources and manpower as per the

completion period and the agreed schedule with the engineer.

7.5 SHIFTING OF MATERIAL:

Purchaser takes no guarantee to provide rail transport facility. However, the same may be made available for movement of material like masts etc on nominal payment as applicable to other consignment. But Contractor is required to make proper assessment of the requirement and place the indent, load, unload and transfer the material in time. Charges if any due to delay shall be borne by the contractor. However, the Railways takes no guarantee to provide such facility and contractor shall not be entitled to any delay/ extension of work on this account.

7.6 ACCOUNTAL OF RELEASED MATERIAL:

The released material if any shall be handed over to the engineer's representative at the nominated depot/place as directed by the engineer. The quantity of released material should commensurate with the assessed/execute/erected quantities at site as per approved quantities, drawings and specifications etc. The contractor shall jointly sign the receipt of released material with the engineer's authorized representative for having correctly received in safe condition. The cost of released material in shortage shall be recovered from the contractor's payment due. Quantity executed should commensurate with the material released and handed over with due certification in this effect by site engineer for having made proper account of released material.

8.0 Inspection of Material:

8.1 Inspection of the materials will be carried out by RDSO/RITES or by authorized representative of the Engineer in-charge of the work, at the Manufacturer's premises in presence of Contractor's representative, prior to dispatch. All the materials/equipment to be supplied shall conform to the relevant specification only.

8.2 The inspection charges, if any, shall be reimbursed by the railway on production of documentary evidence from RITES/RDSO/authorized and approved testing agency as demanded by the engineer.

8.3 However, in the event of exigencies Railway reserves the right to change the inspecting authority from RITES/RDSO to Consignee.

9.0 CONTRACTOR'S ORGANIZATION:

9.1 The tenderer shall constitute a competent qualified electrical team of the firm/partnership/ JV/Co-operative or company of their employees/representative, key personnel to execute the electrical work in strict compliance to statutory rules and specifications, drawings and relevant standards.

9.2 Contractor shall employ only qualified technical staff (having Degree or Diploma in Electrical Engineering) to supervise and carry out the work and maintain an all-time team at its headquarter office for prompt liaison. Necessary details as asked in formats be furnished regarding electrical team proposed for the work with details of Name of Supervisors/Employees shall be furnished and got approved from the Engineer; any changes in the staff shall also be similarly advised. Tenderer shall have equipment, machines, materials and labour and infrastructure shall be available to execute the work.

9.3 The contractor shall not **sublet or assign** this contract or allow any person to become interested therein in any manner without the written permission of the Engineer in-charge of the work. In the event of the contractor subletting or assigning the contract or any part thereof without such written permission, the Railway Administration shall be entitled to cancel the contract and also recover payment of any loss or damage from such cancellation, the amount of which will be determined by the Electrical engineer in-charge of the work.

9.4 Contractor shall maintain appropriate communication facilities viz. fax machine, mobile/land line telephone at their office and telephone communication at work site during currency of the contract and Guarantee period to monitor the progress of the work.

Successful tender shall inform to purchaser about office address, residential address,

communication facilities as mentioned above within 7 days from the issue of LOA and inform progress activity to Railway officer in-charge and his authorized representative i.e. field supervisors etc.

- 9.5 The contractor shall maintain transport facility with proper office premises also during period of execution and guarantee/warranty.

9.6 Engagement of engineer/supervisors for execution of works:

The contractor shall employ the Engineer (Diploma Holder) as under:

Qualified Diploma Holder Engineer when cost of work to be executed is more than ₹ 25.0 Lakh but less than ₹ 200.0 Lakh.

The contractor would be required to furnish the name, with complete bio-data including the work experience of the Engineers/supervisors to the Divisional Executive engineer, in charge of the work for his approval.

The technical supervisor given above shall be available at site during the execution of the works to ensure quality, quantity of the work and also ensure safety of work site and that of the workers and whenever required by the Engineer in charge to take instruction.

In case the contractor fails to employ the technical supervisor as aforesaid a sum of ₹ 25,000.00 per Engineer/supervisor per month will be recovered from the contractor's due. The decision of Engineer in charge as to the period for which the required technical supervisor was not employed by the contractor and as to the reasonableness of amount thereof to be deducted on these accounts shall be final and binding on contractor.

- 9.6 The Assistant Engineer shall record in the Measurement book in each running bill, final bill, the certificate to the effect that the contractor has employed the site technical engineer/supervisor as per the norms stipulated as the contract and for his/their absence necessary recovery has been made from the contractor bill.

10.0 NOTICES AND INSTRUCTIONS TO CONTRACTORS:

- 10.1 The successful tenderer shall furnish the engineers, the postal address its site and HQ office and keep updated with name of authorized representatives to receive and accept notices and instruments.

- 10.2 All orders given by the **purchasers'/engineers'** representative to the contractor concerning the work, have the same effect as if given by the Electrical Engineer in-charge of the work. Subject as otherwise herein provided all notices to be given on behalf of the President of India and all other action to be taken on his behalf may be given or taken on his behalf by the Engineer. The successful tenderer shall on award of contract nominate authorized qualified engineer as Project manager and the authorized representative for receiving instructions from the purchaser/engineer. Any instructions to the authorized representative or nominee or other staff available at site given/imparted by the purchaser's representative, the engineer or nominee shall be deemed to have been given to the authorized representative of the contractor or the contractor.

11.0 CO-ORDINATION OF WORK AT SITE:

The Contractor shall work in co-ordination and co- operation with other agencies at site and shall arrange to execute work as per site conditions. Any hold up shall be the responsibility of the Contractor and shall make him liable for damages as may be considered and levied by the Engineer.

12.0 WORKMANSHIP AND QUALITY OF WORK:

- 12.1 The contractor is responsible for execution of contract as a whole in accordance with conditions of contract.
- 12.2 Good workmanship is an essential prerequisite to be complied for this work. Skilled workers under competent supervision shall carry out entire work in the most workmanlike manner by skilled workers under competent supervision.

- 12.3 In the event the Engineer or his representative finding the work being carried out in a defective or in an inefficient manner or at a slow rate, the decision of which shall be in the sole discretion of the Purchaser, he may give 7 days' written notice, calling upon the Contractor to remove the defects. If the contractor fails to complete with such directions, the contract shall be terminated followed by 48 hours' notice, a final termination notice will be issued and the security deposit will be forfeited in whole as liquidated damages.

13.0 MONTHLY PROGRESS REPORT:

- 13.1 The contractor shall furnish to the Engineer In-charge of the work, or his successors/nominee (whose address will be advised in due course) during the first week of every calendar month, a progress report showing progress of finalization of design and drawings, material at site, the works carried out during the preceding month and Up-to-date progress of these items along with total quantum of design and drawings, materials and equipment and the work required for the contract.
- 13.2 The contractor shall maintain a daily progress register and the same should be signed by both the contractor's and the Engineer's representative. The copy of such progress report /register shall be submitted while submitting claims for payments.

14.0 CERTIFICATION OF WORK:

- 14.1 The methodology shall be framed mutually to certify the work, through checklists, standards progressively. The installations shall be checked by a quality assurance team of the contractor and witnessed by Purchaser's Representative.
- 14.2 The Contractor shall enlist the equipment assemblies/sub-assemblies/components accessories and other movable components on successful installation and commissioning of the equipment.
- 14.3 **The progressive work** shall be certified progressively for supply installation, testing commissioning as indicated in terms of payment to release on account payment demanded by the contractor if any.
- 14.4 **Provisional Acceptance Certificate** shall be issued by the purchaser on physical completion of all the works, testing and successful commissioning of the system, handing over of drawing, manuals, imparting Training, T&P, spares, and other provisions of the contract.
- 14.5 The prior approval for energisation from the **competent authority** shall be obtained as per the statutory regulations in force. The Contractor shall be responsible for all safety aspects included and approved.

15.0 METHOD OF MEASUREMENT:

- 15.1 **The progressive work** shall be certified progressively for supply installation, testing commissioning **for each unit of work as specified in schedule of work** to release on account payment demanded by the contractor if any.
- 15.2 On completion and verification of each stage work as per agreed schedule of payment invoicing, the contractor shall offer for measurement with required details, internal check / quality assurance, abstract sheet and contractor shall produce claim for on account/running payment for verified quantities only.
- 15.3 All the payment claims submitted by the contractor shall be accompanied by the following document:
- (i) Supplier's / manufacturer's challan for major items.
 - (ii) Inspection certificate at manufacturer's works with test reports.
 - (iii) Material inspection Certificate on receipt at Purchaser's depot/s duly accepted by the Purchaser's Engineers/representative.
 - (iv) Material acceptance certificate in good condition granted by the Purchaser's representative if any.
 - (v) Comprehensive Insurance policy providing comprehensive insurance cover for the entire material supplied under the contract.

(vi) Any other documents as desired by the engineer.

15.4 No claims for measurement shall be admitted if any of the above documents is deficient.

16.0 COMPLETION OF WORK:

16.1 The contractor shall complete the whole of the work in all respect on or before the date fixed in the contract or any authorized extension thereof. The Railway Administration is entitled to recover penalty as stipulated in the General Conditions of contract if the contractor is in default.

Imposition of token penalty for delay in the completion of work:

The existing clause 17 (B) of GCC provides for recovery of liquidated damages from the contractor for delay in completion of work. It has now been decided that the competent authority while granting extension to the currency of contract under clause 17 (B) of GCC may also considered levy of token penalty as deemed fit best on the merit of the case.

16.2 FINAL ACCEPTANCE:

On successful completion of the work and/or completion of guarantee period as the case may be, the Final acceptance certificate shall be issued.

The final acceptance of the entire equipment installed on the group shall take effect from the **date of expiry of the period of guarantee.**

16.2.1 After expiry of the period of guarantee for each section, the Purchaser shall issue a certificate of 'Final acceptance' and the last of such certificate will be called the last and final acceptance certificate. The contract shall not be considered as completed until the issue of final acceptance certificate by the Purchaser.

16.2.2 The Purchaser shall not be liable to the Contractor for any matter arising out of or in connection with the contract or execution of the work unless the Contractor shall have made a claim in writing in respect thereof before the issue of final acceptance certificate under this clause. Notwithstanding the issue of final acceptance certificate, the Contractor and the Purchaser (subject to sub-clause as above) shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of final acceptance certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

16.3 Refund of Security Deposit:

16.3.1 Security Deposit shall be returned to the contractor after completion of guarantee period of the work as certified by the Competent Authority. The Competent Authority shall normally be the authority who is competent to sign the contract, if this competent Authority is of the rank lower than JA Grade, then a JA Grade Officer (concerned with the work) should issue the certificate. The certificate, inter alias, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the contractors and that there is no due from the contractors and that there is no due from the contractor to Railways against the contract concerned. Before releasing the SD, an unconditional and unequivocal no claim certificate from the contractor concerned should be obtained.

16.3.2 The Security Deposit shall, however, be liable to be forfeited in case of any breach by the Contractor of any of the conditions of the contract or for non-completion of the full contract without prejudice to other rights and remedies of the purchaser whether specifically provided for herein or otherwise.

16.4 Refund of performance guarantee:

Performance Guarantee shall be released after satisfactory physical completion of the work as certified by consignee. The procedure for releasing should be same as for Security Deposit.

17.0 SUPPLY OF MATERIALS, TOOLS, PLANTS AND EQUIPMENTS BY PURCHASER:

The Purchaser shall supply no material, tools, plant and equipment. The Contractor has to arrange all tools, plant and equipment as well as materials required for the work.

18.0 FACILITY FOR PURCHASERS' ENGINEERS:

Contractor shall provide required facility for purchasers Engineers for inspection of material and work such as transport and establishing communication fax and mobile in adequate numbers each at site and HQ office for the Engineers in-charge of the work representatives including rental and other running charges payable by contractor during currency of contract and Guarantee period.

19.0 PERFORMANCE BANK GUARANTEE:

- 19.1 The contractor shall execute performance guarantee in the prescribed form issued by any State Bank of India or from any Nationalized Bank duly conforming to the requirements and maintain valid up to the date of expiry of Guarantee period or beyond to service defect liability period as per Clause 12.0 of Chapter – “Instructions to Tenderers” of this tender document.
- 19.2 No Claim Certificate before seeking release of the Bank Guarantee will have to be furnished by the contractor at least 15 days in advance.

20.0 SECURITY OF MEN, MATERIAL AND WORK:

The contractor will be responsible for any damage/theft for part of the work completed till entire works be taken over by the Railway.

21.0 DRAFTING OF VEHICLES:

The vehicles and equipment of the contractor can be drafted by Railway administration in case of Accidents/Natural calamities involving human lives.

22.0 INDEMNITY:

The contractor shall furnish the prescribed indemnity bond as per General Condition of Contract, for all Railway material issued to him for execution of work.

23.0 GUARANTEE/DEFECT LIABILITY:

- 23.1 The Contractor shall guarantee satisfactory working of all the equipment and the installations erected by him, irrespective of origin (imported or indigenous) for trouble free and satisfactory performance for a period of 12 months from date of commissioning or **12 months from the date of completion of work or as per condition specified in term and general conditions with Schedule "A" of Technical Specifications at least for a period of months as specified separately whichever is later.** The guarantee for spares should be coincident with the guarantee for erected equipment.
- 23.2 During the period of guarantee the Contractor shall keep available an experienced engineer and necessary equipment to attend to any defective installations 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 all modifications, additions or substitutions 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 Electrical Engineer in-charge of work or his (their) successor(s)/nominee.
- 23.3 During the period of guarantee the Contractor shall be liable for the replacement at site of any parts which may be found defective in the equipment whether such equipment be of his own manufacture or those of his sub-contractors, whether arising from faulty design, material, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts or not repairable at site are promptly return 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, the Contractor should replace all such items irrespective of the fact that whether all such items have failed or not. The Contractor shall bear the 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.
- 23.4 If it becomes necessary for the Contractor to replace or renew any defective portions of the equipment under the para-aforesaid then the provision of the said para shall also apply to the

portions of the equipment so replaced or renewed until the expiration of six months from the date of such replacement or renewal or until the end of above-mentioned period whichever is later. Such extension shall not apply in case of defects of a minor nature, the decision of the Engineer or his successor / nominee being final in the matter. If any defect be not remedied within a reasonable time during the aforesaid period, the Purchaser may proceed to do 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.

- 23.5 The repaired or renewed parts shall be delivered and erected on site free of charge to the Purchaser.
- 23.6 Any material, fittings, components or equipment supplied shall also be covered by the provision of this paragraph. The liability of the contractor under the guarantee will be limited to re-supply of equipment, components and fittings. Such re-supply shall be affected at the contractor's depot or, in the event of closure of the depot, at the store depot or the Engineer in charge of maintenance of overhead equipment of the section covered by the contract.
- 23.7 In the case of materials, components, fittings and equipment supplied by the purchaser, no liability will rest on the contractor for failure on account of defective materials or workmanship and for any consequential damages. Such defective materials, if not yet erected on line, will be returned to by the contractor to the purchaser and such quantities will be considered for the purpose of final reconciliation over and above.
- 23.8 No Tools and Plants shall be supplied by railways.
- 23.9 The Contractor shall receive calls for any and all problems experienced in the operation of the systems, attend to these within 12 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist.
- 23.10 The Equipment supplied shall provide satisfactory services as per scope of work during and up to completion of guarantee period. In case, the system malfunctions or does not perform to the required standards as specified in scope, the penalty/recovery for exceeding the prescribed/offered limit as deem fit in the opinion of the engineer in-charge of work, the same shall be recovered from the contractor from the payment due or through encashment of Bank Guarantee available in hand.

24.0 TRAINING AND DEMONSTRATION:

- 24.1 Prior to commissioning and final inspection or acceptance, Contractor will train and instruct the designated operating and maintenance personnel in the operation, adjustment, and maintenance of all the system plant and equipment. The training plan shall be submitted to Railways for approval.
- 24.2 This training will cover –
 - 1. A demonstration to the designated personnel, all procedures necessary to operate and maintain all equipment and systems on a continuing basis.
 - 2. The contractor shall arrange for theoretical as well as practical training to both supervisors and staff in the various trades for minimum period of 6 days and 8 hours each day which will enable the Railway to efficiently operate and maintain the installation.
 - 3. Training manual shall be submitted for Railways approval. At the end of training competency certificate should be issued to trained personnel.

25.0 DRAWING AND OTHER DOCUMENTS:

25.1 Working drawings and Particulars to be furnished by the Contractor for execution:

- 25.1.1 The Contractors shall submit 6 sets of following drawings and technical particulars after the award of contract for approval of purchasers' representative before commencement of work at site/fabrication at manufacturer's work. The mode of submission and procedure for incorporations of comments by purchasers on such drawings, resubmission and final approval shall be as finalized at site by the purchaser. The Contractor shall promptly inform the Engineer of any error, omission, fault and other defects in the Specifications, Drawings for the Works, which are discovered when

reviewing the Contract Documents or in the process of execution of the Works.

- 25.1.2 The Contractor shall ensure that all drawings meant for further engineering, fabrication, erection and field work are issued to his personnel in a controlled manner - a proper record shall be maintained to show to whom the drawing is issued and to ensure that the latest revisions of the drawing is being followed for further work. All superseded drawings shall be promptly withdrawn from the personnel to whom they are issued and stamped "SUPERSEDED" in RED. The Contractor shall maintain a register of drawings, with their revision/issue number, as received from the Engineer and a record of their distribution to the designated personnel within their organization.
- 25.1.3 The Contractor shall maintain at Site a set of the drawings issued by the Engineer on which changes shall be progressively marked and initialed by the Engineers that "As-Built" drawings can be made correctly and expeditiously at the end of their Work at Site.

26.0 COMPLETION DRAWINGS (WHEREVER APPLICABLE):

- 26.1 On completion of the work in all respects the contractor shall submit the following –
- 26.1.1 Six number portfolios (210 mm x 297 mm) each containing complete set of drawings on approved scale indicating the work "As erected". Each portfolio shall also contain technical literature.
- 26.1.2 These drawings shall be prepared on CAD using Auto-Cad and shall be recorded on floppies/CDs and one set of CDs shall also be submitted.
- 26.1.3 Six sets of catalogues of all manufactured materials with the name and addresses of the manufacturers for all equipment provided by him. Where possible soft copies shall be provided.
- 26.1.4 The Contractor shall also submit one original "As erected" drawings on tracing and on CD.
- 26.1.5 The 'Certificate of Completion of Works' as per the provisions of General Conditions of Contract shall not be issued by the Engineer in the event of Contractor's failure to furnish aforesaid "as-erected" drawings for the entire works.

27.0 MANUALS:

- 27.1 The contractor shall provide/produce six copies of manuals in bound term as approved by the Purchaser for all Contractor-supplied equipment and systems. These would typically include the following –
- a) **User Manuals:**
A comprehensive description of all system principles at block diagram level broken down into as many sub-sections as may be necessary and providing sufficient information to enable non-technical staff to fully exploit the facilities of each system.
 - b) **Maintenance and Servicing Manuals:**
To specify procedures and servicing intervals for planned preventive/condition maintenance and in addition to convey sufficient information on equipment principles and practice to enable first line fault diagnosis and rectification by technician staff. The contractor shall provide necessary maintenance / inspection schedule, General arrangement Drawings, assembly drawings, wiring diagrams/schematics with list of recommended spares.
 - c) **Commissioning Test procedures and Test Values:**
Shall cover commissioning test procedures for all the equipment and the final test values of the equipment on load, without load, protective earthing and measures taken to avoid surprise failures.
- 27.2 The User Manuals and the Maintenance and Servicing Manuals shall be prepared in both English and Hindi Languages. Other technical manuals shall be supplied in the English language only. All manuals made by the contractor shall be supplied in Compact Disc also.
- 27.3 Contractor shall submit all Manuals for review by the Purchaser's representative prior to factory acceptance tests and the Contractor provide six copies of all Manuals well in advance and explain

so as to understand the manuals by the user prior to commissioning.

28.0 OTHER DOCUMENTS:

The Contractors shall supply three sets of hard copies of the test certificates after completion of work. Work shall not be deemed complete till this requirement is satisfactorily complied with.

29.0 TEST CERTIFICATES:

Contractor shall furnish six copies (bound, as approved by the Engineer) of certificates for the type-tests, routine-tests as per the relevant Standard Specification for every equipment/ component/ fitting either at the manufacturer's works or in a laboratory approved by the Engineer, and the cost thereof shall be borne by the Contractor. Test certificates of successful prototype tests shall be furnished within a month of completion of the prototype test and routine test certificates after passing of the equipment/ component/ fitting by the Engineer's Representative on inspection.

30.0 TOOLS AND SPARE PARTS:

30.1 All tools, tackle and M&P required for erection and assembly of the equipment and installation covered by the contract shall be arranged by the contractor himself including consumable material required for successful commissioning.

30.2 The contractor shall maintain a daily progress register and the same should be signed by both the contractors and Railways representative.

30.3 Issue of Departmental Material:

Issue of departmental material (Railway supply) without prior permission of tender acceptance authority and for contractor supply items Railways interest shall be on top priority.

31.0 TESTING AND HANDING OVER:

31.1 The contractor shall carry out tests on different equipment as specified in various sections in the presence of the Engineer in order to enable them to ensure the plant, equipment and installation in general compliance with the specifications and producing test data in approved format.

31.2 Instruments required for testing shall be arranged by the contractor for testing with initial requirements of all consumables at their own cost.

31.3 The plants shall be handed over after satisfactory testing along with six sets of documentation each consisting of:

- (i) Detailed equipment data in the Performa approved by the Engineer.
- (ii) Manufacturer's maintenance and operating instructions.
- (iii) Set of as-built drawings, showing plant layouts, piping, ducting etc.
- (iv) Approved Test readings for all equipment and installation.
- (v) Certificates of approval from Statutory or Local Authorities for the operation and maintenance of the installation and equipment, wherever such approval or certification is required if any.
- (vi) List of Recommended spares.
- (vii) Certificate from the contractors that they cleared the site of all debris and litter caused by them during the construction.

31.3.1 Submission of the above documentation shall from a precondition for the final acceptance of the plant and installation and final plant.

31.3.2 All the equipment as installed and maintained during guarantee period shall be handed over perfectly in working condition on completion of guarantee/defect liability period.

32.0 MAINTENANCE PLAN:

A maintenance plan shall be provided which will include the following:

- a) Operating and Maintenance Instructions which describe the procedures for operating and maintaining each item, unit / equipment and which will include all technical data for its operation, routine inspection/survey, routine maintenance, procedures for removal and replacement of components and test running.

- b) Parts catalogue along with pricelist and recommended list of spares for one year's operation and for five years operation.
- c) Special tools, jigs or fixings required for dismantling and test/diagnostic equipment for performance monitoring.
- d) Training requirements.
- e) Manpower plan required for maintenance.
- f) On completion of Testing and commissioning Contractor will provide to Railways six copies of all manufacturing drawings, maintenance schedules and software for all components, as well as all "As Built Drawings" as amended or updated.

33.0 SITE CLEARANCE:

At the end of each spell of work and on completion of the work, the contractor shall, as a part of his contractual obligation, leave the tracks, and their approaches, stores, yard etc. cleared of rubbish and obstructions of all kinds according to the instructions of the purchaser's representatives.

34.0 SAFETY MEASURES:

- 34.1 The contractor shall take all precautionary measures and conform to rules and regulations of "occupational safety and health hazards" and that of Railway's safety in force from time to time in order to ensure the protection of his own personnel moving about or working on the Railway premises.
- 34.2 The Purchaser shall remain indemnified by the contractor in the event of any accident occurring in the normal course of work arising out of the failure of Contractor or his men to exercise reasonable precaution at all places of work whether or not, the purchaser decides to safety measures at any particular site of work.
- 34.3 The contractor shall remain fully responsible for ensuring safety and in case of any accident, shall bear cost of all damages to this equipment and men and also damages to Railway and its passengers. Engineer in-charge may impose any other condition necessary for a particular work on site.

34.4 SAFETY ASPECT DURING POWER BLOCK:

- 34.4.1 It shall be the responsibility of the contractor to ensure the safety of his remaining materials, tools and tackles during working. He should also remove all men, material, tools, tackles and ladders from OH line/ OHE installations and return the "Permit to Work" to the authorized Railway representative within the permitted period. He shall not be allowed any extra time than permitted power block.
- 34.4.2 Before commencing the work, the contractor should submit the list of man power, machine and tools which will be employed for the work. Contractor is required to submit certificate for tools and equipment before commencement of work.

35.0 INSURANCE (AS APPLICABLE):

- 35.1 The Contractor shall take out and keep in force a policy or policies of insurance against all liabilities of the Contractor or the Purchaser at common law or under any statute in respect of accidents to person who shall be employed by the Contractor in or about the site and the Contractor's officer 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.
- 35.2 **Insurance of materials and installations:** The Contractor shall take out and keep in force a policy or policies of insurance for all materials including Railway supply materials/equipment in storage and installations under erection and/or erected, until such materials and installations are provisionally handed over to the Purchaser.
- 35.3 The Contractor should, however, insure the stores brought to site, against risks in consequence of

war and invasion, as required under the Emergency Risks (Goods) Insurance Act in force from time to time. The Contractor shall take out all insurance covers in connection with this contract with Insurance Companies of India only.

36.0 INSTRUCTIONS FOR SUBMITTING TENDER AS JOINT VENTURE FIRMS (AS APPLICABLE):
As per Clause 16.0 of Chapter – “Instruction to Tenderer” of this Tender document.

The tenderer shall submit documents as mentioned in Clause 17 of the Tender Form (Second Sheet) mentioned in GCC.

37.0 ARBITRATION – AS PER LATEST GCC:

As per Clause 63 and 64 of latest GCC including section 31(A)(5) of Arbitration and Conciliation (Amendment) Act.

38.0 In accordance with railway board's letter no. 2008/RS (G)/777/1 dated 06/07/2017 issued with the concurrence of Finance directorate of Ministry of Railways subjected to compliance with GST Act, 2017 - Special tender conditions, “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 reserve charge mechanism (RCM) and deposit the same to the concerned tax authority”.

- 39.0** (a) (i) Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates he enters in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the Standard General Conditions of Contract for the completion of works to the entire satisfaction of the Engineer.
- (a) (ii) Tenderers will examine the various provisions of The Central Goods and Services Tax Act, 2017(CGST)/ Integrated Goods and Services Tax Act, 2017(IGST)/ Union Territory Goods and Services Tax Act, 2017(UTGST)/ respective state's State Goods and Services Tax Act (SGST) also, as notified by Central/State Govt. & as amended from time to time and applicable taxes before bidding. Tenderers will ensure that full benefit of Input Tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.
- (a) (iii) The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to railway immediately after the award of contract, without which no payment shall be released to the Contractor. The Contractor shall be responsible for deposition of applicable GST to the concerned authority.
- (a) (iv) In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, the railway shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned authority.
- (b) When work is tendered for by a firm or company, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.
- (c) The Railway will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.

It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned. With the submission of the affidavit as mentioned above, the practice of verification of tenderer's documents by the Railways may be dispensed with.

40.0 During the execution of work, if a contractor is suffering from delay in supply of a material due to unavailability of that material or any other genuine reason at his end and the exigency of work is in

the interest of railways then that particular material can be spared to the contractor on loan by Railways (subject to availability of that particular material with Railway). Such material being issued to contractor by Railways will be returned by the contractor to Railways in due course.

41.0 Special condition in reference to Railway Board's letter no. 2018/CE-I/CT/9 dated 04/06/2018 in connection with "Inclusion of 'Letter of Credit' as Mode of Payment in Works Tenders or Service Tenders".

- (i) For all the tenders having advertised cost of ₹ 10 Lakh or above, the contractor shall have the option to take payment from Railways through a letter of credit (LC) arrangement.
- (ii) This option of taking payment through LC 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 affirm having read over and agreed to the terms and conditions of the LC option.
- (iii) The option so exercised, shall be an integral part of the bidder's offer.
- (iv) The above option of taking payment through LC arrangement, once exercised by tenderer at the time of bidding, shall be final and no change shall be permitted, thereafter, during execution of contract.
- (v) 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) State Bank of India, 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 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 duration of 180 to 365 days in consultation with 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 finalized 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 contractor.
 - (f) The LC terms and conditions shall inter-alia provide that Railways will issue a Document of Authorization (format enclosed in Railway Board's letter no. 2018/CE-I/CT/9 dated 04/06/2018) after passing the bill for completed work, to enable 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 Authorization.
 - (h) The Document of Authorization shall be issued by Railway Accounts Office against each bill passed by Railways.
 - (i) On issuance of Document of Authorization, a copy of Document of Authorization shall be posted on IREPS for download by the contractor. A digitally signed copy of Document of Authorization 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 Authorization 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 of copy of Document of Authorization, 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 Authorization received from Railway Accounts Office, release the payment to contractor's bank (advising bank) for crediting the same to contractor's account.
- (n) Any number of bills can be dealt within one I.C, provided the sum total of payments to 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.

42.0 Discharge of tender in the event of lowest (L1) bidder withdrawing from procurement process will hold well as per Railway Board's letter no. 2017/Trans/01/Policy dated 17/11/2017 issued in connection with process reforms – Improving delivery and performance contracts.

43.0 Any special condition stated by the tenderer(s) in covering letter submitted along with the tender shall be deemed as part of contract to such extent only as have explicitly been accepted by the Railway.

44.0 CESS CHARGE:

- (a) For contractor's labour/ residing at station and in colonies where Railway sanitary facilities exist. Contractor (s) will be required to pay cess charges as per rules in force on the Railway from time to time.
- (b) For labour working between stations or at isolated places where Railway facilities do not exist, the contractor(s) shall be required to provide necessary facilities for their labour in terms of Clause 59(4) of the General conditions of contract. In case of any failure on his/their part, the necessary facilities shall be provided by the Railway Administration at the cost of contractor(s) and expenditure thus incurred will be recovered from his/their bills.

45.0 MATERIALS SUPPLIED BY RAILWAY:

The tenderer shall be responsible to see that the materials such as cement, steel, cables, poles etc, supplied by the Administration are utilized for the sole purpose for which they have been issued to him, failing which, he is liable to be dealt according to law for any misuse of these commodities by himself, his agents or workmen, etc.

46.0 PRECAUTIONS WHILE WORKING IN THE VICINITY OF TRACK:

- (a) When the work is required to be done along or near the existing Railway track, the contractor(s) shall take steps as are necessary for the track and labour working at site. He/they will also be required to program his/their working so as not to interfere with the movements of trains. No extra payment shall be allowed for these precautions and also for crossing track/tracks if required during execution of the work. It should be ensured that the ballast of the track(s) is not spoiled or mixed with earth.
- (b) In addition to the precautions taken by the Contractor(s) for the safety of the track and labour, it may be necessary to post flagman in some locations as an additional safety measure for which the cost shall be recoverable from the Contractor(s). The contractor(s) shall be fully responsible for any damage to or trespass caused by him/their men to any surrounding structure, railway bears no liability whatsoever on this account.

47.0 ENGAGEMENT OF TECHNICAL PERSONNEL:

Contractor should employ only qualified staff to supervise and carry out the work. The supervisors shall have 1st Class Electrical Supervisors certificate and wire man 2nd Class Wireman

certificate issued by State Government. Names of supervisors employed should be furnished to Sr. Divisional Electrical Engineer (Power), Vadodara. Any changes in the same should also be advised.

- 48.0** The contractor(s) shall make his/their own arrangement for potable and other water supply required for the execution of the work as well as for his labour. However, if water is supplied by the Railway, the contractor(s) will have to pay charges as laid down in the General Conditions of contract and in addition the contractor(s) will have to pay charges as levied by the corporation/municipality.

Drinking Water: The tenderer shall provide and maintain at suitable places easily accessible to labour, a sufficient supply of water fit for drinking.

- 49.0** The quantities shown in the tender schedule are approximate and can be varied for execution up to 25% plus or minus at the discretion of the Railway. In the event of any such variation in respect of any or all items of work (whether more or less) to the extent of 25% the contractor shall not be entitled to any payment on account of any such excess or reduction in quantities but will be paid at the accepted contracted rates only for the actual amount of work done. The actual quantities of work to be done against items of work pertaining to foundation may, however be varied beyond the limit of 25% plus or minus laid down above for which also the contractor shall be entitled to no extra payment on account of any such excess or reduction in the quantities over those given in the contract actual amount of work done in all the items of work done pertaining to foundations.

50.0 REPRESENTATION OF WORKS:

The contractor should nominate his representative on the works who will be authorized to receive and acknowledge material issued by the Railways and take all orders issued by the inspecting officer of the Railway.

51.0 DEDUCTION FOR SALES TAX AND INCOME TAX:

The Railway will deduct 2% of income tax on the gross amount of each bill while making payment to the Contractors. The settlement of income tax should be made with the Income Tax authorities. Sales tax will be deducted from contractor's running and final bills as per extent rules.

PLEA OF CUSTOM: The plea of custom prevailing will not on any account be permitted as an excuse for an infringement of any of the conditions of the contract or specifications.

52.0 ARRANGEMENT FOR PERMITS OR LICENCE:

Arrangement for permits and license for materials will not be made by the Railway or any assistance given. The contractor will have to make his own arrangements. Also, no import license shall be arranged by the Railway for this work.

53.0 NOTICE TO PUBLIC BODIES:

The contractor(s) shall give to the Municipality, Police and other authorities all notices that may be required by law and obtain all requisite license for temporary obstructions, enclosures and pay all fees, taxes and charges, which may be leviable on account of his operation in executing the Contract. He should make good any damage to adjoining premises whether public or private and supply and maintain any lights, etc. required at night.

54.0 WORKING HOURS:

Work may be carried out round the clock if so desired by the Contractor. The contractor(s) shall, however, be held responsible to ensure that none of the statutory laws are infringed.

55.0 SETTING OUT:

The contractor(s) shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels dimensions and alignment thereof. If at any time any error in this respect shall appear during progress of the work, the contractor at his own expenses should rectify such error if so, required to the satisfaction of the Engineer.

56.0 CARE OF STAFF:

No quarters will be provided by the Railway for the accommodations of the contractor or any of his staff employed on the work. The contractor may be allowed to erect any labour camps for housing the labour at or near the site of work on available railway land subject to payment of cess and water charges. The contractor shall at his own cost make all necessary and adequate arrangements for

the hygiene of his staff. The contractor shall permit inspection, at all times off all sanitary arrangement made by him, by the Engineer or his assistant or medical staff of the railway. If the contractor fails to make adequate medical, sanitary arrangement, these will be provided by the Railway, the cost thereof being recovered from the contractor.

57.0 DAMAGE BY ACCIDENT, FLOODS OR TIDES:

- (a) The contractor shall take all precautions against damage from accident, floods or tides. No compensation will be allowed to the contractor for his plant or material lost or damaged by any cause whatsoever. The contractor shall be liable to make good the damages to any structure or part of structure, plant or material of every description belonging to the administration lost or damaged by any cause during the course of the contractor's work.
- (b) The administration will not be liable to the contractor's any charges for rectification or repairs to any damage which may have occurred from any cause, whatsoever, to any part of the new / existing structure, during construction.

58.0 None of the employees of Railways should be related to Tenderer(s). If the tenderer(s) fail to give the above declaration his/their tender will be ignored. In case it is subsequently discovered that the declaration as aforesaid in any way is incorrect, or the information furnished therein found wrong. Administration reserves the right to take the action in accordance with clause 62 of the General Conditions of Contract (copy of declaration form is attached).

- 59.0**
- (i) The provision of clause 63 and 64 to the General Conditions of contract will be applicable only for the settlement of claims or disputes between the Parties for values less than or equal to 20% of the value of the contract. When the claim or disputes are of value more than 20% the value of the contract, other relevant clauses of the General Conditions of Contract will be applicable and arbitration will not be a remedy for settlement of such disputes.
 - (ii) The contractors shall not be entitled to ask for reference to arbitration before the completion of the work assigned to him under this contract. The contractor shall seek reference to arbitration to settle the disputes only once within the ambit of condition (i) above.
 - (iii) These special conditions I and II shall prevail over existing clauses 63 and 64 of the General conditions of the contract.
 - (iv) No interest will be payable on any amount which is payable to contractor for delayed payment or any other case.

60.0 Only material complying with prescribed specification shall be used. A sample of each material proposed to be used shall be submitted for approval to Divisional Railway Manager (Electrical) or his Assistant Divisional Electrical Engineer whenever called for.

61.0 In all matters of dispute, the decision of Divisional Railway Manager (Electrical) Vadodara shall be final and binding.

- 1. The contractor shall place and keep on the works at all times efficient and competent staff to give the necessary directions to his workmen and to see that they execute their work in sound and proper manner and shall employ only such supervisors, workmen and labourers in or about the execution of any of these works as are careful and skilled in the various trades.
- 2. The contractor shall at once remove from the works any agents, permitted sub-contractor, supervisor, workman or labourer who shall be objected to by the Engineer and if and whenever required by the Engineer, he shall submit a correct return showing the names of all staff and workmen employed by him.
- 3. In the event of the Engineer being of the opinion that the contractor is not employing on the works a sufficient number of staff and workmen as is necessary for proper completion of the works within the time prescribed, the contractor shall forthwith on receiving intimation to this effect deploy the additional number of staff and labour as specified by the Engineer within seven days of being so required and failure on the part of the contractor to comply with such instructions will entitle the Railway to rescind the contract under relevant clause of GCC.

62.0 METHOD OF MEASUREMENT AND PAYMENT:

- (i) The progressive work shall be certified progressively for supply installation, testing

commissioning for each unit of work as specified in schedule of work to release on account payment demanded by the contractor if any.

- (ii) On completion and verification of each stage work as per agreed schedule of payment invoicing, the contractor shall offer for measurement with required details, internal check / quality assurance, abstract sheet and contractor shall produce claim for on account/running payment for verified quantities only.
- (iii) All the payment claims submitted by the contractor shall be accompanied by the following documents –
 - (i) Suppliers' / manufacturers' challan for major items.
 - (ii) Inspection certificate at manufacturer's works with test reports.
 - (iii) Material inspection Certificate on receipt at Purchaser's depot/s duly accepted by the Purchaser's Engineers/representative.
 - (iv) Material acceptance certificate in good condition granted by the Purchaser's representative if any.
 - (v) Comprehensive Insurance policy providing comprehensive insurance cover for the entire material supplied under the contract
 - (vi) Indemnity Bond in the standard proforma (if applicable).
 - (vii) Any other documents as desired by the engineer.

No claims for payment shall be admitted if any of the above documents is deficient.

63.0 PAYMENT CONDITION:

Payment will be made only after erection, testing and commissioning of those items which are to be installed, erected and commissioned and after certification of the same by site engineer.

64.0 VARIATION IN QUANTITIES OF CONTRACT:

The procedure detailed below shall be adopted for dealing with variations in quantities during execution of work contracts –

Variation in quantities specified in contracts will be done in accordance with as per Para 9(A) and 9(B) of Model SOP 2018 Part 'A' or latest

1. Individual NS items in contracts shall be operated within variation up to plus or minus 25% and payment would have made as per the agreement rate. For this no finance concurrence would be required.
2. For the tenders accepted at the Zonal Railways level, the variation in quantities will be approved by the authority in whose current tender acceptance powers, the revised value of the agreement lies.
3. In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity (100% i.e., the original quantity +25% i.e., quantity over and above the original quantity) subject to the following conditions –
 - (a) Since there is an in-built rate reduction Clause of 2% and 4% for variation between 125% and 140% and between 140% and 150% respectively on the accepted rates it will only require the prior approval of the Tender Accepting Authority (TAA) who is an officer not below the rank of JAG without finance concurrence subject to other conditions mentioned in Clause 42 of GCC.
 - (b) However, a Supplementary Agreement/Addendum to original Agreement should be drawn subsequent to sanction of the variation by an officer not below the rank of JAG, which needs to be vetted by Associate Finance.
 - (c) 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.
 - (d) 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.

4. Variation in quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of Associate Finance and shall be paid at 96% of the rate awarded for that item in that particular tender.
5. The variation in quantities as per the above formula will apply only to the individual items of the contract and not on the overall contract value.
6. Execution of quantities beyond 150% of the overall agreement value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with the existing contractor, with personal concurrence of PFA and personal sanction of General Manager.
7. The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1% of the total original agreement value.
8. No such quantity variation limit shall apply for foundation items.
9. As far as SSR/SOR items are concerned, the limit of 25% would apply to the value of SSR/SOR schedule as a whole and not on individual SSR/SOR items. However, in case of NS items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).
10. For tenders accepted by Board Members and Railway Ministers, variations up to 110% of the original agreement value may be accepted by General Manager.
11. The aspect of Vitiating if any, shall be governed as per Railway Board's Transformation Cell Letter No. 2017/Trans 01/policy dated 08.02.2018.
12. In zonal contracts, the variation in the contract should not exceed 25% of the contract value.
13. Overall agreemental Value arrived at by adding the positive variation and subtracting the negative variation from the accepted value of the contract, shall be taken for deciding the competency of sanction. (Authority – Railway Board's letter No. 2017/Trans/01/Policy dated 27.03.2018).
14. The estimate provision/ preparation of revised estimate shall be ensured. The extant rules for excess over estimate, if any, due to escalation/ other than escalation, shall be followed.
15. In case where decrease is involved during execution of contract –
 - (a) The contract signing authority can decrease the items up to 25% of individual items without finance concurrence.
 - (b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than rank of SA Grade may be taken, after obtaining 'No Claim Certificate' from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the quantities.
 - (c) It should be certified that the quantities proposed to be reduced will not be required in the same work at a later stage.
16. The aspect of Vitiating if any shall be governed as per Railway Board's Transformation Cell Letter no 2017/Trans 01/policy dated 08.02.2018.
17. The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1% of the total original agreement value.
18. No such quantity variation limit shall apply for foundation items.

65.5 Final Settlement:

On final acceptance / successful completion of guarantee period, the Security Deposit shall be released. The necessary recovery/penalties if any due from the contractor shall be adjusted from payment due / penalties, if any or through encashment of performance Bank guarantee.

66.0 (a) Deduction for Income Tax:

The Railway will deduct 2% of income tax on the gross amount of each bill while making payment to the Contractor. The settlement of income tax should be made with the Income Tax Authorities.

(b) Taxes and Royalties:

All rates quoted in the tender shall be deemed to be inclusive of all taxes, royalties payable by the Contractor(s) to the government or public body or local authority and no additional amount will be paid or claim entertained on this account by the Railway.

ANNEXURE - XVIII**INDEMNITY BOND**

Indemnity Bond for safe custody of Railway material to be supplied to M/s _____
_____ under Tender No. _____.

I/We, M/s. _____ (hereinafter called the Contractor) do hereby undertake that we shall hold in our custody for and on behalf of the President of India acting in the premises through the General Manager, Western Railway or for him all Railway materials which has been handed over to us against the contract for Tender No. _____ dated _____ for the work of _____ by the Railway for the purpose of execution of the said contract until such time the materials are duly installed and/or erected or otherwise handed over to the Railway.

We shall be entirely responsible for the safe custody and protection of the said materials against all risk till they are duly delivered as installed and/or erected equipment to the Railway or as directed otherwise and shall indemnify the Railway against any loss, damage or deterioration whatsoever in respect of the said materials. The said materials shall at all-time be opened for inspection by any Officer authorized by the General Manager, Western Railway or his nominee.

Should any loss, damage or deterioration of materials occur or surplus materials disposed off and a refund becomes due, the Railway shall be entitled to recover from us the full cost and compensation determined in terms of the contract for such loss or damage, if any, along with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time thereafter becomes due to us under the said or any other contract.

In the event of any loss or damage as aforesaid the assessment of such loss or damage and the assessment of the compensation therefore would be made by the President of India acting through the General Manager, Western Railway or his authorized nominee shall be final and binding upon us.

Signed at _____
On this day of _____
Signature of Witness _____
For and on behalf of M/s _____

Name of Witness in block letters –

Address – _____

ANNEXURE - XIX**PROFORMA FOR BANK GUARANTEE BOND FOR PERFORMANCE GUARANTEE**

From: (Name and Address of Bank)

To,

The President of India

Acting through Sr. Divisional Finance Manager, Western Railway, Vadodara – 390 004.

- 1) In consideration of the President of India (hereinafter called 'The Government') having agreed to exempt (hereinafter called 'the said Contractor(s)' from the demand, under the terms and conditions of an Agreement against letter of Acceptance Nodate..... made between the Western Railway and the said Contractor for the work of..... (Hereinafter called 'the said Agreement'), of Security Deposit for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for ₹..... (Rupees in words). We, (indicate the name of the Bank), (hereinafter referred to as 'the Bank') at the request of the said Contractor do hereby undertake to pay to the Government an amount not exceeding ₹.....against any loss or damage caused to or suffered or would be caused to or suffered by the Government by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said agreement.
- 2) We, (indicate the name of the Bank) do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely on a demand from the Government stating that the amount/ claimed is due by way of loss or damage caused to or would be caused to or would be caused to or suffered by the Government by reason of breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding ₹ (Rupees in words).
- 3) We undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/supplier(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s)/supplier(s) shall have no claim against us for making such payments.
- 4) We, (indicate the name of the bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till Divisional Railway Manager (Electrical), Western Railway, Vadodara, Ministry of Railways certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the....., we shall be discharge from all liability under this guarantee thereafter.
- 5) We, (indicate the name of Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forbear or enforce any of the terms conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
- 6) This guarantee will not be discharged due to the change in the constitution of the Bank or contractor(s)/supplier(s).
- 7) We, (indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Date – the day of _____ 20

For (indicate the name of Bank)

ANNEXURE - XX**BILL(S) OF QUANTITIES FOR THE WORK**

Name of the work – Vadodara Division: Electrical works in connection with provision of new High Level platform, extension of UP platform and other passenger amenities at Utran station.

Tender No. – BRC-EL-P-06-2482-26-27

N.I.T. Cost – ₹ 1,12,67,561.00

Completion Period – Six (06) months

Sr No	Description	Qty	Unit	Rate (₹)	Amount (₹)
Schedule A – Electrical Works					
1	Wiring of light/fan/exhaust fan/common light points in concealed manner with modular accessories	150	Nos	408	61200
2	Providing plug point, 6 Amp in concealed manner on existing board with modular accessories	30	Nos	97	2910
3	Providing plug point, 6 Amp in concealed manner on separate board with modular accessories	30	Nos	335	10050
4	Providing power plug point, 16 Amp in concealed manner on separate board with modular accessories	70	Nos	446	31220
5	Providing board with two switches and two sockets, 6 Amp in concealed manner with modular accessories	10	Nos	237	2370
6	Providing board with four switches and four sockets, 6 Amp in concealed manner with modular accessories	10	Nos	451	4510
7	Providing board with two switches and two sockets, 6 Amp	50	Nos	242	12100
8	Concealed wiring of sub-main with 2.5 sq. mm copper wire, single-core in PVC conduit	130	Mtrs	89	11570
9	Concealed wiring of sub-main with 4.0 sq. mm copper wire, single-core in PVC conduit	70	Mtrs	109	7630
10	Wiring of sub-main with copper wire, single-core, 4.0 sq. mm - 5 Nos and 2.5 sq. mm - 1 No in PVC conduit/casing-capping with junction box	700	Mtrs	189	132300
11	Providing ceiling rose with PVC junction box in existing sub-main	400	Nos	40	16000
12	Providing sub-main board with MCB DP, 16 Amp and circuit fuse	10	Nos	811	8110
13	Providing 20 Amp ray roll plug and socket with MCB DP, 16/20 Amp in weather proof box	10	Nos	1206	12060
14	Supply, fixing, testing and commissioning of BLDC ceiling fan, decorative type with three blades, 1400 mm sweep	160	Nos	3226	516160
15	Providing down rod of 3.0 feet length complete with all accessories like nut-bolts, rubber reels, cotter pin, shackles etc	450	foot	80	36000
16	Providing heavy duty exhaust fan, 300 mm sweep with louver/bird guard	20	Nos	1461	29220
17	Supply of energy efficient, BLDC pedestal fan, 400 mm sweep	20	Nos	3796	75920
18	Providing MCB and starter with three-pin plug point for Air Conditioner unit	3	Nos	1191	3573
19	Providing copper piping for suction and discharge lines of Air Conditioner unit	20	foot	328	6560
20	Providing four-core, multi-stranded, flexible copper cable, 2.5 sq. mm from indoor to outdoor unit of Split Air Conditioner	20	Nos	176	3520
21	Supply and fixing of MS stand for outdoor unit of Split Air Conditioner	2	pair	474	948
22	Providing rigid PVC drain piping	20	Nos	42	840
23	Installation, testing and commissioning of Split Air Conditioner	2	Nos	1436	2872

24	Providing on-load, three-way, rotary change over switch, three-phase, 40 Amp in sheet steel enclosure with indication lamps, earthing terminals etc	4	Nos	6012	24048
25	Providing Distribution Board with incomer MCB DP, 16/32 Amp - 1 No, RCBO, 25 Amp - 1 No and outgoing MCB SP, 6/10/16 Amp - 8 Nos	6	Nos	7721	46326
26	Providing Distribution Board with incomer MCB TPN, 63 Amp - 1 No, outgoing MCB DP, 16/20/32 Amp - 6 Nos with Time Switch, 16 Amp - 2 Nos and Single-Phase Contactor, 32 Amp - 2 Nos	4	Nos	14870	59480
27	Providing Distribution Board with incomer MCCB, four-pole, 125 Amp - 1 No and outgoing MCCB, four-pole, 63 Amp - 2 Nos	1	Nos	55878	55878
28	Providing online UPS, 2.0 KVA cap with 120 minutes backup	4	Nos	90193	360772
29	Supply, fixing, testing and commissioning of three-phase, 415 Volt pre-cooling socket, complete with MCCB, three-pole, 63 Amp, heavy duty plug-socket, 63 Amp, MCB DP, 20 Amp and ray roll plug and socket, 20 Amp in MS outdoor type enclosure for pre cooling point	10	Nos	9898	98980
30	Fabrication, supply, fixing and commissioning of 110 Volt battery charging terminals to be mounted on rail poles	10	Nos	1271	12710
31	Digging of cable trench 450/600 mm wide and 900 mm deep in all types of soil including hard, rocky etc	81	cum	129	10449
32	Digging of cable trench 100 mm wide and 200 mm deep in concrete/tar road/platform and refilling to its original position after laying of cable in 50 mm diameter HDPE pipe	1250	Mtrs	406	507500
33	Supply and laying of DWC pipe, 63 mm diameter	200	Mtrs	84	16800
34	Providing PVC maxi trunking of size 100 x 50 mm	100	Mtrs	500	50000
35	Supply and erection of G.I. perforated cable tray of size 150 mm x 100 mm x 100 mm on MS frame with cover	50	Mtrs	910	45500
36	Providing uPVC pipe, 50 mm diameter	50	Mtrs	177	8850
37	Supply and laying of HDPE pipe, 110 mm diameter by pushing method under track/road	150	Mtrs	1512	226800
38	Providing cable route marker	20	Nos	174	3480
39	Laying of cable in trench	1450	Mtrs	21	30450
40	Laying of cable on wall/cover shed/existing tray with MS clamp	150	Mtrs	33	4950
41	Providing polyurethane painted, decorative single arm bracket fabricated from "B" Class MS pipe of 42 mm diameter	10	Nos	3000	30000
42	Providing polyurethane painted, decorative double arm bracket fabricated from "B" Class MS pipe of 42 mm diameter	10	Nos	3850	38500
43	Supply, fixing, testing and commissioning 5.0 meter height, decorative street light pole with PU paint and complete with all accessories with foundation	20	Nos	11778	235560
44	Supply, fixing, testing and commissioning of 5.0-meter height G.I. Street light octagonal pole, double arm complete with all accessories and foundation	10	Nos	15465	154650
45	Supply, fixing, testing and commissioning of 5.0 meter height G.I. multipurpose octagonal pole, double arm, for mounting of Street Light fitting, Coach Guidance Board, Public Address System and CCTV camera complete with all accessories, junction boxes and foundation etc.	10	Nos	22500	225000
46	Design, manufacture, display and installation of wall/hanging/floor mounting type LED illuminated signage/directional boards in flat/half elliptical/parabolic/triangular shape. The display sheet shall be of unbreakable 040 translucent polycarbonate sheet of 2.0 mm thickness. The text/graphics matter visibility shall not be less than 160 deg. The approved colour text and graphics shall be printed/router cut on	1000	sq foot	2189	2189000

	monomeric calendared vinyl of 70 um thickness and shall be firmly pasted on display sheets				
47	Providing G.I. Earth wire, 8 SWG in PVC sleeve along with cable	1500	Mtrs	22	33000
48	Providing maintenance free earthing	20	Nos	10594	211880
	Cost of work for Schedule A (₹)				56,68,206.00
Schedule B – LED Fittings					
1	Providing 9 Watt LED lamp	10	Nos	77	770
2	Providing four-feet long, 18/20 Watt LED fitting complete with all accessories and LED tube	30	Nos	499	14970
3	Providing 15/18 Watt LED down lighter suitable for surface/recessed mounting as per site requirement	30	Nos	613	18390
4	Providing LED mirror light fitting, 12 Watt	5	Nos	2043	10215
5	Supply, fixing, testing and commissioning of LED fitting 2 feet x 2 feet, 36/38 Watt recessed/surface mounted complete with all accessories	30	Nos	2270	68100
6	Providing LED Street light luminary 35 - 45 Watt $\pm 10\%$ complete with all accessories	40	Nos	2860	114400
7	Supply, fixing, testing and commissioning of 70 Watt LED street light fitting	20	Nos	4153	83060
8	Supply, installation, testing and commissioning of four-feet, suspended linear light, IP-20 protection, 50 mm width with housing constructed of extruded aluminum	20	Nos	4755	95100
9	Supply, installation, testing and commissioning of Extruded Aluminium Linear LED luminary, IP 54/65 protection	800	Nos	5949	4759200
10	Providing LED profile light	50	Mtrs	903	45150
11	Providing energy efficient, LED post top luminary, 45 Watt with luminous efficacy of 100 Lumens/Watt complete with all accessories and IP: 65/66 protection	30	Nos	13000	390000
	Cost of work for Schedule B (₹)				55,99,355.00
	Total cost of work (₹)				1,12,67,561.00
	Total cost of work (in words) (₹) – One Crore Twelve Lakh Sixty-Seven Thousand Five Hundred and Sixty-One only				

TERMS AND GENERAL CONDITIONS

1. **This is a works contract and shall be carried out as per Annexure - XXI and governed by Indian Railways' Standard General Conditions of Contract, April 2022 with all the latest correction slips.**
2. Completion period shall be **six (06) months** from the date of issue of the Letter of Acceptance.
3. Conditional tender will not be accepted and will be summarily rejected.
4. The work, if required; can be executed anywhere over Vadodara Division with the approval of Sr. Divisional Electrical Engineer (Power) Vadodara.
5. Railways can terminate the contract at any time by giving a notice as per rules and regulations of Indian Railways' G.C.C. In case of dispute arising during the course of contract, the decision of Sr. Divisional Electrical Engineer (Power) Vadodara shall be final and binding.
6. The quantities shown in the schedule are on approximate basis. However, the payment shall be made on actual quantity executed.
7. **Payment Terms and conditions** – Payment shall be made will be made on actual quantity executed as per Railways' tender terms and conditions only after erection, testing and commissioning of those items which are to be installed, erected and commissioned and fulfillment of conditions of Railways' Standard General Conditions of Contract and after satisfactory certification of the same by site engineer.
8. Railway shall not be responsible for any personal injury or loss to the representative of the firm or any other loss to the firm while they are on the job at Railway premises.
9. Security deposit shall be deducted as per Standard General Condition of Contract, which would be released only after successful completion of the contract period. Discount offered in tender linked to payment conditions of Railways shall not be considered.
10. In case in increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions –
 - a) Operation of an item by more than 125% of the agreement quantity needs the approval of an officer of the rank not less than S.A. Grade. For this no finance concurrence would be required (Ref.: - RB's letter No. 2007/CE-I/CT/18 Pt. XII dated 01/07/16) –
 - i) 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.
 - ii) Quantities operated in excess of 140% but up to 150% of the agreement quantity of concerned item shall be paid at 96% of the rate awarded for that item in that particular tender.
 - iii) Variation in quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of associated finance and shall be paid at 96% of the rate awarded for that item in that particular tender.
 - b) The variation in quantities as per the above formula will apply only to the Individual items of the contract and not on the overall contract value.
 - c) Execution of quantities beyond 150% of the overall agreement value should not be permitted and if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with prior personal concurrence of FA&CAO/FA&CAO (C) and approval of General Manager.
11. In case where decrease is involved during execution of contract –
 - a) The contract signing authority can decrease the items up to 25% of individual item without finance concurrence.
 - b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than rank of S. A. Grade may be taken, after obtaining 'No Claim Certificate' from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the quantities.
 - c) It should be certified that the work proposed to be reduced will not be required in the same work.
12. The tenderer shall comply with the provision of all laws including labour laws, rules, regulations and notifications issued there under from time to time by statutory agency and Railways and shall abide by these laws, strictly. The tenderer shall take necessary measures to protect the personnel, work and facilities and shall observe all reasonable safety rules and instructions.

13. **The tendering firm must have valid Electrical Contractor's License issued by the Government in their own name. A copy of the license shall be uploaded along with the tender offer, failing which the offer shall be summarily rejected. The license must be valid as on the date of opening of the tender.**
14. All loading/unloading and transportation that may be required shall be done by the contractor at his own cost. Any damage to plaster or any other item of railway during the course of execution of work shall be made good by the contractor and restoring it to match the general décor of the wall/ceiling etc.
15. This is a complete turnkey job as such any item, minor Civil/Fabrication work or any other minor work required to be carried out for commissioning of the work should also be considered within the contractor's scope of work for which no extra payment would be admissible. The price quoted shall be firm and inclusive of all taxes, labour, transportation charges and any other contingency charges that may be necessary to complete the work satisfactorily.
16. Work shall be carried out as per specification and IS shall be followed. All the spare parts to be used shall be genuine and of good quality and reputed make and the same shall be got approved from Site Engineer before replacing the same.
17. **Error/omission and discrepancies** – The tenderer shall not take advantage of any error due to typing or otherwise. If there is any doubt it shall be brought to the notice of Sr. DEE (Power) Vadodara without delay and same shall be dealt as per Railway's requirement and to Railway's advantage only.
18. The contractor has to supply and provide ancillary materials such as nuts, bolts, clamps, brackets etc. that are required for the work even if they are not mentioned in the tender schedule.
19. Removal of existing wiring and accessories if any, and handing over the same to Railway representative at their office/store is within the scope of the work. Released materials should be handed over to Railway with joint receipt note.
20. **NOTE – Western Railways' Specifications for L.T. Panel, ACBS, MCCBs and MCBs are uploaded on IREPS portal in the list of documents. L.T. Panels and Switchgears covered in this tender shall be fabricated strictly according to these specifications.**
21. **Maintenance Period –**
Schedule A – The maintenance period shall be twelve (12) months from the certified date of completion and Security Deposit shall be released accordingly.
Schedule B – The maintenance period shall be sixty (60) months from the certified date of completion and Security Deposit shall be released accordingly.

**Sr. Divisional Electrical Engineer (Power),
Western Railway, Pratapnagar, Vadodara – 390 004
For and on behalf of The President of India**

DETAILED TECHNICAL SPECIFICATIONS FOR ITEMS OF WORK**Schedule A - Electrical Works****Item No. 1 – Wiring of light/fan/exhaust fan points in concealed manner with modular accessories –**

The price shall cover for concealed wiring of light/fan/exhaust fan point with 1.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with 1.0 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire with all accessories in concealed type of wiring in medium grade PVC conduit and accessories of Precision/Modi/Prestoplast/Gerard make. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make.

Item No. 2 – Providing plug point 6 Amp in concealed manner on existing board with modular accessories –

The price shall cover for providing plug point with modular type universal socket and switch, 6 Amp, 230 Volt, AC on existing board in concealed manner. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make.

Item No. 3 – Providing plug point, 6 Amp in concealed manner on separate board with modular accessories –

The price shall cover for providing plug point board with modular type universal socket and switch, 6 Amp, 230 Volt, AC with modular accessories. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make. The price shall also cover for concealed wiring of sub-main with 1.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with 1.0 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire with all accessories in concealed type of wiring in medium grade PVC conduit and accessories of Precision/Modi/Prestoplast/Gerard make.

Item No. 4 – Providing plug point 16 Amp in concealed manner on separate board with modular accessories –

The price shall cover for providing power plug point with modular type universal socket and switch, 16 Amp, 230 Volt, AC on separate board with modular accessories in concealed manner. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make. The price shall also cover for concealed wiring of plug point with 2.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with 1.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire with all accessories in concealed type of wiring in medium grade PVC conduit and accessories of Precision/Modi/Prestoplast/Gerard make.

Item No. 5 – Providing board with two switches and two socket, 6 Amps in concealed manner with modular accessories –

The price shall cover for providing multi-plug point board (switch, 6 Amp - 2 Nos and universal socket, 6 Amp - 2 Nos) with modular type universal five-pin socket and switch, 6 Amp, 230 Volt, AC with modular accessories in concealed manner. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make. The price shall also cover for concealed wiring of board with 1.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with 1.0 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire with all accessories in concealed type of wiring in medium grade PVC conduit and accessories of Precision/Modi/ Prestoplast/Gerard make.

Item No. 6 – Providing board with four switches and four sockets, 6 Amp in concealed manner with modular accessories –

The price shall cover for providing multi-plug point board (switch, 6 Amp - 4 Nos and universal socket, 6 Amp - 4 Nos) with modular type universal five-pin socket and switch, 6 Amp, 230 Volt, AC with modular accessories in concealed manner. The accessories shall be of modular type of C&S/MK/North West/L&T/Crabtree/Siemens/Anchor/Legrand/Havells/Luminous make. The price shall also cover for concealed wiring of board with 1.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with 1.0 sq. mm, PVC insulated,

unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire with all accessories in concealed type of wiring in medium grade PVC conduit and accessories of Precision/Modi/ Prestoplast/Gerard make.

Item No. 7 – Providing board with two switches and two sockets, 6 Amp – The price shall cover for wiring of multi-plug point (switch, 6 Amp - 2 Nos and socket, 6 Amp - 2 Nos) on separate surface mounted polypropylene switch board with modular cover plate of suitable module with 2.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 and 1.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire in medium grade PVC casing capping, double lock type, ISI marked of Modi/Precision/Gerard/Prestoplast make or medium grade PVC conduit of not less than 19 mm diameter, ISI marked of make Prestoplast/Precision/Modi/Gerard as per site conditions at an approximate distance up to 3.0 meter or as per site requirement. PVC box shall be as per IS: 14772.

Item No. 8 – Concealed wiring of sub-main with 2.5 sq. mm in PVC conduit – The price shall cover for concealed wiring of sub main with two-wire single core 2.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 and one wire of 1.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 in concealed manner as per site requirement in PVC conduit.

Item No. 9 – Concealed wiring of sub-main with 4.0 sq. mm in PVC conduit – The price shall cover for concealed wiring of sub main with two-wire single core 4.0 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 and one wire of 2.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 in concealed manner as per site requirement in PVC conduit.

Item No. 10 – Wiring of sub-main with copper wire, single-core, 4.0 sq. mm - 5 Nos and 2.5 sq. mm - 1 No in PVC conduit/casing-capping with junction box – The price shall cover for wiring of five wire sub-main with 4.0 sq mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 with five wires of 4.0 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 and one wire of 2.5 sq. mm, PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 in green colour as earthing wire in medium grade PVC casing capping of not less than 25 mm size, double lock type, ISI marked of make Prestoplast/Precision/Modi/ Gerard or medium grade PVC conduit of not less than 19 mm diameter, ISI marked of make Prestoplast/ Precision/Modi/Gerard with heavy duty PVC junction box as per site conditions.

Item No. 11 – Providing ceiling rose with PVC junction box in existing sub-main – The price shall cover for supply and fixing of ceiling rose with PVC junction box of reputed make and quality, ISI marked in existing sub-main and its connection from existing sub-main with 1.5 sq. mm multi-stranded, PVC insulated, unsheathed FRLS copper conductor and 1.0 sq. mm multi-stranded, PVC insulated, unsheathed FRLS copper conductor in green colour as earthing wire of 1100 Volt grade, ISI marked, conforming to relevant and latest IS.

Item No. 12 – Providing sub-main board with MCB DP, 16 Amp and circuit fuse – The price shall cover for supply, fixing, testing and commissioning of sub-main board with one no MCB DP, 16 Amp, 10 KA breaking capacity, 'C' curve of MDS/L&T (Hager)/ABB/Siemens/C&S/BCH/ Schneider make in sheet steel enclosure of same make as MCB with one no of flush type Kit-Kat fuse, 16 Amp for incoming supply and two Nos of flush type Kit-Kat fuse, 10 Amp for outgoing supply on sun mica top T.W. board of size 250 x 200 x 50 mm with hinged door.

Item No. 13 – Providing 20 Amp ray roll plug and socket with MCB DP, 16/20 Amp in weather proof box – The price shall cover for supply, erection, testing and commissioning of power plug board with one MCB DP 16/20 Amp, ray-roll socket 16/20 Amp and LED indication lamp in weather proof MS enclosure. The MCB shall be of ABB/L&T (Hager)/HPL/GE/MDS/Siemens/BCH/C&S/CGL/Schneider make. The colour of MS enclosure should be in sync with the décor of the room and as decided by site engineer. The MS enclosure shall be properly earthed.

Item No. 14 – Supply, fixing, testing and commissioning of BLDC ceiling fan, decorative type with three blades – The price shall cover for supply of Brushless DC ceiling fan of 1400 mm sweep conforming to IS: 374 (2019) latest complete with top and bottom canopies, 300/600/900 mm down rod, shackles, nuts, bolts, clamps and all other accessories as per site requirement. The fan shall be supplied with remote control unit and shall be ISI marked and of reputed make of ATOMBERG/HAVELLS/ORIENT/CROMPTON/USHA or any other make approved by Sr. DEE (Power) Vadodara confirming to the IS mentioned above.

The price shall also cover for fixing, testing and commissioning of ceiling fan on existing hook and its connection by FRPVC insulated, flexible copper cord, 1100 Volt grade, 24/0.20 mm from existing ceiling rose with earth connection. A suitable suspension clamp made from G.I. flat of 40 x 6 mm with MS 'S' shaped hook of diameter not less than 10 mm shall be provided as per site requirement if fan hook is not available and this is included in the scope of work.

The colour of the BLDC fan shall be in sync with the room ambience and shall be got approved from site engineer before supply.

Item No. 15 – Providing down rod of 3.0 feet length complete with all accessories like nut-bolts, rubber reels, cotter pin, shackles etc – The price shall cover for supply and fixing of M.S. down rod for ceiling fan of 3.0 feet length, 12.0 mm diameter, 2.0 mm thick, powder coated with matching colour of ceiling fan, complete with suspension assembly, rubber reels, shackles, galvanized nuts and bolt, washers, split pins, insulator and slot at bottom.

Item No. 16 – Providing Exhaust fan 300 mm sweep/heavy duty with louver/bird guard – The price shall cover for supply of heavy duty, industrial Exhaust Fan of metal body, 300 mm sweep with bird guard operating on 230 Volt, 50 Hz AC supply complete with all accessories of make Crompton Greaves/GEC/Almonard/Usha/Bajaj. The price shall also cover for fixing, testing and commissioning of the Exhaust Fan on existing pocket with rake bolts/Anchor fasteners of suitable size as per site condition, and its connection from existing ceiling rose with three-core, 24/0.20 mm size, FRPVC insulated, flexible copper wire of 1100 Volt grade.

Item No. 17 – Providing energy efficient, BLDC pedestal fan, 400 mm sweep – The price shall cover for supply of energy efficient, BLDC pedestal fan, 400 mm sweep, operating on 230 Volt, 50 Hz AC supply. The pedestal fan should offer high air delivery (≥ 75 CMM), speed of 1500 RPM, low noise level (≤ 57 dB) and aerodynamically balanced blades. The fan should be supplied with IR remote control for effortless control, allowing to adjust speed, activate boost mode, set timers, enable sleep mode with a single click or enable oscillation/swing mode. The remote control shall be universal across all the pedestal fans and not needed to be paired, allowing easy operation. The fan should feature 90 degree swing (controlled by remote control/button) to ensure higher coverage across the room. Additionally, it should be manually tilted up to 30 degree allowing directing the airflow precisely for maximum comfort. The pedestal fan shall be of ATOMBERG/HAVELLS/ORIENT/CROMPTON/USHA or any other make approved by Sr. DEE (Power) Vadodara.

Item No. 18 – Providing MCB and starter with three-pin plug point for Air Conditioner unit in concealed manner with modular accessories – The price shall cover for supply, erection, testing and commissioning of power unit for Air Conditioner in enclosure with MCB DP 20/25 Amp, 3 KA breaking capacity, DOL starter of 16 – 25 Amp capacity suitable for 1.5/2.0 TR A.C. unit, one No 16/20/25 Amp socket and three-pin plug top, 16/25 Amp of ANCHOR-ROMA/CRABTREE/NORTH-WEST make with concealed wiring of sub main with two-wire single core 4.0 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 and one wire of 2.5 sq. mm PVC insulated, unsheathed, multi-stranded, FRLS copper conductor of 1100 Volt grade, ISI marked, conforming to IS: 694/1990 as earthing wire in concealed manner at an approximate distance up to 3 meter as per site requirement in PVC conduit. The enclosure shall be of modular type and its colour of should be in sync with the décor of the room and as decided by site engineer.

Item No. 19 – Providing copper piping for suction and discharge lines of Air Conditioner unit – The price shall cover for supply, fixing, testing and commissioning of refrigerant copper piping suitable for R-22, R-134 A, R-407 refrigerant and conforming to IS: 10773/2006 (latest) from indoor unit to outdoor unit. The copper piping shall be insulated with polyurethane foam tubing duly covered with weather protection. The copper refrigerant pipe shall be suitable for bearing 350 PSI pressure and the thickness should be 19 SWG

and diameter should be suitable for handling of refrigerant for capacity 3.5 TR of refrigerant quantity without creating any extra pressure due to quantity of refrigerant and as per manufacturer's recommendations. The exposed copper piping shall be suitably concealed as per site requirement.

Item No. 20 – Providing four-core, multi-stranded, flexible copper cable, 2.5 sq. mm from indoor to outdoor unit of Split Air Conditioner – The price shall cover for supply of decorative wall mounted bracket fan, 400 mm sweep, operating on 230 Volt, 50 Hz AC supply, oscillating type, 90° swing with three-speed regulator, three aerodynamically balanced blades made of aluminium and base made of MS pipe/plate. Make – Crompton Greaves/Usha/Orient/Bajaj/GEC/Almonard. The price shall also cover for fixing, testing and commissioning of bracket fan on wall by suitable size of MS clamps and its connection from existing socket/supply point as per site requirement. The wall bracket fan shall be got approved from site engineer before supply.

Item No. 21 – Providing MS stand for outdoor unit of Split Air Conditioner – The price shall cover for fabrication, supply, fixing and commissioning of MS angle frame/stand made from MS angle for outdoor unit of split AC. The size of angle shall be 40 x 40 x 6 mm painted with two coats of red oxide primer and finished with one coat of black enamel paint. The angle stand shall be fixed at site with anchor bolts. Necessary civil works involved are included in the scope of work.

Item No. 22 – Providing rigid PVC drain pipe – The price shall cover for supply and fixing of rigid uPVC pipe medium grade of required diameter from indoor unit to main drain hole for draining of condensed water from cooling coil (Indoor unit) to main drain discharge point.

Item No. 23 – Installation, testing and commissioning of Split Air Conditioner – The price shall cover for installation, fixing, testing and commissioning of the split AC as per the site-engineer's instructions/requirements with all associated wiring, copper piping, existing drain piping, existing MS outdoor stand. This shall also cover for making a hole of suitable diameter in the existing brick masonry/RCC wall for laying of cables, pipes etc from indoor to outdoor unit in a neat and aesthetic manner. The hole shall be sealed with plaster of Paris to prevent entry of insects, rain water, lizards etc. Manufacturer's recommendations/instructions shall be strictly followed. Split AC shall be supplied by railways from the site engineer's office/stores.

Item No. 24 – Providing on-load, three-way, rotary change over switch, three-phase, 40 Amp in sheet steel enclosure with indication lamps, earthing terminals etc – The price shall cover for supply, fixing, testing and commissioning of 'On Load' rotary change over switch three-way, 40 Amp, three-phase, 415 Volt in powder coated, weather proof sheet enclosure, conforming to IS: 13947-Part III (1993). The changeover switch shall be of ABB/Siemens/GE/ HPL/L&T/BCH/C&S/Schneider/Havells make.

Item No. 25 – Providing Distribution Board with incomer MCB DP, 16/32 Amp - 1 No, RCBO, 25 Amp - 1 No and outgoing MCB SP, 6/10/16 Amp - 8 Nos – The price shall cover for supply, fixing, testing and commissioning of pre-fabricated, double door, MCB distribution board fabricated from CRCA sheet steel, powder coated with grey finish, dust and vermin proof, water resistant with metallic door complete with MCBs of 10 KA breaking capacity. The DB shall be equipped with incomer MCB DP 16/32 Amp - 1 No, RCBO, two-pole, 30 mA sensitivity, 25 Amp - 1 No and outgoing MCB SP, 6/10/16 Amp - 8 Nos. The MCBs/RCBOs shall be of ABB/L&T/HPL/GE/MDS/Siemens/BCH/C&S/Schneider/CGL/Havells make. The board shall be completely wired with multi-stranded copper wire of suitable capacity and shall be provided with heavy duty connectors of suitable capacity for termination of incoming and outgoing wires and shall be provided with two nos of earthing terminals on each side of the board and riveted metallic caution board in three languages.

Item No. 26 – Providing Distribution Board with incomer MCB TPN, 63 Amp - 1 No, outgoing MCB DP, 16/20/32 Amp - 6 Nos with Time Switch, 16 Amp - 2 Nos and Single-Phase Contactor, 32 Amp - 2 Nos – The price shall cover for supply, fixing, testing and commissioning of Distribution Board fabricated from CRCA sheet steel, powder coated with grey finish, dust and vermin proof, water resistant with metallic door complete with MCBs of 10 KA breaking capacity. The board shall be equipped with incomer MCB TPN, 10 KA breaking capacity, 63 Amp rating - 1 No and outgoing MCB DP, 16/20/32 Amp - 6 Nos with Time switch, 16 Amp - 2 Nos, Single-phase contactor of rating 32 Amp - 2 Nos. The MCBs shall be of ABB/L&T/HPL/GE/MDS/Siemens/BCH/C&S/Schneider/CGL/Havells make, the contactor shall be of L&T/BCH/C&S/CGL/Schneider/Siemens make and Digital Time Switch "CRONO" of L&T make or similar of Siemens/Minilec

make. The board shall be completely wired with multi-stranded copper wire of suitable capacity and shall be provided with heavy duty connectors of suitable capacity for termination of incoming and outgoing wires and shall be provided with two nos of earthing terminals on each side of the board and riveted metallic caution board in three languages.

Item No. 27 – Providing Distribution Board with incomer MCCB, four-pole, 125 Amp - 1 No and outgoing MCCB, four-pole, 63 Amp - 2 Nos – The price shall cover for fabrication, supply, fixing, testing and commissioning of pre-fabricated Distribution Board fabricated from 18 SWG CRCA sheet steel, powder coated with grey enamel, double door, wall/floor mounted, dust and vermin proof, water resistant, outdoor type conforming to relevant IS and complete with MCCBs and MCBs. The Distribution Board shall be suitable for surface/concealed mounting. The Distribution Board shall be suitable for vertical installation as per site conditions. The board shall be fabricated for three-phase, four-wire, 440 Volt AC, 50 Hz supply system and shall consist of the following switchgears/accessories –

(a) **Incomer –**

MCCB, four-pole, 125 Amp, with thermal-magnetic release range 100 - 125 Amp, $I_{cs} = 100\% I_{cu}$ having 35 KA breaking capacity and conforming to IS/IEC 60947-2 with adjustable overload and short circuit settings and inbuilt instantaneous protection. The MCCB shall be supplied with spreader terminals and rotary handle. The MCCB shall be of ABB/L&T (Hagar)/HPL/GE/MDS/Siemens/BCH/C&S/Schneider/CGL/Havells make --- 1 No

(b) **Outgoing –**

MCCB, four-pole, 63 Amp, with thermal-magnetic release range 50 - 63 Amp, $I_{cs} = 100\% I_{cu}$ having 35 KA breaking capacity and conforming to IS/IEC 60947-2 with adjustable overload and short circuit settings and inbuilt instantaneous protection. The MCCB shall be supplied with spreader terminals and rotary handle. The MCCB shall be of ABB/L&T (Hagar)/HPL/GE/MDS/Siemens/BCH/C&S/Schneider/CGL/Havells make --- 2 Nos

(c) Bus bar for main circuit and neutral shall have uniform cross section and made from electrolytic tinned copper as per relevant standards with colour coded, heat shrinkable, PVC insulated and having current density of 1.6 Amp/sq. mm cross sectional area --- 1 set

(d) Multi LED type indication lamp for three-phases (Red, Yellow and Blue) of L&T/Schneider/Siemens/C&S/ABB/BCH make with protection fuses --- 1 Set

(e) Cable glands of required sizes --- LOT

(f) Two earth terminals of 12 mm diameter G.I. nut/bolt with washers shall be provided in the LT panel and all sheet steel section shall be electrically connected with a separate G.I. earth strip of 50 x 6 mm size across the panel at bottom.

(g) Metallic Caution Board in three languages riveted to the panel board --- 2 Nos

Item No. 28 – Providing online UPS, 2.0 KVA cap with 120 minutes backup – Supply, fixing, testing and commissioning of Online UPS, 3.0 KVA capacity with isolation transformer and 120 minutes backup complete with all accessories, IGBT PWM based system suitable for single phase, 230 Volt 50 Hz AC input and single phase 230 Volt, sine wave, 50 Hz AC output, floor mounting type with indicative backup time of 120 minutes with minimum 6400 VAH, SMF VRLA batteries.

Specifications are as under –

Capacity – 3.0 KVA

Input Voltage – 160 - 260 Volt, Single-phase, 50 Hz AC

PF – Minimum 0.9 at full load

Overall efficiency – 90% at Rated Load

Overload capacity – Deliver a minimum overload at 125% for 10 minutes and 150% for 30 seconds.

Operating temperature – 0 to 40 deg C

Total harmonic distortion – Maximum 3% for linear loads and 5% for non-linear loads

Crest factor – 3.1

Noise level – Maximum 55 db

Battery – SMF type battery, 42 AH, 12 Volt - 8 Nos

Make – HBL/Amara Raja/Exide/CSB/Panasonic/Hitachi/Yuasa

Warranty – Minimum five (5) years for UPS and 2 years for batteries

Item No. 29 – Supply, fixing, testing and commissioning of three-phase, 415 Volt pre-cooling socket, complete with MCCB, three-pole, 63 Amp, heavy duty plug-socket, 63 Amp, MCB DP, 20 Amp and ray roll plug and socket, 20 Amp in MS outdoor type enclosure for pre cooling point – The price shall cover for supply of three-phase power plug and socket as per below mentioned specifications –

- (i) Three-phase, 415 Volt power plug and five-pin socket, 63 Amp of BCH make, Cat. No. DS6A7A1 or similar model of L&T/SIEMENS/HPL --- 1 No
- (ii) Single phase, 230 Volt power plug and three-pin socket, 20 Amp of BCH make, Cat. No. MPSEU202 or similar model of L&T/SIEMENS/HPL --- 1 No
- (iii) MCCB, four-pole, 63 Amp, with thermal-magnetic release range 50 - 63 Amp, $I_{cs} = 100\% I_{cu}$ having 35 KA breaking capacity and conforming to IS/IEC 60947-2 with adjustable overload and short circuit settings and inbuilt instantaneous protection. The MCCB shall be supplied with spreader terminals and rotary handle. The MCCB shall be of ABB/L&T/HPL/GE/MDS/Siemens/BCH/C&S/Schneider/CGL/Havells make --- 1 No
- (iv) MCB DP, 10 KA breaking capacity, 20 Amp of ABB/L&T/HPL/GE/MDS/Siemens/BCH/C&S/CGL/Schneider/Havells make --- 1 No
- (v) Outdoor type enclosure fabricated from 18 SWG CRCA sheet steel, powder coated with grey enamel, wall/pillar mounted, dust and vermin proof, water resistant conforming to relevant IS. The enclosure shall be fabricated for three-phase, four-wire, 440 Volt AC, 50 Hz supply system.
- (vi) The enclosure shall be internally wired by suitable size FRPVC insulated, single core flexible copper multi-stranded wires with crimped copper lugs.

The price shall also cover for fixing testing and commissioning of the enclosure securely on cover shed pillars/rails/wall with necessary M.S. clamps, nuts, bolts etc. The drawing, design of plug socket, switchgears with make and model shall be got approved from site-engineer before fabrication and supply.

Item No. 30 – Fabrication, supply, fixing and commissioning of 110 Volt battery charging terminals to be mounted on rail poles – The price shall cover for fabrication, supply, fixing and commissioning of 110 Volt battery charging terminals and design shall be as per sample drawing available in Sr. DEE (Power) Vadodara office. Only two cables shall be tapped from the outgoing terminal of the battery charger and looping of the charging terminals should be in alignment. The looping shall take place at the charging terminals only. Cables shall be terminated/looped at the charging terminals with crimped sockets, nuts, bolts, washers etc. and proper capacity of DC MCB shall be provided on positive and negative terminals. The battery charging terminals shall be securely mounted on rail poles. The 110 Volt charging terminals shall be painted with yellow enamel paint. The cable shall be properly clamped to the pipe. 110 Volt DC and symbol for '+' and '-' for identification of polarity shall be painted on the charging terminal.

Item No. 31 – Digging of cable trench 450/600 mm wide and 900 mm deep in all types of soil including hard, rocky etc. – The price shall cover for digging of 450/600 mm wide and 900 mm deep trench in all types of soil including soft, rocky as per cable route plan and filling back the trench after laying of cables. This also includes clearing of roots of trees and bushes and other temporary obstructions on the selected route.

Item No. 32 – Digging of cable trench 100 mm wide and 200 mm deep in concrete/tar road/platform and refilling to its original position after laying of cable in HDPE pipe, 50 mm diameter – The price shall cover for digging of cable trench of size 100 x 200 mm deep in concrete/tar road/platform surface and its refilling/ plastering after laying of cable in 50 mm diameter HDPE pipe of Tijaria/Himalyan/Koncept/Poddar/Unique/Dutron/Reliance/Baba/Shivam make in existing trench. Supply and laying of HDPE pipe, 50 mm diameter is included in the scope of work.

Item No. 33 – Supply and laying of DWC pipe, 63 mm diameter – The price shall cover for supply of Double Wall Corrugated (DWC) HDPE pipe of 63 mm diameter of Tijaria/Himalyan/Koncept/Poddar/Unique/Dutron/Reliance/Baba/Shivam make. DWC HDPE pipe shall have corrugation on outer wall but inner wall shall be plain conforming to IS: 14930 Part I and II amended from time to time. The pipes shall be "ISI" marked. Accessories like HDPE snap fit coupler with neoprene 'O' ring shall be part of supply to make the joints water/damp proof. The strength and stiffness class of the pipe shall be SN4 and SN8 respectively. The price shall also cover for laying the DWC pipes in the ground below the tracks/road by push through method at a depth below the formation level as indicated in the drawing supplied by railway. The term

“formation” level means the earth surface just below the bedding of the ballast. In case of any hard/stony soil, contractor should adopt new technology method in push through method. Each length of the pipes shall be joined together properly using proper size of socket and aligned in a straight line, keeping an inclination to facilitate the draining of water.

Item No. 34 – Supply and fixing of PVC maxi trunking of size 100 x 50 mm – The price shall cover for supply, fixing, testing and commissioning of ISI marked PVC Maxi Trunking of size 100 x 50 mm with all accessories of make Precision/Gerard/Modi/Prestoplast. The PVC Maxi trunking shall be fixed at site by fabricated clamp of 18 SWG GI sheet at a distance not more than 1.5 meters by machine screw/GI nut bolts, washers etc. The existing power cables shall be laid in the PVC Maxi trunking properly dressed and secured by means of suitable clamps/fasteners etc.

Item No. 35 – Supply and erection of G.I. perforated cable tray of size 150 x 100 x 100 mm on MS frame with cover – The price shall cover for fabrication, supply and fixing of M.S. perforated cable tray, hot dip galvanized as per latest ISS/BSS of size 150 x 100 x 100 mm and 2.0 mm approximate thickness with appropriate cover of thickness 1.6 mm. The cable tray shall be fixed horizontally or vertically at site and the existing LT cables shall be laid/shifted in the cable tray by disconnecting from the panel/switch end and reconnecting as per site requirement duly tied with suitable clamps with GI nuts, bolts and washers in a safe and secure manner. The fixing clamps shall be fabricated from 50 x 50 x 6 mm MS angle or 50 x 6 mm MS flat duly painted and fixed at approximate distance of 1.5 to 2.0 meter apart with 2” long dowel/fisher rack bolts. The tray shall be fabricated in lengths of 2.0 m and couplers shall be provided at joints. The cable tray cover shall be fixed with GI screws.

Item No. 36 – Providing uPVC pipe, 50 mm diameter – The price shall cover for supply of uPVC pipe of 50 mm nominal bore diameter and working pressure of 14 kg/sq. cm along with coupling, elbow, tee etc. for protection of cable. The upright cable shall be encased in uPVC pipes for mechanical protection. The pipe shall be clamped with flat MS clamp at each location on upright cable length. uPVC Pipe shall be as per ASTM-D: 1785, Sch-80 of PARIXIT/SWASTIK/ASHIRWAD/ASTRAL/DOLPHIN/POLYTECH/DUKE/FALCON make.

The price shall also cover for laying the uPVC pipes in ground/road and under the track by digging open trench method. Each length of the pipes shall be joined together using proper size of uPVC coupler and properly aligned in a straight line, keeping an inclination to facilitate the draining of water.

Item No. 37 – Supply and laying of HDPE pipe, 110 mm diameter by pushing method under track/road – The price shall cover for supply of HDPE (High Density Polyethylene) pipe of 110 mm nominal diameter as per IS 4984-1995 of make Tijaria/Himalyan/Koncept/Poddar/Unique/Dutron/Reliance/Baba/Shivam with accessories required for laying such as coupler, bend etc.

Material grade and class	Description	Nominal diameter (mm)	Wall thickness (mm)	
			Minimum	Maximum
PE-80 & PN-4	HDPE (High Density polyethylene) pipe	110	5.3	6.1

The price shall also cover for laying the HDPE pipes in the ground below the tracks/road by push through method at a depth below the formation level as indicated in the drawing supplied by railway. The term “formation” level means the earth surface just below the bedding of the ballast. In case of any hard/stony soil, contractor should adopt new technology method in push through method. Each length of the pipes shall be joined together properly using proper size of socket and aligned in a straight line, keeping an inclination to facilitate the draining of water.

Item No. 38 – Providing route cable marker – The price shall cover for supply and fixing of cable route markers on route of cable at each turning point and suitable distance in straight formation as guided by the site engineer. The cable route marker shall be casted of cast iron and fitted with 16 mm diameter M.S. rod and description as per drawing No. S - 287. After fabrication the complete marker assembly shall be hot dip galvanized to make it anti corrosive and shall be got approved from the site engineer.

Item No. 39 – Laying of cable in trench – The price shall cover for laying, testing and commissioning of LTUG armoured cable in existing trench/pipe and its connection at both ends. The cable shall be tested with 500 Volt Megger earth tester before laying it in the trench. The cable cores shall be tested for continuity,

absence of cross phasing, Insulation Resistance between conductors to earth/armour and between conductors. The results should be recorded in presence of railways' representative. A composite cable layout plan on ferro-print or computerized print duly laminated in A-4 size should be submitted by the contractor to this office as well as site in-charge after laying of cable. Cables shall be supplied by railways at site engineer's stores.

Item No. 40 – Laying of cable on wall/cover shed/existing tray with MS clamp – The price shall cover for laying, testing and commissioning of LTUG armoured cable on wall/cover shed/in existing tray and its connection at both ends. The cable shall be tested with 500 Volt Megger before laying it in the tray. The cable cores shall be tested for continuity, absence of cross phasing, Insulation Resistance between conductors to earth/armour and between conductors. The results should be recorded in presence of railways' representative. A composite cable layout plan on ferro-print or computerized print duly laminated in A-4 size should be submitted by the contractor to site engineer and Divisional Office after laying of cable.

Item No. 41 – Providing polyurethane painted, decorative single arm bracket fabricated from "B" Class MS pipe of 42 mm diameter – The price shall cover for supply and fixing of decorative single arm bracket fabricated from "B" Class MS pipe of 42 mm diameter. The pole cap shall be 200 mm long and the diameter shall be suitable for fixing on the existing octagonal street light poles. The length of the arm shall be 1000 mm. The bracket shall be PU painted as per relevant Indian standards. The shade of PU paint shall be decided by railways as per the site scheme. The design of the bracket shall be got approved by the site engineer before fabrication.

Item No. 42 – Providing polyurethane painted, decorative double arm bracket fabricated from "B" Class MS pipe of 42 mm diameter – The price shall cover for supply and fixing of decorative double arm bracket fabricated from "B" Class MS pipe of 42 mm diameter. The pole cap shall be 200 mm long and the diameter shall be suitable for fixing on the existing octagonal street light poles. The length of the arm shall be 1000 mm on each side. The bracket shall be PU painted as per relevant Indian standards. The shade of PU paint shall be decided by railways as per the site scheme. The design of the bracket shall be got approved by the site engineer before fabrication.

Item No. 43 – Supply, fixing, testing and commissioning 5.0 meter height, decorative street light pole with PU paint and complete with all accessories with foundation – The price shall cover for supply, erection and commissioning of 5.0 meter height single/double arm, decorative, street light tubular pole with PU paint as per the below mentioned specifications.

Tubular pole of 5.0 meter height, Top – 70 mm diameter, Bottom – 130 mm diameter and 3 mm thickness sheet. Base plate of minimum dimension 200 x 200 x 12 mm, foundation bolts (4 Nos with 3 Nos of nuts and washers in each), single arm bracket for mounting the light fittings, Bakelite sheet with one MCB SP, 6 Amp and 16 sq. mm stud type connector (4 Nos) inside the pole at door opening for cable connection, common templates minimum for 15 poles.

Detailed specifications of Tubular poles –

Design – The Tubular Poles shall be designed to withstand the maximum wind speed as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS: 5649 Part VI 1982.

Pole Shaft – The pole shaft shall be made from sheet steel conforming to BSEN 10025. The pole shaft shall have round cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process.

All tubular pole shafts shall be provided with the rigid flange plate of suitable thickness (as per IS 2062) with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to the pole shaft from inside and outside.

Door opening – The octagonal poles shall have door of approximate 600 mm length at the elevation of 400 mm from the base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

Material – Octagonal Poles – HT Steel Conforming to grade S355JO

Base Plate – Fe 410 conforming to IS 226 / IS 2062
 Foundation Bolts – EN.8 grade

Pole sections – The Octagonal Poles shall be in single section. There shall not be any circumferential weld joint.

Surface coating – The poles shall be PU painted as per relevant Indian standards. The shade of PU paint shall be decided by railways as per the site scheme.

Fixing Type – The Tubular Poles shall be suitable for bolting on a foundation with a set of four foundation bolts for greater rigidity.

Foundation – The poles are to be erected on foundation i.e. 200 mm above ground level and erected with cement concrete foundation in ratio of 1:3:6. The size of foundation should be of 500 mm (L) x 500 mm (W) x 1000 mm (H). The height of 200 mm above ground level is included in the total height (1000 mm) of foundation. The height of foundation of 200 mm above ground level has to be maintained. The M.S. fabricated bar to be used in the foundation shall be 'J' type foundation bolt (4 nos) and shall be fabricated from 600 mm long M.S. bar of M-16 mm diameter. Other M.S. rod of 12 mm diameter x 1000 mm (H), 4 Nos for vertical reinforcement and 8 mm diameter M.S. rod horizontally bound to the vertical rod.

Bracket for fixing luminaries – The brackets shall be made of specified size NB G.I heavy duty pipe with minimum 1000 mm long, bent at an angle of 120° with necessary holding brackets, hold fasts etc.

Approved makes – Subham Poles (Bangalore)/Bajaj/Kumaran Poles/Crompton Greaves/Ambika Poles/Maruti Poles/JETCOTECH Engineering/Transrail Lighting Ltd or any other make approved by Sr. Divisional Electrical Engineer (Power) Vadodara.

Note –

1. Pole drawing along with details of base plate, foundation bolts and foundation details (RCC) shall be submitted for approval to the site engineer.
2. Material shall be dispatched only after getting approval from the inspection agency.
3. Red Ochre coat shall be applied on the portion of foundation of poles above the ground level.
4. Required length of three core flexible wire for connection to light fitting is included in the scope of work.

Item No. 44 – Supply, fixing, testing and commissioning of 5.0 meter height G.I. street light octagonal pole, double arm complete with all accessories and foundation – The price shall cover for supply, erection and commissioning of 5.0 meter height double arm, G.I. street light octagonal pole as per the below mentioned specifications.

G.I. Octagonal pole of 5.0 meter height, Top – 70 mm diameter, Bottom – 130 mm diameter and 3 mm thickness sheet. Base plate of minimum dimension 200 x 200 x 12 mm, foundation bolts (4 Nos with 3 Nos of nuts and washers in each), double arm bracket for mounting the light fittings, Bakelite sheet with one MCB SP, 6 Amp and 16 sq. mm stud type connector (4 Nos) inside the pole at door opening for cable connection, common templates minimum for 15 poles.

Detailed specifications of Galvanized Octagonal poles –

Design – The Octagonal Poles shall be designed to withstand the maximum wind speed as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS: 5649 Part VI 1982.

Pole Shaft – The pole shaft shall be made from sheet steel conforming to BSEN 10025. The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process.

All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness (as per IS 2062) with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to the pole shaft from inside and outside.

Door opening – The octagonal poles shall have door of approximate 600 mm length at the elevation of 400 mm from the base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

Material – Octagonal Poles – HT Steel Conforming to grade S355JO

Base Plate – Fe 410 conforming to IS 226 / IS 2062
Foundation Bolts – EN.8 grade

Pole sections – The Octagonal Poles shall be in single section. There shall not be any circumferential weld joint.

Galvanization – The poles shall be hot dip galvanized as per relevant Indian standards with average coating thickness of minimum 70 micron. The galvanizing shall be done in single dipping.

Fixing Type – The Octagonal Poles shall be suitable for bolting on a foundation with a set of four foundation bolts for greater rigidity.

Foundation – The poles are to be erected on foundation i.e. 200 mm above ground level and erected with cement concrete foundation in ratio of 1:3:6. The size of foundation should be of 500 mm (L) x 500 mm (W) x 1000 mm (H). The height of 200 mm above ground level is included in the total height (1000 mm) of foundation. The height of foundation of 200 mm above ground level has to be maintained. The M.S. fabricated bar to be used in the foundation shall be 'J' type foundation bolt (4 nos) and shall be fabricated from 600 mm long M.S. bar of M-16 mm diameter. Other M.S. rod of 12 mm diameter x 1000 mm (H), 4 Nos for vertical reinforcement and 8 mm diameter M.S. rod horizontally bound to the vertical rod.

Bracket for fixing luminaries – The brackets shall be made of specified size NB G.I heavy duty pipe with minimum 1000 mm long, bent at an angle of 120° with necessary holding brackets, hold fasts etc.

Approved makes – Subham Poles (Bangalore)/Bajaj/Kumaran Poles/Crompton Greaves/Ambika Poles/Maruti Poles/JETCOTECH Engineering/Transrail Lighting Ltd.

Note –

1. Pole drawing along with details of base plate, foundation bolts and foundation details (RCC) shall be submitted for approval to the site engineer.
2. Material shall be dispatched only after getting approval from the inspection agency.
3. Red Ochre coat shall be applied on the portion of foundation of poles above the ground level.
4. Required length of three core flexible wire for connection to light fitting is included in the scope of work.

Item No. 45 – Supply, fixing, testing and commissioning of 5.0 meter height G.I. multipurpose octagonal pole, double arm, for mounting of Street Light fitting, Coach Guidance Board, Public Address System and CCTV camera complete with all accessories, junction boxes and foundation etc.

– The price shall cover for supply, fixing, testing and commissioning of 5.0 meter height double arm, G.I. multipurpose, octagonal pole for mounting of platform light fitting, Coach Guidance Board, Public Address System and CCTV camera as per the below mentioned specifications. There shall be a common template minimum for 15 poles.

G.I. Octagonal pole of 5.0 meter height, Top – 80 mm diameter, Bottom – 155 mm diameter and 3 mm thickness sheet. Base plate of minimum dimension 200 x 200 x 12 mm, foundation bolts (4 Nos with 3 Nos of nuts and washers in each).

The pole shall be provided with –

- Double arm bracket of 1700 mm length and appropriate diameter for mounting of street light fittings
- “L” shaped two arm bracket of minimum 800 mm length and appropriate diameter for mounting of Coach Guidance Board
- Double arm bracket of 250 mm length made from 50 mm square G.I. conduit for mounting of CCTV camera
- Bracket for mounting of loud speaker for Public Address System

Bakelite sheet with one MCB SP, 6 Amp and 16 sq. mm stud type connector (4 Nos) inside the pole at door opening for cable termination and connection. Connectors shall be provided for respective cables of Coach Guidance Board, CCTV camera and Public Address System.

Detailed specifications of Galvanized Octagonal poles –

Design – The Octagonal Poles shall be designed to withstand the maximum wind speed as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS: 5649 Part VI 1982.

Pole Shaft – The pole shaft shall be made from sheet steel conforming to BSEN 10025. The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall

not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process.

All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness (as per IS 2062) with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to the pole shaft from inside and outside.

Door opening – The octagonal poles shall have door of approximate 600 mm length at the elevation of 400 mm from the base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

Material –	Octagonal Poles –	HT Steel Conforming to grade S355JO
	Base Plate –	Fe 410 conforming to IS 226 / IS 2062
	Foundation Bolts –	EN.8 grade

Pole sections – The Octagonal Poles shall be in single section. There shall not be any circumferential weld joint.

Galvanization – The poles shall be hot dip galvanized as per relevant Indian standards with average coating thickness of minimum 70 micron. The galvanizing shall be done in single dipping.

Fixing Type – The Octagonal Poles shall be suitable for bolting on a foundation with a set of four foundation bolts for greater rigidity.

Foundation – The poles are to be erected on foundation i.e. 200 mm above ground level and erected with cement concrete foundation in ratio of 1:3:6. The size of foundation should be of 500 mm (L) x 500 mm (W) x 1000 mm (H). The height of 200 mm above ground level is included in the total height (1000 mm) of foundation. The height of foundation of 200 mm above ground level has to be maintained. The M.S. fabricated bar to be used in the foundation shall be 'J' type foundation bolt (4 Nos) and shall be fabricated from 600 mm long M.S. bar of M-16 mm diameter. Other M.S. rod of 12 mm diameter x 1000 mm (H), 4 Nos for vertical reinforcement and 8 mm diameter M.S. rod horizontally bound to the vertical rod.

Bracket for fixing luminaries – The brackets shall be made of specified size NB G.I heavy duty pipe with minimum 1000 mm long, bent at an angle of 120° with necessary holding brackets, hold fasts etc.

Approved makes – Subham Poles (Bangalore)/Bajaj/Kumaran Poles/Crompton Greaves/Ambika Poles/Maruti Poles/JETCOTECH Engineering/Transrail Lighting Ltd.

Note –

1. Pole drawing along with details of base plate, foundation bolts and foundation details (RCC) shall be submitted for approval to the site engineer.
2. Material shall be dispatched only after getting approval from the inspection agency.
3. Red Ochre coat shall be applied on the portion of foundation of poles above the ground level.
4. Required length of three core flexible wire for connection to light fitting is included in the scope of work.
5. Drawing of multipurpose pole is as under –

TECHNICAL SPECIFICATIONS FOR ELLIPTICAL/PARABOLIC/FLAT SIGNAGE BOARDS

- 1.0** The work shall be carried out as per the “Guidelines on Standard Signages at Stations on Indian Railways, 2023” issued by the Ministry of Railways, Government of India. The work shall be executed strictly as per the specifications given in the document which is attached as Annexure. Colour scheme, font sizes, directional arrows, materials, fabrication, text, pictogram shall be as given in the document.

2.0 General Principles for Design of Signages –**2.1 Materials –**

The material for signages should be non- reflective, preferably matt finish to reduce the stray light reflectance and increase the visibility. The surface should be processed to prevent glare. Backlighting is preferred. The material of all signage boards shall be chosen to reduce wear and tear and possible damage by vandalism and at the same time easy to maintain. Some suggested materials for signage include Aluminium Composite Panel (ACP), acrylic, Concrete, Steel, wood etc.

The installation/erection of signages should be executed in accordance with good industry practices followed for achieving high standards of workmanship, thus ensuring safety and durability of the Works. All codes and standards referred to in these specifications shall be the latest thereof, unless otherwise stated. The design of various components, assemblies and subassemblies should be done so that it facilitates easy field assembly and dismantling.

“Good Industry Practice” means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability, and prudence in accordance with Applicable Statutory Laws and Applicable Standards in a reliable, safe, economical, and efficient manner.

2.2 Typography, Colours and Pictograms –

The typography shall be so selected that it provides context more easily understandable and can be read from adequate distance. The spacing of letterforms and vertical spacing between lines of text also have an impact on legibility of signages. For people with vision impairments, letters and lines of text can seem blurred when spaced too close together. A balance shall be sought between spacing text to be universally accessible.

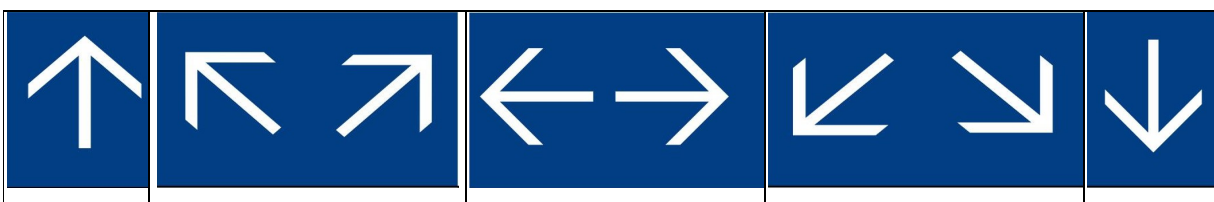
Some people may have difficulty distinguishing between different colours, if they appear next to each other. For this reason, a minimum luminance contrast of 30% is required to easily distinguish text on a background of different colour. However, a Visual Contrast value of 70% is recommended. Visual Contrast value is the difference in Light Reflectance Value (LRV) between the Background Colour and Character Colour. LRV is measured on a scale of 0 to 100 where 0 equals black where total light is absorbed and 100 equals white where total light is reflected. If A1 is LRV of the lighter area colour and A2 is the LRV of the darker area colour, then Visual contrast value is calculated as $[(A1-A2)/A1] \times 100\%$.

The pictograms when used along with typographical information communicate information to its viewers of many different languages at once. Extensive use of universally accessible pictograms is recommended.

2.3 Arrows –

Directional arrows shall be designed to be highly visible and recognizable from a distance. Their correct application should be done for clear identification of directional signs within a busy station environment ensuring messages on signs are quickly assimilated and understood.

Use of Arrows on sign should comply with the following principle –



SSEE (Tech) PRTN

ADEE (Power) BRC

Sr. DEE (Power) BRC

<u>Up/Ahead</u>	<u>Diagonal or Up</u>	<u>Left/Right</u>	<u>Down</u>	<u>Down via lift</u>
To be used For representing straight ahead direction or level change	To be used for directing across a diagonal flat area or level change (up) and to be accompanied by the text “via lift”, “via escalators” or “via stairs to indicate way of getting to the upper level	For standard left/right directions.	To be used for representing a change in level and to be accompanied by the text “via lift”, “via escalators” or “via stairs to indicate the way of getting to the lower level	Only to represent level change (down via lift)

45 degree/oblique arrows should be used very carefully only at following instances –

- Showing a change in level, i.e., movement above or below at the staircase
- Showing a prominent location/ third direction in the same sign panel which is distinctly accessed between the straight ahead and right / left directions.
- In open areas where a person can walk in an oblique direction between the straight and left/right
- These should not be used in narrow corridors

2.4 Language for Signages –

In Hindi speaking States i.e., States located in Region A (these States have Hindi as their Official Language), the information on signage shall be in Hindi and English. The sign boards shall first have Hindi written/engraved or printed/painted/engraved. In addition to Hindi and English, other language shall be used as are authorized by the State Governments for use for official purposes considering the convenience of the general public living in these states. In non-Hindi Speaking States i.e., States located in Regions B and C, the information on signage boards shall be in order of Regional Language, Hindi, and English. Reference – Department of Official Language (Ministry of Home Affairs for Official purposes of the Union) OM No. 1/14013/07/2010-OL (Policy-1) dated 07.04.2011.

2.5 Interaction of signages with commercial boards –

Commercial boards/hoardings should be placed such that they do not obstruct the visibility of the way finding signage. In general, the way finding signages shall not be combined with commercial information. Further, the colours chosen for commercial boards shall not interfere with the signages. On End Platforms, commercial boards should preferably be placed along the walls and clamped on the roof structure parallel to the track. On Island Platform, it shall be preferably be placed parallel to the track duly clamping on the roof structure.

There shall be a mechanism in place to vet the content, the colour scheme and placement of the commercial boards so that these do not interfere with the signage system.

2.6 Interaction of signages with station architecture –

It is important that the signages gel with the station architecture. Normally, it is expected that the architects and interior designers working on stations would see the signages and provide the colours and other features such that there is an overall visual harmony and the objectives of providing signages are enhanced by better contrast and lack of clutter around the signages. However, in existing stations with strong architectural features, the design of signages has to be modified to achieve the same objectives.

Special care may be taken to design Station Name Boards over station buildings matching with the architectural vocabulary while meeting the information and visibility requirement.

3.0 Design Recommendations –

3.1 Universal Accessibility –

Notwithstanding anything contained herein these guidelines, the signages shall be fully compliant with “Divyangjan” guidelines issued by Railway Board from time to time. However, while providing signage boards for “Divyangjan”, care shall be taken in the following regard:

- For completely accessible Station buildings, an explanatory sign shall be displayed at the entry/exit of the station.

- Directional signs bearing the symbol of access must be displayed at all other non-accessible entrances to direct persons with disabilities to the accessible entrance.
- Wherever the location of the accessible parking lots is not obvious or is distant from the approach viewpoints, directional signs should be placed along the route leading to the accessible parking lots. Accessible parking bays shall be clearly demarcated with floor signs along with vertical sign posting. The international symbol of accessibility (wheelchair sign) should be displayed at approaches and entrances to car parks to indicate the provision of accessible parking for Persons with Disabilities within the vicinity. A square with dimensions of at least 1000 mm but not exceeding 1500 mm in length located at the centre of the lot; and the colour of the symbol should be white on a blue background.
- If the slope of the existing ramp is meeting the accessibility requirement, a sign indicating accessible ramp should be mentioned, else caution sign indicator boards need to be provided at appropriate locations.
- A tactile map shall be provided to the intended user at the Information counter which shall be helpful in providing information to visually impaired people and people with hearing impairments who wish to navigate around a building.
- Braille signage may also be provided along with all other signages at the stations. Audio/visual Braille map shall also be provided at the station main concourse area at Information/Service counter and Help booths duly integrated with the tactile flooring as illustrated in the Guidelines for Divyangjan. Efforts shall be made to get frontline service staff trained in sign language in a phased manner.

3.2 Fonts for Signages –

- The English text for signage shall be Helvetica Bold font for all non-illuminated signs and illuminated signs.
- A complementary font Utsaah Bold shall be used for all Hindi text. The same can be downloaded from official Lok Sabha Website.
- For regional language, the fonts shall be suitably selected with the approval of DRM concerned. Reference can be made from major Airport of the respective state or as used by State Government. Sakal Bharati (OTF) Font as available at tdil-dc.in may also be explored wherever required.
- Cap height (i.e., letter height of English Capital letter in sign) determines the visibility distance of the sign.
- Typical character height for fonts in small/medium size station for different sign categories are –
 - Concourse Pylon : 50 mm
 - Internal way finding (Hanging) : 100 mm
 - Internal way finding (Wall mounted) : 75 mm
 - External way finding : 100 mm
 - Railway offices (other than passenger amenities) : 50 mm
 - Necessary repeater boards shall be provided in linear spaces
- However, as per the station specific requirement for placement of signages and its visibility distance, the cap height may be suitably selected. Following table gives the normal and maximum viewing distance for various cap heights.

Table 1: Cap Height with respect to viewing distance

Cap Height (in mm)	Ideal Readability distance (in m)	Maximum Readability distance (in m)
50	6	15
75	9	30
100	12	45

150	18	75
200	24	100
250	30	125
400	48	180
600	72	270
750	90	350
1000	120	450

- Font size must be suitably selected to achieve the required cap height depending upon the expected viewing distance of particular signage.
- Where bilingual signage is used, font size of both the languages shall be the same and as mentioned above. Where trilingual signage is to be used, regional language will be the main language and its font size will be as mentioned above and font size of other two languages shall be approximately 50% to 60% of the size of regional language.

3.3 Colour Scheme –

Following colours shall be used on signages –

Table 2: Colours to be followed

Types of Signage	Description of colour for background and signage matter
Identification & Directional related to train boarding (e.g., PF no., FOB no., entry etc.), buildings/facilities integrated like BUS, Metro, High Speed with station and Utilities (e.g., Waiting room, VIP lounge, Clock Room, Parcel etc.)	Dark blue background with white text/arrow/logo.
Way Out	Dark blue background with yellow text
Emergency Exit	Green background with white text/arrow/logo. The green safety colour should cover at least 50% of the surface of the sign
Caution/Warning/Prohibited Items	Yellow background with black Text
Safety/Security	Red background with white text along with symbols
Room name board related to passenger facility/utility/amenities and Railway Offices	Orange background with white text

- If a given railway Station has segregated platforms catering to different train types like Local/Mail Express or BG/MG etc. then different colour schemes can be used for way finding of different areas for ease of passengers. Floro-graphic signages can also be used to separate and distinguish different train types with marking lamination (anti-skid lamination) after approval of DRM.

Following is the colour palette for the signage colours recommended. The shades shall be a close match to the below mentioned CMYK (Cyan, Magenta, Yellow and Key Black) scale.

Identification & Direction Information CMYK: 100-75-2-18	Emergency Exit CMYK: 100-0-91-27
Safety /Security CMYK: 0-100-63-12	Caution/ Warning CMYK: 0-9-100-0
Room name board related to passenger facility/ utility/ amenities and Railway offices CMYK: 0-60-80-0	Exit CMYK: 100-75-2-18 Text CMYK 0-0-100-0

Figure 4: Colour Palette for the signage colours to be followed

Periodic checks should be made to ensure that the colours of the signs continue to be a close match to the standard shades mentioned above.

3.4 Information Layout –

- Positioning of elements in a line must always follow the same sequence –
 - Arrow
 - Symbol
 - Legend
 - Secondary Text



Figure 5: Sequence of Text Layout

- The sequence applies in both cases i.e. when ranged left-to-right or right-to-left. Sequence for vertical boards shall also follow the same informational hierarchy from top to down.
- The character height of platform number mentioned shall be kept larger than the character height of legend text to give more visibility and emphasis to platform number on sign board, being the most important train information from passenger point of view.
- Secondary text must always be positioned following the main legend. It must not be used without the main legend. Secondary text must always be ranged to the same direction as other elements in the same line. The font size of Secondary text shall be 75% of the Primary Text.



Figure 6: Secondary text in Signage Board

- To maintain consistency, all signs are split into two text zones (range left/range right). Text leading straight ahead should also be aligned to left. Text ranged to the left must appear at the top of the sign while text ranged to the right appears at the bottom. Refer Annexure A for typical Do's and Don'ts.



Figure 7: Left and Right text zones in Signage boards

3.5 Pictograms –

Pictograms should be used to the maximum extent possible. Pictograms are useful because they are a form of shorthand for explaining directional or location messages, designed to be suitable for local as well as an international audience. Stand-alone pictograms are used to identify passenger facilities such as information points and toilets. See Annexure B for the list of standard icons. If a representative icon is not available in the list, then the same shall be approved by the DRM/PHOD concerned.

3.6 Text Spacing and Pictogram Sizes –

A standard alphabet spacing is to be ensured. The ratio of sizing of various elements in the sign board vis-à-vis the Cap height (denoted by x) is specified in the following graphic. This ratio is to be followed for all the sign boards. As mentioned in Para 2.3, the cap height (x) may be finalised based upon the requirement of Viewing distance.



Figure 8: Proportions of Arrow, Pictograms, Text, and Spacing in Signage Boards

4.0 Technical Specifications –**4.1 Materials –**

The material for signages recommended above shall be non-reflective matt finish. The surface shall be processed to prevent glare. Some suggested materials for signage include Aluminium Composite Panel (ACP), acrylic, Concrete, Steel, wood etc. The frame of the sign boards should be sturdy and corrosion resistant. The material for fabrication of the frame box should preferably be powder coated aluminium sheet or fibre glass. The signages meant to be installed without any shelter or roof above should be designed as to prevent entry of water inside, even under heavy rains. Weatherproof polymer lining should be used. The general technical specifications of the material which are for guidance only and are not mandatory of the material for different type of signage boards are outlined below:

4.1.1 Elliptical Illuminated Boards –

All the elliptical signage shall be illuminated. The display sheet shall be of unbreakable translucent polycarbonate sheet of 2 mm to 3 mm thickness. The approved colour text and graphics shall be printed / router cut on monomeric calendared vinyl of 100 µm thickness and shall be firmly pasted on display sheets. The text / graphics matter visibility shall not be less than 160 deg.

The Top Profile of Elliptical Board shall preferably be made up of Aluminium Alloy (6063-T6) Extruded profile anodised to 15 µm +/- 3 µm. The profile nominal wall thickness shall be 2 mm. The reflective metallic silver PU particle coated granules shall be provided on the internal face of the profile. The edges of the profile shall be rounded. The profile shall have a suitable slot at an angle of 80-84 degree to firmly hold the polycarbonate sheet to its required shape. Bottom, top and side Profile shall be made of the same material having 2 mm to 5 mm wall thickness. The frame of elliptical boards shall preferably be made of Extruded Anodized hollow aluminium profile of size not less than 1.2 mm thickness and anodized to minimum 15 µm thickness (Grade AC-15) in approved colour. Anodizing coating shall be as per IS: 1868 or latest amendment.

4.1.2 Aluminium Composite Panel (ACP) Boards –

Board material Aluminium Composite Panel of 4 mm total thickness sheet with 0.5 mm thick aluminium foil skin on both sides along with minimum 25-micron PVDF coating on top coil and polymer/epoxy coating on Back Coil of 4 to 7 microns. The sheet shall be fixed on aluminium substructure of required size fixed with stainless steel fastenings system and making 25 mm grooves and applying non-staining and non-streaking sealant with Baker rod. ACP boards can be used with either Vinyl Sheet or Retro reflective sheet.

4.1.3 Aluminium Sheets –

Aluminium sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy confirming to IS: 736 material designation 24345 or 1900. The sheets shall be used with digitally printed reflective vinyl graphic.

4.2 Adhesives –

Two types of adhesives can be used to paste the base sheeting with top surface sheet. Pressure sensitive adhesive of the aggressive tack type requires no heat, solvent or other preparation for adhesion to a smooth clean surface. Tack free adhesive activated by heat requires heat for making a durable bond between materials. The heat is generally applied in a heat vacuum applicator. The adhesive thus formed shall have a durable bond to smooth, corrosion and weather resistant surface of the base plate such that it shall not be possible to remove the sheeting from the sign base material in one piece by use of sharp instrument. The surface preparation and application process shall be in accordance with the manufacturer's specifications.

4.3 Fabrication –

The base material shall be first removed of any grease, oil, scale/dust or any other contaminants with the help of either acid or hot alkaline to obtain a smooth plain surface before the application of top surface sheet. If the base material surface is rough, approved surface primer shall be used. After cleaning, the materials shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of top surface material.

Complete sheets of the material shall be used on the signs except where it is unavoidable. At splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Sheeting with heat activated adhesives may be splices with an overlap not less than 5 mm or butted with a gap not exceeding 0.75 mm. The material shall cover the sign surface evenly and shall be free from twists, cracks, and folds. Cut outs to produce legends and borders shall be bonded with the sheeting in the manner specified by the manufacturer.

4.4 Text, Pictograms and Arrows –

The information on the sign boards shall either be screen printed or of cut outs. Screen printing shall be processed and finished with materials and in a manner specified by the sheeting manufacturer. Cut-outs shall be of materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer.

5.0 Technical Specification for Elliptical/Parabolic Signage Boards –

Design, manufacture, display, installation of wall/hanging/floor mounting type LED illuminated signage/directional boards in half elliptical/Parabolic/Triangular/Flat shape. The display sheet shall be of unbreakable 040 translucent polycarbonate sheet of 2 mm thickness. The text/graphics matter visibility shall not be less than 160 deg. The approved colour text and graphics shall be printed/router cut on monomeric calendared vinyl of 70 µm thickness and shall be firmly pasted on display sheets. The mounting arrangement shall be hanging, wall mounting, ceiling mounting, pole mounting or floor mounting and as per site requirement. The signage shall have the integral mounting arrangements with sturdy structural frame and ACP cladding on the back side of the signage to avoid rusting and entry of dust. The LED board shall have uniform illumination with 4 to 8 Watt per sq. feet and with brightness more than ambient light. Suitable sized end caps of 1.5 mm thick SS-304 should be provided.

The price shall cover for cost of design, manufacture, supply, loading, transportation and unloading to site, display, installation/erection, testing and commissioning of wall/hanging/floor mounting type LED illuminated signage/directional boards in Full Elliptical (FE), Half Elliptical (HE), Semi Elliptical (SE), parabolic shape as per site requirements. The display sheet shall be of unbreakable translucent polycarbonate sheet of 2 mm thickness. The text/graphics matter visibility shall not be less than 160 deg. The approved colour text and graphics shall be printed/router cut on monomeric calendared vinyl of 70-80 µm thickness and shall be firmly pasted on display sheets. The mounting arrangement shall be hanging, wall mounting, ceiling mounting, pole mounting or floor mounting and as per site requirement.

Display Board shall be Full Elliptical (FE) / Half Elliptical (HE) / Semi Elliptical (SE). All the elliptical signage shall be illuminated. The display sheet shall be of unbreakable 040 translucent polycarbonate sheet of 2 mm thickness. The text / graphics matter visibility shall not be less than 160 deg. The approved colour text and graphics shall be printed / router cut on monomeric calendared vinyl of 70 µm thickness and shall be firmly pasted on display sheets. The mounting arrangement shall be hanging, wall mounting, ceiling mounting, pole mounting or floor mounting and as per site requirement. The signage shall have the integral mounting arrangements with sturdy structural frame and ACP cladding on the back side of the signage to avoid rusting and entry of dust. The LED board shall have uniform illumination with 4- 8 W / sq. ft and with brightness more than ambient light. Suitable size end cap of 1.5 mm thick SS 304 should be provided.

The signage shall have the integral mounting arrangements with sturdy structural frame and ACP cladding on the back side of the signage to avoid rusting and entry of dust. The LED board shall have uniform illumination with 4 to 8 Watt/sq. feet and with brightness more than ambient light. Suitable size end cap of 1.5 mm thick SS-304/die moulded polycarbonate should be provided. The signage boards shall confirm to as per technical specification enclosed.

- (i) The work covers design, manufacture, display, installation of elegant, aesthetically appealing energy efficient LED Elliptical signage for passenger amenities areas like platforms, direction, FOB's, Service buildings, utilities, concourse etc. of various stations.
- (ii) The work which is not included in the schedule but is required to complete the installation work shall be considered as the part of work and carried out by the contractor accordingly and no extra payment will be paid for that.

- (iii) Agency shall visit the site for designing the signages, design, model, graphics and colour scheme shall be got approved from user department before supply of LED Elliptical glow sign boards.
- (iv) Agency shall submit the design report through professional design expert for appreciation of user department.
- (v) LED Elliptical Glow Sign Boards are to be provided dust environment and open space and should have proper louvers or ventilation for dissipation of heat generated by drivers/LEDs.
- (vi) The quality of the Vinyl/Polycarbonate sheet/anodized coating should be covered under three years warranty from the manufacturer. LEDs/LED drivers shall be covered for free replacement five years warranty from the manufacturer.
- (vii) Documentary proof of purchasing of LED/LED drivers/Vinyl sheet/Polycarbonate sheet from reputed approved brand shall be required to be submitted along with bill.
- (viii) The unit prices indicated in the Schedule of quantity is inclusive of the prices for design, manufacturing, supplying of materials, multiple loading/unloading required under the particular item of schedule, storing, handling, erection testing and commissioning of installation in conformity of specification. The unit price is also inclusive of all incidental charges for transport, loading/unloading and handling of materials, commission for arranging dispatch direct from manufacturer's factory/authorized dealer/supplier and completing all necessary formalities in this respect, such as submission of forwarding notes, all insurance premium, bankers' charges for bank guarantee, indemnity bonds inclusive of cost of stamps, etc. The unit prices shall include all incidental charges duties and levies including GST.

5.1 Mounting –

Mounting arrangement shall be hanging, wall mounting, ceiling mounting, pole mounting, floor mounting or as per site requirement. Sign Boards shall be with integrated mounting arrangement powder coated pipes to FOB/PF Structure/walls with tension rope made of SS-304 and supplied with minimum 5.0-meter, 2.5 sq. mm FRLS multi stranded copper flexible cable as per IS: 694 with latest amendment and socket pin for connecting to power supply system. The cost of fixing of sign board with suitable clamping arrangement with SS nut, bolts, washers, square shear nut, nut-bolts, screw, T bolt, Chuck nut, shear nut or welding etc. is also included. The clamps shall be powder coated and enamel paint of approved colour.

5.2 Elliptical Glow Board Frame –

Shall be made of Extruded Anodized hollow aluminium profile of size not less than 1.2 mm thickness and anodized to minimum 15 µm thickness (Grade AC-15) in bronze and silver or any other approved colour. Anodizing coating shall be as per IS: 1868 or latest amendment.

5.3 Top profile –

Top Profile of Elliptical Glow Board shall be made up of Aluminium Alloy (6063-T6) Extruded profile anodized to 15 µm ±3 µm. The profile nominal wall thickness shall be 2 mm and width approx 170 mm, 137 mm and 268 mm. The reflective metallic silver PU particle coated granules shall be provided on the internal face of the profile. The edges of the profile shall be rounded.

The profile shall have a slot of approx 4.8 mm and 7 mm width on both sides to hold 2/3/4 mm thick polycarbonate sheet. The slot shall be at an angle of 80-84 degree to face firmly hold the polycarbonate sheet in elliptical and parabolic curvature. The Elliptical / Parabolic curvature of the polycarbonate sheet shall be maintained by its inherent flexural tension property. It should have circular slots for M6 self-tapping cheese head screws to fix the end caps. Along the centre line of the top of this profile there shall be a 10 mm x 3 mm slot for press fitting the heat sink holding brackets in place with circular slot for M6 self-tapping screw should be made available. There shall also be a flat extension of 12 mm to rectangular slot for additional support/fixing screws to firmly hold the heat sink holding bracket. The Total height of the central Projection should be maintained to minimize obstruction to light illumination.

5.4 Bottom, Top and Side Profile –

Bottom, top and side Profile full/half of the Elliptical Glow Board shall be made of extruded anodized Aluminium Alloy hollow profile (6063-T6) having 2 mm to 5 mm wall thickness. It should have internal ribs with approx 1.5 mm, 2.5 mm thickness and 4.5 mm, 4.2 mm wide slot to firmly hold the

polycarbonate sheet in elliptical and parabolic curvature using its flexural tension. Total external width and height of the bottom, top and side profiles should be full of approximately 34 mm x 48 mm R 11.7 mm/42 mm x 50 mm, R 24.3 mm/42 mm x 80 mm, R16 mm/84 mm x 80 mm, R16 mm without compromising the strength and causing any obstruction to the light while giving maximum viewing area. The bottom corner shall have a curvature of approximately R 11.7 mm, 24.3 mm and 16 mm to appear in continuous flow of elliptical Curvature of polycarbonate sheet. This also shall add to aesthetic beauty of the whole Elliptical Glow Board.

5.5 Heat Sink Holding Bracket –

Heat Sink Holding Bracket shall be of approximate length 184 mm, 252 mm, 260 mm, 324 mm, 397 mm, 537 mm, 551 mm injection moulded in Nylon 6 material and 1130 mm, 1156 mm, 861 mm in MS machine formed powder coated for its strength and flexibility. The bracket shall be of 'I' cross section of sizes approximately 102 mm x 15 mm x 10 mm, 1080 mm x 25 mm x 5 mm, 1156 mm x 50 mm x 5 mm, 861 mm x 50 mm x 5 mm at mid portion and it should reduce proportionately in slant at both the ends for nylon 6 mm, MS 5 mm. Thickness without obstructing the light and without compromising on strength. The 'I' cross section nylon shall have ribs for maintaining stiffness. Both the ends of HSH brackets shall have locking clasp to press fit in 10 mm x 3mm slot of top and bottom profile. The mid portion shall have offset of 14mm for nylon and 12 mm for MS. Central clasp shall be moulded in the Heat Sink Holding bracket to firmly hold the Heat Sink along the longitudinal axis of Elliptical Glow Board. The central clasp shall have two prong sets to hold the heat sink across its diagonal or along its sides as required. Two holes as per requirement shall be provided near the end clasps firmly. Two holes for nylon and MS shall be provided on both sides of central clasp to fix at both profiles. Two holes shall be provided on both sides of central clasp to fix the mid portion of bracket to strip in the event longer bracket if required. The mid portion of HSH bracket approx. 3 mm thick x 10 mm wide aluminium strip in the event longer bracket is required or more than one Heat Sink is required for bigger size of Elliptical Glow Board.

5.6 Heat Sink –

Heat Sink shall be 25 to 26 mm hollow anodized Aluminium Alloy (6063-T6) profile of 2 mm thickness. Corners shall be flattened to form a square across flat to hold the heat sink diagonally. Heat sink must be press fit horizontally and diagonally from all 8 sides. All the four sides shall have dovetail of slots. Circular slots of diameter 2 mm shall be provided at all four internal corners to tight fit the pins of Heat Sink connector. There shall be a set of three of approximately 1.5 mm thick ribs central of approximately 5 mm height and two sides of approximately 2 mm height. Provision for maximize the surface area to aid in faster cooling as well as for additional strength to hollow square profile.

5.7 Heat Sink connector –

Heat Sink connector shall be a moulded from polycarbonate profile of same cross-sectional dimensions as that of Heat Sink. The thickness of the connector shall be approximately 5 mm. Two semicircular slots shall be provided on each face. Provision to pass out hot air from heat sink should be made. Four pins shall be moulded on four corners on both the faces of Heat Sink connectors to be press fitted in Heat Sink profile.

5.8 Elliptical Glow Board End Cap –

End caps full/half with elliptical and parabolic shape shall be made from injection moulded polycarbonate granules 2 mm thick / SS 304 1.2 mm thick/Aluminium die casted 8 mm thick having curve on top side and internal hollow and elliptical base at bottom side with reflective internal surface. The End caps shall be perfectly opaque.

The boards shall be such that the text and graphics displayed on the Polycarbonate sheet held in these end caps should be completely visible even if it is viewed directly from the bottom or any direction; the text is very much legible. Polycarbonate cap internal face shall be cross ribbed 2 mm x 3 mm to increase the strength of the end cap. Eight nos. locating pins tapering towards collar of the end cap shall be provided near the internal periphery of the end cap. These pins shall firmly hold the 3mm translucent polycarbonate sheet in elliptical / parabolic curvature. Circular cut-out of dia. approx. 80mm shall be provided for illuminated branding or opaque cap shall be provided in case of none branding. For branding translucent material fitting provision should provide without shadow on branding. 2mm x 5mm

Ribs approx. 20mm inside and parallel to the external periphery shall be provided for additional strength. Riser buttons shall be provided along the internal ribs to block the cut-outs using opaque sheet screwed through these buttons. These buttons may also be used to mount the LED projector when required. Projector fitting bracket shall be fixed to end cap to align with oval slot. Three nos. cap holding sockets shall be moulded at three corners of the End Cap. Two nos. locating pins shall be provided on each cap holding sockets and shall be provided at the bottom of these pins for additional strength. This pin shall locate in the top and bottom Aluminium profile. Two tapering ribs shall be provided to cap holding brackets for additional strength. Three through slots of approx. 17 mm x 1.5 mm shall be provided near the top of end cap for heat ventilation. Moulded Screw caps shall be provided to externally press fit in the cap holding sockets. The end cap shall be Moulded Shatter proof opaque polycarbonate as per IS 14443 or latest amended with thickness not less than 1mm and of reputed Indian make using Bayer granules. SS 304 elliptical or parabolic cap should have approx. 20 mm vertical collar at corners of suitable dia. hole to interlock with profile and structure, square bracket at bottom cap should be provided to interlock vertical square structure pipe and top cap should have cut out to thorough pass the structure pipe with the provision of ventilation. Aluminium die Casted cap top should have curvature of R 1123-1125 mm and internal hollow with wall thickness of 6-8mm with polished and premixed with metallic PU gloss lacquer coated internal 2 nos. cap holding socket shall be casted at both corners of cap to interlock with side profile, Bottom casted cap should have side curvature of - R78-79mm / 112-113 mm and hollow of approx. 100 mm with internal 2 nos. cap holding socket shall be casted at both the corners of cap to interlock with side profile. Vertical rib should provide to interlock polycarbonate sheet with inner pins support should be flushed with side Aluminium profile. Cap should have a hole with die moulded dia. approx. 12 mm grommet to pass main supply wire.

5.9 Podium –

Elliptical shape one piece cut, top and bottom 3mm thick with size approx. 1170 mm x 512 mm x 508 mm at R 914 mm at corner R 117 mm/1643 mm x 575 mm x 508 mm at R 1652 mm at corner R 92.5 mm of SS- 304 with parabolic shape cut at center having diameter approximately 8 mm, 2 holes on top for matching with bottom cap of Elliptical Glow Board for fixing and interlocking without welding and bottom approx. 12 mm 4 hole for foundation fitting should be provided. Provide nine holes of approximately 4 mm for ventilation at top and backside openable door system with lock and key. SS-304 grade frame structure of size approximately 25 mm x 50 mm x 1.2 mm square with vertical and horizontal supports covered with SS 304 sheet of 1.2mm thick with powder coated in elliptical shape machine formed matching with top of podium should provide Anchor fastener fitting provision has to be made for ground fixing.

5.10 ACP Cladding –

Design, fabrication and installation of 3 mm thick exterior grade PVDF coated Aluminium composite panels (Timex, Alucobond) of having 0.5 mm thick aluminium PVDF coated sheet with specific standard colour + 3 mm core material + 0.5 mm aluminium sheet chemically treated (back sheet) bent with 5mm uniform machine grooved as per requirement, fitted on anodised aluminium/anodized aluminium angle Primer with PU coated MS rectangular grid work. Grid for supporting ACP shall be of size approximately 38 mm x 38 mm x 1.5 mm at a distance of Heat sink fixed in Elliptical Glow Board should accurately match Horizontally and Vertically along with existing structure on site. Hardware, fixtures, brackets, anchor, fasteners of SS 304 grade etc. complete duly sealed with weathering silicon (DOW / GE) for circular columns and curved beams etc. Provision of MS clamp/bracket for fixing with existing structure vertically, horizontally or slanted without welding and with level size alignment adjustment and interlocking provision without compromising strength and structural stability of frame should provide.

5.11 Text/Graphics –

Text/Graphics shall be computer cut/printed on 100 µm Monomeric calendared vinyl matt sheet of reputed make (Metamark/3M).

5.12 LED ribbon light illumination –

Ribbon light shall be of waterproof SMD 2835. The width of Ribbon light shall be 12 ±1 mm. This shall be slide into the dovetail grooves of the heat sink and firmly pasted on all four sides of the heat sink. The light emitted from LED ribbon light should be partially reflected from the elliptical and parabolic

curvature of white glossy polycarbonate sheet multiple times. Any obstruction or low brightness at the edges of the beam should be taken care of. Uniform illumination - Average 4 to 8 Watt per sq. feet.

5.13 Sizes of boards –

The size of board shall of different sizes, as per the site requirement.

5.14 Sign Substrate –

Sign Substrate shall be of Eco Friendly, High impact strength, shatter proof, UV resistant, Translucent, non-flammable White polycarbonate solid sheet as per IS 14448 of not less than 3 mm of reputed make Bayer/Lexan/Polymac. Light transmission shall be in the range of 60-90%. Provide U shaped 7 mm x 1 mm / 4 mm x 1 mm / 8 mm x 2 mm gasket for tight holding and interlocking polycarbonate sheet in aluminum profile.

6.0 TECHNICAL SPECIFICATION FOR FLAT SIGNAGE BOARDS –

6.1 ILLUMINATED SIGNAGE –

6.1.1 Illuminated Double Side (Back-to-Back) Signage –

The Modular Design Signage have its openable profile of 100mm for double side shall be made of Aluminium Extrusion (Alloy 6060) sheet of 2 mm with anodizing (thickness 15 20 microns) with a weight of 0.84 kg per meter ISO:9001 2008 product with premium grade anodizing and pure polyester powder coated (colour as per Railways norms and satisfactions).

The message on 3M Scotchcal 3635 20/22 Cast Blackout Vinyl or PRS Parmacel or Avery 5301 Blackout Vinyl and 3M Scotchcal 3630 Cast Coloured Vinyl or PRS Parmacel or Avery 5600 LD Translucent/Avery 5500 QM TF Coloured Vinyl (as per colour standard specified by Railways) pasted on Polycarbonate Sheet (Pioneer or Polyleathers or Laxan or PC Lite or equivalent brand) of 3mm thickness is to be used on both sides of panel. Letters of the Vinyl message to be made with plotter cut self-adhesive cast colour Vinyl.

Signage shall be illuminated from back wherever specified using Single/Multiple LED Modules each with IP 65 protection of white colour and rating of appropriate watts. Modules should be uniformly placed in a manner that at least one LED Module every 12 to 16 sq. inch of surface required illumination. Each signage should have an individual power supply adaptor for illumination of all LED installed in signage. The power supply adaptor should be placed inside signage and power supply adaptor should be connected using plug-in type connector connected to mains supply. LED to be used with five-year replacement warranty and specifications of LED module and Driver shall be as per Para 2.4.

Providing and fixing of all accessories such as spring clips, anchoring hooks, nuts, screw hooks, slots etc. The Modular Design Signages is to be suspended from the concrete (e.g., slab, beam, trusses etc.) by Mild Steel (MS) Suspender pipe including all accessories like bottom plate, locking plate, adjuster, bolts etc. Hilti fastener or equivalents brand of specified diameters are to be used where anchoring is to be done with the concrete chamber. VHB (Very High Bond) double side adhesive tape for pasting purpose wherever required. All anchor fasteners, bolts etc. to be SS304 grade. The Vinyl should have a warranty of 5 Years by Vinyl Manufacturer.

6.1.2 Illuminated (Wall Mounted) Single Side Signage –

The Modular Design Signages have its openable profile of 70mm for single sided shall be made of Aluminium Extrusion (Alloy 6060) sheet of 2mm with anodizing (thickness 15-20 microns) with a weight of 0.84 kg per meter ISO: 9001 2008 product with premium grade anodizing and pure polyester powder coated (colour as per Railways norms and satisfactions).

The message on 3M Scotchcal 3635 20/22 Cast Blackout Vinyl or PRS Parmacel or Avery 5301 Blockout Vinyl and 3M Scotchcal 3630 Cast Coloured Vinyl or PRS Parmacel or Avery 5600 LD Translucent/Avery 5500 QM TF Coloured Vinyl (as per colour standard specified by Railways) pasted on Polycarbonate Sheet (Pioneer or Polyleathers or Laxan or PC Lite or equivalent brand) of 3mm thickness is to be used on one side of panel and other side of panel will be of Aluminium Composite Panel (ACP) Sheet (GurInd or Indo bond or Alstrong or equivalent brand) of 3 mm thickness. Letters of the Vinyl message to be made with plotter cut self-adhesive cast colour Vinyl.

Signage shall be illuminated from back wherever specified using Single/Multiple LED Modules each with IP 65 protection of white colour and rating of appropriate watts. Modules should be uniformly placed in a manner that at least one LED Module every 12 to 16 sq. inch of surface required illumination. Each signage should will have an individual power supply adaptor for illumination of all LED installed in signage. The power supply adaptor should be placed inside signage and power supply adaptor should be connected using plug in type connector connected to mains supply. LED to be used with five-year replacement warranty and specifications of LED module and Driver should be as per Para 2.14.

Providing and fixing of all accessories such as spring clips, anchoring hooks, nuts, screw hooks, slots etc. The Modular Design Signages is to be fixed on wall by Mild Steel (MS) Suspender pipe including all accessories like bottom plate, locking plate, adjuster, bolts etc. Hilti fastener or equivalents brand of specified diameters are to be used where anchoring is to be done with the concrete chamber. VHB (Very High Bond) double side adhesive tape for pasting purpose wherever required. All fasteners, bolts etc. shall be of SS-304 grade. The vinyl should have a warranty of five years by Vinyl Manufacturer.

6.2 LED Specification –

Linear LED of density 120/240 LEDs per meter of quality of proven make such as Bridge Lux/NICHIA/SEOUL Semiconductor/OSRAM. OEM certificate of LED should be provided. LED and driver Specifications are as under –

Parameter	Value
Module Wattage(W)	≥ 1 W
Colour temperature	6500 K
LED module make	OSRAM/GE CURRENT/LUCO LED/SLOAN
Chip	OSRAM/CREE/NICHIA/LUMILED/SAMSUNG
Module Lumen/Watt	≥150 lm/W
IP Rating	IP 66
Beam Angle	≥160
SDCM (colour consistency, binning)	≤3.0
CRI	>80
Burning hours	50,000 @T _c Max (L70 B50)
LM79/ERP Report (Energy Related Product)	Yes
LM80 Certificate	Yes
BIS Certificate	IS 10322 (Part 5/Sec 7) - IEC 60598-2-20
CE/RoHS	Yes
Operating Voltage	24 Volt
Operating Temperature	-25 to +70 Degree Celsius

6.3 LED Driver Specification –

Parameter	Value
Power Factor	0.95
Input Voltage Range	180 to 270 Volt
THD	<5%
IP Rating	IP 67
Line to Earth Surge Protection	6 KV
Line to Neutral Surge Protection	4 KV
Efficiency	90%
Expected Lifetime	50,000 hours
CE/ENEC/CB	Yes
BIS Certificate	IS 15885
Protections	Yes

- LEDs/LED drivers shall be covered for free replacement for five years warranty from the manufacturer.

- To promote energy efficiency, the lux levels of the illuminated signage boards except emergency signages should be reduced to 50% in selected time slots when the ambient light is still available, or when the passengers/users are below 20% of the average peak hour traffic at the station. Use of Technology to remotely access and control shall be promoted.

6.4 ALUMINIUM CLIP - On Frame and Aluminium Composite Panel (ACP) Sheet Signage –

3M U 180 Cast or PRS Parmacel or Avery MPI 1105 Easy Apply White/Colour Vinyl (as specified by Railways) with Over-laminate of 3M 8519 Gloss Finish or PRS Parmacel or Avery DOL 10802 with Eco Solvent Printing pasted on Aluminium Composite Panel (ACP) Sheet (Gurind or Indo bond or Alstrong or equivalent brand) of 3mm thickness and Polycarbonate Sheet (Pioneer Polyleathers or Laxan or PC Lite or equivalent brand) of 3mm thickness. Covered all around with Aluminium Extruded Openable Profile (Clip on). Fixing of the clip-on profile and ACP sheet on the concrete wall is to be using drill machine etc. The vinyl with 5 Years Warranty by Vinyl Manufacturer.

6.5 Retro Reflective Sheet and Aluminium Composite Panel (ACP) Sheet Signage –

3M DGS Reflective 4000 series or PRS Parmacel or Avery Omnicube™ T 11000 and W 11000 Series Reflective Sheet with plotter cut message of 3M DGS Reflective 4000 series or PRS Parmacel or Avery Omnicube™ T 11000 and W 11000 Series Reflective Sheet pasted on Aluminium Composite Panel (ACP) Sheet (Gurind or Indo bond or Alstrong or equivalent brand) of 3 mm thickness. The Retro Reflective Sheet with 5 Years Warranty by Retro Reflective Manufacturer.

6.6 Vinyl and Aluminium Composite Panel (ACP) Sheet Signage –

3M 11 180 Cast or PRS Parmacel or Avery MPI 1105 Easy Apply White/Colour Vinyl (as specified by Railways) with Over-laminate of 3M 8519 Gloss Finish or PRS Parmacel or Avery DOL 10802 with Eco Solvent Printing on it and pasted on Aluminium Composite Panel (ACP) Sheet (Gurind or Indo bond or Alstrong or equivalent brand) of 3mm thickness. The vinyl with 5 Years Warranty by Vinyl Manufacturer.

7.0 Suspender –

The signage frame is to be suspended from metal supporting members or concrete e.g., slab or beam, trusses or purlins etc. with lengths as per site conditions including all accessories like adjuster, stoppers, sleeves, bolts etc. complete as per fabrication drawing. All mild steel, to be Polyurethane painted, shall be Hot Dipped Galvanized after fabrication and before painting. Entire assembly of suspension system is to be Polyester powder coated. Hilti fasteners or of equivalent brand of specified diameters are to be used where anchoring is to be done with the concrete members. The mounting surface shall be required or finished as per surrounding area complete at no extra cost.

8.0 TECHNICAL SPECIFICATION FOR CIRCULATING AREA SIGNAGE BOARDS –

- 3M DGS Reflective 4000 series or PRS Parmacel or Avery Omnicube™ T-11000 and W-11000 Series Reflective Sheet with plotter cut message of 3M DGS Reflective 4000 series or PRS Parmacel or Avery Omnicube™ T-11000 and W-11000 Series Reflective Sheet pasted on Aluminium Composite Panel (ACP) Sheet (Gurind or Indo bond or Alstrong or equivalent brand) of 3 mm thickness. The Retro Reflective Sheet with 5 Years Warranty by Retro Reflective Manufacturer. ACP Sheet should be fixed on frame made of 25 mm x 3 mm SS flat and provided with Stainless steel pipe frame on all four sides with pipe of 30 mm to 50 mm diameter (depending on the size of board).
- Sign Board to be fixed using stainless steel pipe of 50 mm to 100 mm diameter (depending on the size of board).
- All stainless-steel work shall conform to the requirements of IS: 6911/1992 (equivalent BS 1449 Part 2). Stainless steel shall be low carbon chromium nickel austenitic steel type 302 or 304. The surface of stainless steel shall be in No. 4 brushed in a horizontal direction to achieve a satin polish grain.
- For single sided board, backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat.
- For “Station Welcome” board mounting arrangement may be decided as per local conditions like width of road, availability of dividers etc. However, the mounting arrangement must be suitable covered with SS sheet of appropriate thickness.

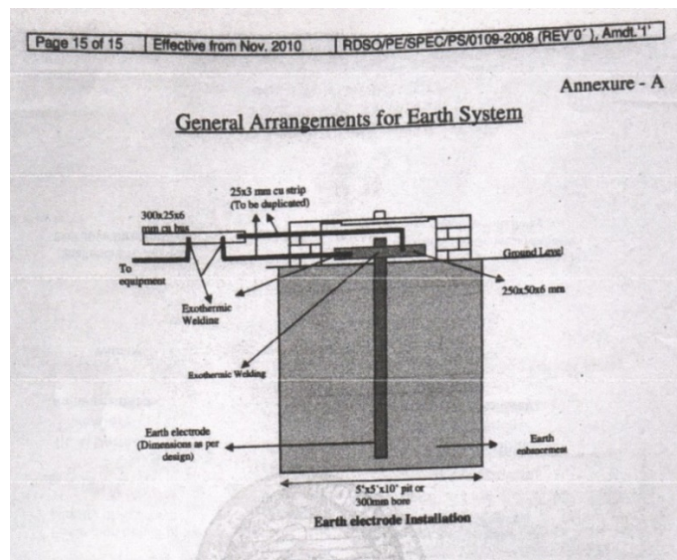
Contractor shall supply materials as per the approved makes. The contractor should submit documentary proof of purchase of LED/LED drivers/Vinyl sheet/Polycarbonate sheet from reputed/approved brand and shall submit along with the bills.

The successful contractor shall arrange of all equipment, tools, consumables, testing meters, Hydra scaffolding, crane, forklift etc and other required materials for successful completion of the work. Any work not specifically mentioned, but required for successful completion of work is deemed to be included in the work. If any activity is required to be included later on due to reliability and safety shall be carried out by contractor at no extra cost.

Item No. 47 – Providing G.I. Earth wire, 8 SWG in PVC sleeve along with cable – The price shall cover for supply and laying of soft G.I. wire of 8 SWG covered with black coloured PVC sleeve of superior quality and laid along with PVC LTUG cable properly fixed and connecting earthing terminals of each panel.

Item No. 48 – Providing maintenance free earthing – The price shall cover for providing maintenance free earthing as per the following specifications –

1. High tensile-low carbon steel rod having diameter not less than 17 mm complying with requirements of BS 4360 Grade 43A or EN10025:2-004 S275JR, molecularly bonded by 99.99% pure high conductivity copper on outer surface with copper coating thickness of 250 micron or more, Length 3000 mm (minimum). Certificates from NABL approved labs shall be submitted with test results.
2. Copper earth bus-bar of size 250 mm x 50 mm x 6 mm having electrical conductivity of 101% IACS, minimum 99.9% copper content shall be exothermically welded to rod with 4 holes of 12 mm diameter (two on each side) for connecting earthing conductor.
3. Earth Enhancement compound should have characteristics as mentioned in the RDSO specifications. It should have low resistivity preferably below 0.2 Ohm-meter, supplied in sealed bags (minimum 75 kg per pit for 5' x 5' x 10' size pit and minimum 50 kg per pit for 300 mm bore type pit. The bags shall be marked with manufacturer's name or trade name, quality, Batch No. and date of manufacture. Certificates from NABL approved labs shall be submitted with test results, for at least following parameters –
 - i) Composition of Earth Enhancement compound
 - ii) Resistivity – < 2 Ohm-meter
 - iii) pH value – > 7 but < 9
 - iv) Moisture retaining capacity – > 10% at 105 degrees Celsius
 - v) Water solubility – < 5%
4. Backfill material – Good quality soil or excavated soil free from sand, gravel and stones shall be used for backfilling.
5. Earth pit of size 5 feet x 5 feet x 10 feet or min 300 mm bore up to 10 feet using earth auger shall be made.
6. Inspection chamber – A concrete box of 300 x 300 x 300 mm (inside dimensions) and 50 mm thickness of wall, with smooth cement plaster finish shall be provided on the top of the pit. A concrete lid, painted black, approximately 50 mm thick with pulling hooks shall be provided to cover the earth pit. PVC sleeve shall be provided in concrete wall to take out earthing connections.
7. On backside of the cover, date of the testing and average resistance value shall be written with yellow paint on black background.
8. Instead of copper bus-bar and strips mentioned in the drawing, a GI main bus-bar of minimum size 300 mm x 75 mm x 8 mm to be installed on nearby wall etc. It shall be connected to earthing with two GI strips of 50 mm x 6 mm size each, up to a distance of 10 meters from earth bus-bar (minimum 3 meters x 2 Nos GI strips to be supplied).
9. Earthing shall generally be carried out in accordance with the requirement of I.E. Rules, 1956, as amended from time to time and shall confirm to IS: 3043 of 1987 with latest amendment.
10. The earth value shall be measured and recorded at the site by painting on earth pit or nearest wall along with date of testing. It shall be less than 2 Ohms and neutral to earth voltage shall be less than 3 Volt.
11. Earthing performance after a year of installation shall be jointly checked and measured. It should be less than 2 Ohm.
12. General arrangement of the earth system shall be as per following drawing –



Schedule B - LED Fittings

Item No. 1 – Providing 9 Watt LED lamp – The price shall cover for supply of 9 Watt LED bulb as per Western Railways' specification no. WR/CCG/Specification/P/001 (Rev. 01) - 2018. The bulb shall be equipped with B22 cap and shall be of A67 type. The bulb shall deliver 900 lumens output with CCT of 6500° K and CRI of 80. The bulb shall be of reputed quality and make.

Item No. 2 – Providing four-feet long, 18/20 Watt LED fitting complete with all accessories and LED tube – The price shall cover for supply of 1 x 18/20-Watt LED batten fitting. The fixture shall be of CRCA channel finished with white polyester powder coating with high UV and corrosion resistance. The fixture shall be equipped with end caps, push fit type lamp holders and mains connector to directly fix 4 feet long LED tube. The LED lamp shall be of 18/20 Watt as per Western Railways' specification no. WR/CCG/Specification/P/001 (Rev. 01) - 2018. The tube shall be of polycarbonate material. The entire fixture shall be of reputed quality and make.

The price shall also cover for fixing testing and commissioning of the complete fitting at site by means of bracket made from GI flat of 25 x 3 mm with nuts, bolts and washers or on heavy duty, ISI marked PVC square box as per site requirement. Connection shall be given by means of 24/0.2 mm three-core flexible copper wire through connector and heavy-duty flexible PVC conduit. Removal of existing fittings along with brackets and handing over the same to the site in-charge is included in the scope of work.

Item No. 3 – Providing 15/18 Watt LED down lighter suitable for surface/recessed mounting as per site requirement – The price shall cover for supply, fixing, testing and commissioning of 15/18 Watt LED luminary operating on 230 Volt, 50 Hz AC supply. The fitting shall conform to Western Railways' specification no. WR/CCG/Specification/P/001 (Rev. 01) - 2018 and shall be of reputed quality and make. The fitting shall be of pressure die cast aluminum suitable for surface/recessed mounting with high efficiency Polycarbonate diffuser. Luminous flux – ≥ 2000 lumen, rated luminous efficacy – ≥ 110 lumen/Watt, CCT – 6500 deg K, Colour rendering index (CRI) – ≥ 80 , SDCM – < 5 , iTHD – $< 10\%$, Power Factor – ≥ 0.95 , Median useful life L70B50 @ $T_a - 45^\circ \text{C} \geq 50,000$ burning hours, surge protection level – ≥ 2.5 kV with aluminum die cast housing. The fitting shall be fixed at site by means of suitable size of GI Clamps/PVC block as decided by site engineer. The connection shall be given by means of 24/0.2 mm three-core flexible copper wire through proper connector. The fitting arrangement shall be as per the aesthetics of the room. Removal of existing fittings and handing over the same to the site engineer at his store is included in the scope of work.

Item No. 4 – Providing LED mirror light fitting, 12 Watt – The price shall cover for supply, fixing, testing and commissioning of aesthetic type surface/ceiling mounted luminary for 12 Watt LED mirror light. The fixture shall confirm to Western Railways' specification no. WR/CCG/Specification/P/001 (Rev. 01) - 2018. The fixture shall be of reputed quality and make. The fitting shall be got approved by the site engineer before supply and commissioning.

Item No. 5 – Providing LED fitting 2 feet x 2 feet, 36/38 Watt recessed/surface mounted complete with all accessories – The price shall cover for supply, fixing, testing and commissioning of eco-friendly, maintenance free and energy efficient LED module, 2 feet x 2 feet of 36/38 Watt ± 3 Watt made from CRCA housing with high efficiency diffuser for full glow and constant current electronic driver suitable for 220 - 240 Volt, 50 Hz AC supply. The fitting shall conform to Western Railways' specification no. WR/CCG/Specification/P/001 (Rev. 01) - 2018 and shall be of reputed quality and make. The fitting shall be suitable for recessed/surface mounting arrangement. The fitting shall be fixed at site by means of suitable size of GI Clamps/PVC block as decided by site engineer. The connection shall be given by means of 24/0.2 mm three-core flexible copper wire through proper connector. The fitting arrangement shall be as per the aesthetics of the room. Removal of existing fittings and handing over the same to the site engineer at his store is included in the scope of work.

Item No. 6 – Providing LED Street light luminary 35 - 45 Watt $\pm 10\%$ complete with all accessories – The price shall cover for supply of 45-Watt $\pm 10\%$ LED Street Light fitting made from pressure die-cast LM6/ADC12/LM24 housing with optimal heat sink for better thermal dissipation and toughened glass or UV stabilized polycarbonate cover with high transmission index for superior light output. The fitting shall be as per Western Railways' specification no. WR/CCG/Specification/P/001 (Rev-01)-2018 of reputed quality and make. The fitting shall be designed for IP: 65 class protection for pole/bracket mounting. The fitting shall be provided with special moisture proof vent. The fitting shall be of reputed quality and make.

The price shall also cover for fixing, testing and commissioning of the above street light fitting on pole/truss/roof/wall by fabrication and supply of 'B' class G.I. pipe of required length, diameter and shape and fixed with M.S. clamps made from M.S. flat of 40 x 5 mm size duly painted with nut, bolts and washers of 12 mm diameter. The connection shall be carried out through ISI marked, PVC insulated, flexible three-core copper wire of size 24/0.20 mm from the existing overhead line/catenary/junction box as per site conditions. The connection cord shall be protected by suitable size of heavy-duty flexible PVC conduit. Removal of existing fittings along with pipe and clamps and handing over the same to the site in-charge is included in the scope of work.

Item No. 7 – Supply, fixing, testing and commissioning of 70 Watt LED Street light fitting – The price shall cover for supply of energy efficient LED Area light/flood light luminary of 70 Watt capacity with luminous efficacy of 120 Lumen/Watt. The luminary shall be made from pressure die cast aluminium housing, toughened front glass cover, fitted with secondary optics, heat sink and integrated electronic driver for long life with IP: 66 protection suitable for working on 240 Volt, 50 Hz AC supply as per Western Railways' Specification No. WR/CCG/Specification/P/001 (Rev. 01) - 2018 or latest. The fitting shall be of reputed quality and make. The fitting shall be supplied with required length of three-core flexible copper wire of 24/0.20 mm and shall be fixed at site by means of suitable size of GI pipe and GI Clamps as decided by site engineer. Removal of existing fittings and handing over the same to the site engineer at his store is included in the scope of work.

Item No. 8 – Supply, installation, testing and commissioning of four-feet, suspended linear light, IP-20 protection, 50 mm width with housing constructed of extruded aluminum – The price shall cover for supply, installation, testing and commissioning of four-feet suspended linear light with system lumen output of 2500 lumens @ 6500 deg K CCT and CRI – >80 . The luminary shall be supplied with LED Driver with operating voltage range of 140 to 270 Volt AC, PF - >0.95 , iTHD - $<10\%$ and 4 KV surge protection inbuilt inside the driver. The luminary should conform to Western Railways' Specification No. WR/CCG/Specification/P/001 (Rev. 01) - 2018 or latest. The fitting shall be of reputed quality and make. The fitting shall be fixed at site by means of suitable size of GI Clamps/PVC block as decided by site engineer. The connection shall be given by means of 24/0.2 mm three-core flexible copper wire through proper connector as per site requirement. The fitting arrangement shall be as per the aesthetics of the room. Removal of existing fittings and handing over the same to the site engineer at his store is included in the scope of work.

Item No. 9 – Supply, installation, testing and commissioning of Extruded Aluminium Linear LED luminary of rating IP: 54/65 – The price shall cover for supply, installation, testing and commissioning of Extruded Aluminium Linear LED luminary, IP 54/65 as per site condition (in case of indoor installation the fitting shall be IP 54 and in case of outdoor installation the fitting shall be IP 65) to be decided by railways. Depth of the luminary (without driver) should not be greater than 35 mm. The housing shall be constructed of

extruded aluminum. System lumen output of 4000 lumens @ 6500 deg K, CCT and CRI - >80. The luminary shall be supplied with LED Driver with operating voltage 140 to 270 Volt AC, iTHD - <10%, P.F. - >0.95 and inbuilt 4 KV protection inside the driver. The luminary should conform to Western Railways' Specification No. WR/CCG/Specification/P/001 (Rev. 01) - 2018 or latest. The fitting shall be of reputed quality and make. The fitting shall be fixed at site by means of suitable size of GI Clamps/PVC block as decided by site engineer. The connection shall be given by means of 24/0.2 mm three-core flexible copper wire through proper connector as per site requirement. The fitting arrangement shall be as per the aesthetics of the room. Removal of existing fittings and handing over the same to the site engineer at his store is included in the scope of work.

Item No. 10 – Providing LED profile light – The price shall cover for supply, installation, testing and commissioning of IP20 based LED Strip Light with highly efficient LED, Environment friendly without no UV and IR radiation, with High Operating temperature of - 20°C to 50°C. Average life L70B50 – 35,000 burning hours. Powered by an independent, isolated, SELV output, IP20 electronic LED driver. (SMPS based constant voltage supply) with Output Short-circuit protection, Surge Voltage protection and other safety test as per IS: 15885 (Part 2/Sec 13). The connection shall be given by means of 24/0.2 mm three-core flexible copper wire through proper connector as per site requirement. The fitting arrangement shall be as per the aesthetics of the room.

Item No. 11 – Supply, fixing, testing and commissioning of energy efficient, LED post top luminary, 45 Watt with luminous efficacy of 100 Lumens/Watt, IP: 65/66 protection, complete with all accessories – The price shall cover for supply, fixing, testing and commissioning of outdoor type LED post top light fittings complete with all accessories on pole. The LED fixture shall have following design criteria –

- Main Housing: Cast Aluminium metal in PU painted finish
- LED: LM80 certified LED
- Heat sink: Aluminium section.
- Lumen maintenance: 50,000 Hrs @ L70
- Rated voltage & frequency: 240V, 50Hz AC
- LED Make: Cree/Nichia/Osram/Lumileds/Philips

Post top luminary shall conform to model No. SLE PT 40W RIGEL of Surya or equivalent of HPL/Phillips/CG/Bajaj/Wipro/Jaguar/Havells make. The make and model No. of the luminary shall be got approved from Sr. DEE (Power) BRC before supply. Post top luminary shall be mounted on powder coated, 'B' Class M.S. pipe of 75 mm diameter. The colour and shade shall be decided by Railways. The length of the pole shall be 3.5 meter above the ground level. Junction box for termination of incoming and outgoing cables on each pole shall be provided at a height of 300 mm from ground level. Holes shall be provided in the pipe to accommodate incoming and outgoing cables. The junction box shall be fitted with four-way heavy-duty connector, 15 Amp -1 No, MCB SP, 6 Amp -1 No and rubber gasket and grommets for proper sealing. The foundation having ratio of 1:2:4 of 0.125 cubic meter volume provided with partially threaded 4 No, 175 mm x 12 mm size MS bolt with nut grouted in foundation. Pole shall be fixed with foundation bolts of appropriate size. The connection to the luminary shall be carried out through ISI marked, PVC insulated, flexible, three-core copper wire of size 24/0.20 mm from the existing junction box.

**Sr. Divisional Electrical Engineer (Power)
Western Railway, Pratapnagar, Vadodara – 390 004
For and on behalf of the President of India**

GENERAL REMARKS FOR WIRING

- i) Relevant code of practice for electrical wiring as per IS: 732/1989 or latest to be followed along with the following.
- ii) All lamp fittings shall be fixed at a height of not less than 2.5 meter above the floor level.
- iii) Switch boards shall be provided at 1.5 meter above the floor level.
- iv) Live wires of the points (half/phase) must be controlled by switches.
- v) Wiring shall be done by looping system. Phase/live conductors shall be looped at the switch box. For point wiring neutral/earth first looping shall be done in switchboard and subsequent loop shall be made at each point outlet. No joints shall be allowed in the wiring inside the PVC conduit/casing.
- vi) The contractor shall have to maintain the standard colour code for circuit such as phase - red, neutral - black, earth - green/grey. For three phases, colour coding shall be Red, Yellow and Blue for phases, Black for neutral and green/grey for earth.
- vii) Wiring shall be suitable for 240 Volt, 50 Hz AC supply between phase and neutral and 415 Volt, 50 Hz AC supply between two phases.
- viii) All wiring shall be free from short - circuit/earth fault and shall be tested for these defects prior to being connected to the circuit.
- ix) There shall be a spacing of at least 125 mm between live parts and the mounting plane of the fixture.
- x) The clearance between the bottom most point of the ceiling fan and the floor shall be not less than 2.4 meter. The minimum clearance between the ceiling and the plane of the blades shall be not less than 300 mm.
- xi) The number of wires and its overall diameter in the PVC/MS conduit should not exceed as recommended in latest ISS.
- xii) Lights and fans may be wired on common circuit. Such sub circuit shall not have more than a total of seven points of light, fan and 5 Amp socket outlets. The load of such circuit shall be restricted to 800 Watt.
- xiii) 6/16 Amp socket outlets shall be installed at the following positions unless otherwise specified –
 - a) Non-residential building – 0.23 meter above floor level.
 - b) Kitchen – 0.23 meter above working platform and away from the likely position of stove and sinks.
 - c) Bathroom – No socket outlet is permitted for connecting portable appliances, thereto. MCB/IC switch may be provided 2.0 meter from fixed appliances, and at least 1.0 meter away from shower.
 - d) Rooms in residence – 0.23 meter above floor level or any other level in special cases with the approval of site engineer.
- xiv) Connection for electrical fitting shall be done with ISI marked three core flexible copper wire from ceiling rose. Chrome plated screw, nut, bolts, washers etc shall be used for electrical connection.
- xv) Wires used for wiring shall be multi-stranded, single core, FRLS-PVC insulated 1100 Volt grade copper conductor conforming relevant and latest IS. If any manufacturer discontinues FRLS wires, in such circumstances higher version FRLSH wires can be accepted and shall be got approved from site in-charge before supply. All wires should be of similar make.
- xvi) PVC casing capping and accessories shall be as per IS: 14927 of minimum thickness of 1.2 mm and of ivory/white colour only. Wall crossing of wiring should be done through ISI marked PVC conduit pipe of reputed make and shall be got approved from site in-charge before supply.
- xvii) Hardware, nut, bolts, washers, clamps etc. used for fixing shall be of galvanized iron.
- xviii) As far as possible switches, sockets and other accessories shall be ISI marked and of similar make.
- xix) The MCBs to be provided should be ISI marked, 10 KA breaking capacity, “B” / “C” curve and of suitable current rating as specified in the detailed specification. All the MCBs should be connected with crimped copper lugs of respective wire size. PVC numbering/ferrules should be provided at all the wire/circuit in distribution panel boards/switch boards for easy identification.
- xx) Switches, plug sockets, Angular/batten holders, three-plate ceiling rose, bell push switches, electronic fan regulator shall be of modular type. The switch board and cover plate shall be of off-white/white colour. Modular cover plate shall be glaze finished. Bell push switches should be marked for “bell” indication.
- xxi) The switch board and cover plate shall be of off-white/white colour. Modular cover plate shall be glaze finished.

- xxii) The dimensions of the RCC circular box for earthing shall be as per this office drawing No. EL/111/1/116. The date of testing of earth and earth resistance (Ohm) should be painted on each earth box by the contractor. Earthing shall be done as per specifications in the tender. The drawing is for general guidance for installation purpose only.
- xxiii) Earth resistance shall be as per IE regulations.

TESTING OF INSTALLATION

Before a completed installation is put into service, the following tests shall be complied with –

a) **INSULATION RESISTANCE –**

The insulation resistance shall be measured by applying 500 Volt Megger with all fuses in places, circuit breaker and all switches closed. The insulation resistance in mega-ohms of an installation, measured shall not be less than 50 MΩ divided by the number of points on the circuit. The insulation resistance shall be measured between Earth to Phase, Earth to Neutral, Phase to Neutral and Phase to Phase.

b) **EARTH CONTINUITY PATH –**

The earth continuity conductors shall be tested for electrical continuity and the electrical resistance of the same along with the earthing lead but excluding any added resistance or earth leakage circuit-breaker measured from the connection, with the earth electrode to any point in the earth continuity conductor in the completed installation and shall not exceed 1.0 Ω.

c) **POLARITY OF SINGLE POLE SWITCHES –**

A test shall be made to verify that every single pole switch is connected to one of the phases of the supply system.

d) **COMPLETION CERTIFICATES –**

All the above tests shall be carried out in presence of site in-charge or his authorized representative and the results shall be recorded in prescribed forms. Any default during the testing shall be immediately rectified and that section of the installation shall be re-tested. The completed test result forms shall be submitted to the site in-charge for approval. On completion of an electric installation a certificate shall be furnished by the contractor, countersigned by Railways' site in-charge under whose direct supervision the installation was carried out. This certificate shall be in a prescribed form as required by the local electric supply authority if necessary.

**Sr. Divisional Electrical Engineer (Power),
Western Railway, Pratapnagar, Vadodara – 390 004
For and on behalf of The President of India**

“END OF THE TENDER DOCUMENT”