



Start of Tender Document

Tender Document

of

E-Tender No.: M200MCFFURACTIVITYACCOACHF84,

E-Tender Notice No.: M-200/MCF/RBL/FUR-ACTIVITIESACCOACH/F-84, Date. 11.06.2026

Date of Opening: 03.07.2026

Name of Work: Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBCAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBCAC (LHB AC hot buffet with air suspension) coaches as per scope of work.

Tender No.- M-200/MCF/RBL/FUR-ACTIVITIESACCOACH/F-84,

Date. 11.06.2026

Forwarding Letter detailing salient features of the tender -

Issued to:

Name of the work: Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBCAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBCAC (LHB AC hot buffet with air suspension) coaches as per scope of work.

The cost of Bid Security money to be paid through online net Banking on the IREPS portal before the closing date & time have to be filled up in the format. The incomplete offer or offer without Bid Security cost shall be summarily rejected. The detail of Bid Security deposited to be furnished in the format given below-

Transition No. for bid security -----DATE-----
Name of Bank- -----
AMOUNT- Rs.

Dear Sir,

- 1.0** E-Tender has been invited for and on behalf of the President of India for the above mentioned work as per e-tender notice quoted above. A copy of the e-tender notice is enclosed herewith as chapter- II.
- 2.0** The railways, before 15 days from the date of opening of tender, may of its own or in response to any clarification requested or suggested by any person including that of the Tenderer, may modify the tender document at its sole discretion.
- 3.0** The tender document includes many chapters as enclosed, which are integral parts of the tender document.
- 4.0** This tender document contains 126 pages including cover page in I to VIII chapters.
- 5.0** All the below mentioned chapters and below named documents, taken together, if not scored off, shall constitute the complete tender document hereinafter referred to as "tender document" and have to be read together and acted upon accordingly. No part of the tender document can be relied upon or acted upon in isolation.

Chapter No.	Index of Tender Document	Page/s
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- 6.0** The Standard General Conditions of Contract of Indian Railways as amended by updated correction slips till the date of tender opening will also be applicable as part of tender document". The copy of GCC may be obtained from Railway Board's website www.indianrailways.gov.in/ railway board.
- 7.0** In the event of any conflict between the Books of Reference and contents of various chapters of these documents, the latter shall prevail.
- 8.0** **Scope of the Work (Refer Chapter-VII):** Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBCAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBCAC (LHB AC hot buffet with air suspension) coaches as per scope of work.
- 9.0** **Approximate Quantity-** 48 LWACCW (LHB 2T) Coaches: Schedule A & B, 19 LFCWAC coaches :Schedule-C, 169 LWACCN Coaches : Schedule D, 19 LWCBCAC (increased Heating Capacity) : Schedule E , 26 LWCBCAC (Intermediate Capacity): Schedule F.
- 10.0** **Approximate cost of the work:** The assessed cost of the work covered by this tender is approximately –Rs. 4,19,11,978.07 (Rs. Four Crore Nineteen Lakh Eleven Thousand Nine Hundred Seventy Eight and Seven Paisa) only.
- 11.0** **Date of Opening:** 03.07.2026 after 17.00 Hrs.
- 12.0** **Receiving & Opening of the tender:** The tenderer(s) are to bid online only through Indian Railways portal www.ireps.gov.in for the work mentioned against the Tender Notice No. M-200/MCF/RBL/FUR-ACTIVITIESACCOACH/F-84 available in the website. No manual offer is acceptable against the tender. No tender document in hard copy will be sold from this office against the tender. Please read the instructions for e-tendering, General Condition of Contract (GCC), Special Condition of contract, scope of work etc. before filling the e-tender online. E-Tender forms are not transferable and the same is to be submitted with digital signature by personnel already registered with the Indian Railways portal. However, if scheduled day is declared holiday at later stage or any technical problem such as internet/ireps server is observed, the tender shall be opened on the next working day at the scheduled time.
- 13.0** **Amount of Bid Security:** Rs. 8,38,200.00 (Rs. Eight Lakh Thirty Eight Thousand Two Hundred only). The amount of bid Security required to be deposited only through online payment. The bid Security deposit shall be accepted by online payment through Net Banking in Favour of PFA/MCF/RBL-Lalganj (Distt. Raebareli), Account No. 32884249555, IFSC code-SBIN0001644 or gateway payment through ireps portal only. Scan copy of the transaction receipt of bid Security also be uploaded along with e-tender offer. Offer without bid Security along with e-tender offer/invalid form shall lead to summarily rejection of the Tender.
- 14.0** **Validity of the tender:** A Tenderer shall **keep his tender open for a period of 60 days** from the date of opening of the tender.
- 15.0** **Period of Completion:** The successful tenderer shall complete the entire work within the period specified in the tender notice. The period starts from the date which shall be mentioned in the letter of acceptance (LOA) issued by the Railway to the successfully tenderer.
- 16.0** **Schedule of Rate:** Rates will be quoted online and submitted online duly signed digitally.
- 17.0** **Specification of the work:** The work shall be carried out as per specifications contained in the scope of work of tender document or otherwise referred to.
- 18.0** **Advance to the Contractor:** Not Applicable
- 19.0** **Price variation clause:** Not Applicable
- 20.0** **Participation of JV/AOP:** Not Applicable

Enclosure: The tender document
(Total 126 Pages)

Signature of Tenderer(s)
Date:

Witness:

- 1.
- 2.

E-Tender notice**E-Tender No.-** M-200/MCF/RBL/FUR-ACTIVITIESACCOACH/F-84,

Date: 11.06.2026

On behalf of the President of India, Dy. Chief Mechanical Engineer/Fur./Co., Modern Coach Factory, Raebareli is inviting open E-tender based on single packet system online through Indian railway portal www.ireps.gov.in for the under mentioned work on prescribed tender format.

1. Details:-

1	Name of Work	Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBCAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBCAC (LHB AC hot buffet with air suspension) coaches as per scope of work.
2	Place of work	Modern Coach Factory, Lalganj, Distt. Raebareli
3	Approx. cost	Rs. 4,19,11,978.07 (Rs. Four Crore Nineteen Lakh Eleven Thousand Nine Hundred Seventy Eight and Seven Paise) only
4	Bid Security	Rs. 8,38,200.00 (Rs. Eight Lakh Thirty Eight Thousand Two Hundred only).
5	Quantity	48 LWACCW (LHB 2T) Coaches: Schedule A & B, 19 LFCWAC coaches :Schedule-C, 169 LWACCN Coaches : Schedule D, 19 LWCBCAC (increased Heating Capacity) : Schedule E ,26 LWCBCAC (Air suspension -Intermediate Capacity): Schedule F.
6	Period of completion	12 Months or earlier.
7	Date & Time of Closing of tender	03.07.2026 at 17:00 Hrs.
8	Validity of tender	60 days from the date of opening of tender. Participation by Association of Partnership (AOP)/Joint Venture (JV) Firms are not allowed for this tender. (a) Advance to contractor is not applicable. (b) Purchase preference clause is not applicable. (c) Price variation clause is not applicable.

2. Minimum eligibility criteria:-

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

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

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

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

Similar work means:-

Any of the following activities of furnishing on any type of railways/metro coaches at any IR workshop or Production units or Govt. PSU, etc:-

- Furnishing of coaches on Turnkey Contracts
- Side wall paneling/roof paneling/Partition paneling
- Installation of windows/roof ducts/Seat & Berth/Seats

- iv) Flooring/PVC laying
- v) Lavatory fitment work

Note:

- (i) In case of turnkey/composite contracts including supply of material also, the calculated value of installation/fitment of material only as indicated in purchase order/LOA shall be taken into consideration for technical eligibility.
- (ii) The Tenderer must submit the proof of successful completion of the work otherwise offer of the firm shall not be considered.

Also as per CME/CC's letter no. M-200/MCF/RBL/Split/C02 dated 11.09.2018; special condition was included in regards to distribution of tendered quantity to more than one bidder in every works contract of production. It is certified by the PHOD of the executive department that **the work is related to production activities.**

- 2.2 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 of IRSGCC, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.

Note for Item 2.1:

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, work experience certificate issued by Public listed company having average annual turnover of Rs. 500 crores and above in the 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-

- (i) **The firm must have a valid Electrical License issued by any state within India and shall upload documentary proof of the same, failing which offer shall be summarily rejected.**
- (ii) **The tenderer is required to be registered with the EPFO. The tenderer has to submit the registration certificate/relevant document along with the tender/bid, failing which the bid shall be summarily rejected.**

Dy. Chief Mechanical Engineer/Fur./Co.
MCF/Raebareli, Lalganj

Chapter-III

CONDITIONS OF TENDER AND INSTRUCTIONS TO TENDERER(S)
REGULATIONS FOR TENDERS AND CONTRACTS

1. The tenderer must have to submit following documents in support of their eligibility.

Check list of documents to be submitted by tenderer-

S. No.	Description	Yes	No
1.1	Tenderer shall submit the copies of documents to establish the facts that tenderer has successfully completed of similar nature of the work of furnishing of Railway Coaches. Documents should include work completion certificate, contract agreements, details of payments received against the work etc.		
1.2	The tenderer must have minimum average annual contractual turnover of V/N or V whichever is less; where V = Advertised value of the tender in Crores of Rupees N = Number of years prescribed for completion of work for which bids have been invited. The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover. The tenderers shall submit requisite information as per Annexure-VIB of IRSGCC, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.		

2. **ORDER OF PRECEDENCE OF DOCUMENTS:** In a tender/contract, in case of any difference, contradiction, discrepancy, with regard to Conditions of tender/contract, Specifications, Drawings, Bill 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. 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.
 - viii. Indian Railways Unified Standard Specifications (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.
 - 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.

3. **INTERPRETATION:** These Regulations for Tenders and Contracts 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.
4. **DEFINITIONS:** In these Regulations for Tenders and Contracts 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 Modern Coach Factory, Rae Bareli or 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 Modern Coach Factory, Rae Bareli 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 the 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 the Executive Engineer, Divisional Signal & 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 & Telecom, Mechanical and Electrical Departments, i.e. the Senior Divisional Engineer/Deputy Chief Engineer/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 Successors Railway.
 - f) "Tenderer" shall mean the person / the 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 personal 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 schedules 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 of the Railway" shall mean the Schedule of Rates adopted by the Railways, which includes-
 - (1). "Unified Standard Schedule of Rates of the Railways (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. Standard Schedule of Rates published by the Director General/Central Public Works Department, Government of India, New Delhi, as adopted and modified by the railways 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 tender documents.
 - l) "Drawing" shall mean the maps, drawings, plans and tracings or prints there of annexed to the tender forms.

- m) “Contractor’s authorized Engineer” shall mean a graduate Engineer having more than 3 years experience in the relevant field of construction work involved in the contract, duly approved by 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.
5. Words importing the singular number shall also include the plural and vice versa where the context requires.
6. **BOOKS OF REFERENCE:** These tender documents are to be read with the latest version of “Indian Railways Standard General Conditions of Contract April 2022” works matter as amended by updated correction slips till the date of tender opening referred as GCC hereafter.
7. **SCOPE OF TENDER:** E-tenders are invited for and on behalf of the President of India for work described as “Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBAC (LHB AC hot buffet with air suspension) coaches as per scope of work.”
8. **CHANGE OF ADDRESS:** The tenderer must keep the Railways informed of any change of address during the currency of contract of work in his own interest.
9. **SYSTEM OF VERIFICATION OF TENDERER’S CREDENTIALS:** The tenderer shall submit along with the tender document, documents in support of his/their claim to fulfill the criteria as mentioned in the tender document. Each page of the copy of documents/certificates in support of experience 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 special conditions”, will be considered for evaluating his/their tender. The system shall be applicable once it is made operational in IREPS. This system is already being followed by some of Railway PSUs.
10. **CREDENTIALS OF CONTRACTORS:** As per clause 2 of Part 1, on page no. 3 & 4 of Indian Railways Standard General Conditions of Contract (IR GCC April 2022).
11. **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. Annexure-I is attached. Please read carefully this tender form and upload this annexure after filling at the time of submitting the bid. . All details are as per ANNEXURE-I of GCC’ April 2022 at page no.9 to 28.
12. **OMISSIONS & DISCREPANCIES:** If a tenderer find discrepancies in or omissions from the drawings or any of the Tender Forms or if 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 endeavour 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.
13. **Bid Security:**
- 1.a The tenderer shall be required to deposit Bid Security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender. The Bid Security shall be as under:

Value of the Work Bid Security :-

Value of the work	Bid Security
For All work	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 clause (a) above will be retained as part security for the due and faithful fulfillment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the Railway shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.
- (2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee Bond from a scheduled Commercial Bank of India or mentioned in tender documents. The Bank Guarantee Bond shall be as per Annexure VI A 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 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 within 5 working days before closing date for submission of bids.
 - iii) Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non submission of original Bank Guarantee within the specified period shall lead to summarily rejection of bid.
 - iv) The tender security shall remain valid for a period of 90 days beyond the validity period for the tender.
 - v) The details of the BG, physically submitted should match with the details available in the scanned copy and the data entering 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 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.
 - ix) 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 mentioned in tender documents. The Bank Guarantee Bond shall be as per Annexure D and shall be valid for a period of 90 days beyond the bid validity period.

The amount of Bid Security has been worked out as described by IR GCC-April-2022. All other details and conditions are as per clause 5 on page 4 to 6 of IR GCC- April-2022 or related clause in the latest version with correction slips are applicable on this amount.

14. 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.

- (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.
- (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.
- (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.

14.1 In case of other than Company/Proprietary firm, Annexure -V(A) shall be submitted by the each member of a Partnership Firm/ Joint Venture (JV) I Hindu Undivided Family (HUF) I 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.

Other conditions is as per clause 6 & 6.1 on page no. 6 & 7 of Indian Railways Standard General Conditions of Contract (IR GCC April'2022).

14.2 Other conditions is as per clause 6 & 6.1 on page no. 6 & 7 of Indian Railways Standard General Conditions of Contract (IR GCC April'2022).

15. 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.

15A. Pre Bid Conference: Intenders having advertised value more than Rs 50 Crore or as mentioned in the tender document, Railway shall conduct Pre Bid Conference(s) with the prospective bidders.

15B. 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.

15C. 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.

15D. Clarification of Bids: To assist in the examination, evaluation & 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.

16. **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..
17. **Form of Contract Document:** 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 Chapter-VIII. All details are as per clause 9 on page no. 8 of Indian Railways Standard General Conditions of Contract (IR GCC April-2022).

TENDER FORMS

**MODERN COACH FACTORY, RAEBARELI
TENDER FORM (First Sheet)**

Tender No: _____

Name of Work: _____

To
The President of India
Acting through the Railway

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

Signature of Witnesses: _____

(1) _____

Signature of Tenderer(s)

(2) _____

Date _____

Address of the Tenderer(s)

(Contd...)

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) Bill(s) of quantities (enclosed)
 - (d) Standard General Conditions of Contract and Standard Specifications (Works and Materials) of Indian Railways as amended/corrected upto latest correction slips, copies of which can be seen in the office of or obtained from the office of the Chief Engineer, Railway on payment of prescribed charges.
 - (e) Standard Schedule of Rates (SSOR) as amended / corrected upto latest correction slips, copies of which can be seen in the office of or obtained from the office of the Chief Engineer, Railway 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 and / or Chief Engineer, Railway at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Detailed working drawings (if required) based generally on the drawing mentioned above, will be given by the Engineer or his representative from time to time.
3. The Tenderer(s) shall quote his / their rates as a percentage above or below the Standard Schedule of Rates of Railway as applicable to 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 Bill(s) of Quantities are given as a guide and are approximate only and are subject to variation according to the needs of the Railway. The Railway does not guarantee work under each item of the Bill(s) of Quantities. The tenderer(s) shall quote rates/rebates only at specified place in Tender Form supplied by Railway. Any revision of rates/rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be summarily ignored and will not be considered.
4. Tenders containing erasures and/or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him/them.
5. The works are required to be completed within a period of months from the date of issue of acceptance letter.
6. **Bid Security:**
 - (a) Subject to exemptions provided under para 13(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.
 - (b) 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 opening 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 Railway, 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.
 - (c) 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.

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

10. EXECUTION OF CONTRACT DOCUMENTS: The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through Modern Coach Factory, Raebareli 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 upto latest correction slips, mentioned in tender form (First Sheet).

11. DOCUMENTS TO BE SUBMITTED ALONG WITH TENDER: 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 Partner (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.

Others details are as per clause 14 & 15 on page no. 17 to 19 of Indian Railways Standard General Conditions of Contract (IR GCC April-2022).

12. 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 14.a), b), c) above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of the Standard General Condition of contract.

Please read carefully the clause 16 of Railways Standard General Conditions of Contract (IR GCC April-2022) on page no. 19 & 20 and upload **Annexure-II & III** duly filled at the time of submitting e-tender.

13. PARTICIPATION OF PARTNERSHIP FIRMS IN WORKS TENDERS:

- (i) All documents as mentioned in para 18 of the Tender Form (Second Sheet) of GCC' April 2022.

14.INSPECTION OF DATA: Copies of drawing and other information for the work, relevant to this tender, may be obtained from the office of the CWE/Furnishing, MCF/Raebareli, Lalganj-229120 on any working day during office hours on payment of applicable charges in the form of DD in favour of PFA, Modern Coach Factory, Raebareli payable at Lalganj.

15.INSPECTION OF SITE: Tenderer must acquaint himself, at his own responsibility, risk and expense, with all information of the site(s) of work(s) and their neighborhoods, actual working and other prevalent conditions, laws/regulations, availability and suitability of local labors, materials, accessibility of site(s) of work(s) sources and availability of water, electricity, camp site, market, banking facilities etc. and all such possible factors as have bearing on rates and progress of the work under this tender and all these factors should be taken into consideration before submitting this tender

16.CONTRACT TO BE SIGNED BY AUTHORISED PERSONS:

- (a) The contract shall be signed by individual or individuals legally authorized to enter into commitments on behalf of the Contractor. Any individuals or individuals signing the contract document or other documents connected therewith should specify whether he is signing the said documents:-
- (i) As a Sole Proprietor of the firm or Attorney of the Sole proprietor.
Or
- (ii) As a Partner of partnership firm
Or
- (iii) As a Director, manager or secretary in a Limited company duly authorized by a resolution passed by the board of directors or in presence of the authority conferred by the memorandum of association.
- (b) In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender documents and all other concerned documents.
- (c) Requisite power of attorney or such other documents empowering the individual or the individuals to sign the contract document should be furnished in original.

- (d) The Railway shall not be bound by any Power of Attorney granted by the Contractor or by changes in the composition of the firm made subsequent to the execution of the Contract agreement. It may, however, recognize such Power of Attorney and changes, after obtaining legal advice to the satisfaction of the Railway, the cost of which will be borne by the Contractor.

17.PERIOD OF VALIDITY OF TENDER:

The tenderer(s) shall keep the offer open for a minimum period as stated in Chapter- I from the date of opening of the tender within which period the tenderer(s) cannot withdraw or modify his offer. The Railway Administration may request the tenderer(s) to extend the validity. The Bid Security referred to in this chapter is for the performance of the stipulation to keep the tender open for the aforesaid period. It shall be understood that the tender documents have been issued to the tenderer(s) and the tenderer(s) is permitted to tender in consideration of the stipulation on his part that after submitting his tender, he will not resile from his offer or modify the same in any manner not acceptable to the Railway within the period of validity. Should the Tenderer fail to observe or comply with this stipulation; the Railways shall forfeit the full amount of Bid Security.

18.RESPONSIBILITY FOR DAMAGE TO CONTRACTOR'S MATERIALS:

- (a) The Railway Administration will not be responsible for any loss or damage to contractor's materials, equipments, tools and plants due to fire, flood or any other cause(s) whatsoever.
- (b) The materials issued by the Railway to the contractor for use in the works shall be treated as contractor's materials for this purpose, and the contractor (s) shall make good these materials in the event of any loss/ damage thereto.
- (c) Works finished but not taken over by the railway shall be treated as contractor's materials for this purpose, and the contractor shall be responsible for making good any loss or damage thereto.

19.SPECIAL CONDITIONS BY TENDERER (S):

- (a) The tenderer(s) is, normally, not expected to make any special condition / stipulation of his own and is expected to submit his tender in accordance with the conditions / stipulations contained in these documents, if however, the tenderer(s) wishes to make any special condition / stipulation(s) or wishes to intimate the Railway of any matter of importance, he may do so in a covering letter. Such stipulations and conditions shall be a part of the contract in case of acceptance of the tender, only to the extent explicitly accepted by the Railway Administration. The accepting authority reserves the right not to accept any such special stipulations and conditions made by the tenderer and may reject the tender(s) as unacceptable without any reference to the tenderer(s) or may ask the tenderer to withdraw any or all such stipulations before awarding the contract and in the event of his refusals to do so, may not accept his tender.
- (b) In case, any special conditions and/or stipulations are made by the tenderer, he shall also indicate, along with such conditions/stipulations, the cost of withdrawal of the same. The accepting authority reserves the right, either to accept the conditions / stipulations made by the tenderer or the cost thereof, at its sole discretion. If such cost is not indicated, it will be construed that the tenderer(s) is not in a position to withdraw these conditions at any cost and the tender may be adjudged accordingly without any reference to the tenderer(s).
- (c) The work can be awarded to more than one firm as the work has to be performed to execute the work in proper manner.

20.GENERAL INSTRUCTIONS FOR COMPLETING TENDER DOCUMENTS:

- (a)The tenderer shall submit, as his tender, all these documents intact, without severing detaching, defacing or removing any part thereof. After completing these documents, The tenderer(s) shall sign each page of these documents, before submission, intact, without severing, detaching, defacing or removing any part thereof, as per instructions contained in these documents.
- (b)Tender form containing over writings, scribbling, and erased rates and/or rate-not shown in words are liable to be rejected .In case of any discrepancy in rates shown in figures and words being noticed, the accepting authority may at his discretion accept the lower of the two.
- (c)The Tenderer shall not leave any space blank, where he is expected to make any entry.

21.DOCUMENTS TO BE SUBMITTED: The following documents are required to be uploaded scanned copy along with the E- Bid.

S. No.	Documents	Copy Attached
1.	GSTN certificate	Yes/No
2.	PF Registration Certificate	Yes/No
3.	ESI Registration Certificate (if applicable)	Yes/No
4.	PAN Card in which PAN is readable	Yes/No
5.	Firm's Registration Certificate	Yes/No
6.	Bank Mandate Form (Detail of Bank for Payment)	Yes/No
7.	Power of Attorney if required	Yes/No
8.	Personal Detail (Firm Name & Full Address with E-mail & Mob. No.)	Yes/No
9.	Declaration regarding banning/forfeiting & black listing and completion the awarded work within stipulated time and compliance of related statutory laws.	Yes/No

22. PURCHASE PREFERENCE: (Not applicable)

23. SUBMISSION OF TENDER: The tender offer complete in all respect and with all document is to be submitted online by e-tendering process through the website www.ireps.gov.in before the closing time/date of this tender as mentioned in the NIT (Notice Inviting Tender). Tenderer can revise the bids any number of times till the closing time/date of the tender, No manual offers shall be accepted.

24. CREDENTIALS/TESTIMONIALS:-

- In order to establish the capability of the tenderer(s) to undertake and tackle the work under this tender, the tenderer(s) shall submit along with the tender, the particulars of all the works awarded OR taken-up by him or them for execution during the seven years preceding the date of opening of this tender irrespective of whether the same have been completed or are still continuing or were terminated, in the proforma mentioned below as Annexure- I, of chapter IV and the same shall be uploaded by the tenderer on Indian Railways portal www.ireps.gov.in while submitting the bid, in absence of which the Railways reserves the right to treat the tenderer(s) as having no capability/credential.
- The said proforma should be filled-up by the tenderer in respect of all the works done by him/them whether for the Railways or for any other client.
- The tenderer shall submit photocopies of documents to establish the facts mentioned by him or them in the aforesaid proforma and also certificates certifying satisfactory completion and performance of the works. The Railways reserves the right to verify the correctness of such facts in whatever manner it considers fit and appropriate.
- The tenderer should also enclose Bank-certificate(s) showing the financial capability of the tenderer to undertake work of such magnitude as is covered by this tender, without which the Railways reserves the right to treat the tenderer as having no financial capability to undertake this tendered work.

25. OPENING OF TENDER: Tenders will be opened through online using the IREPS portal after the time of closing. No representative is required to be present for opening of tender and taking notes of rates quoted and ranking as the complete details of rates etc. of all the bidders shall be available to the bidders in the website after the opening of the tender. The date and time of opening of the tender may be postponed at the sole discretion of the Railways, if circumstances so warrant.

26. CLARIFICATION OF BIDS SUBMITTED: To assist in the examination, evaluation and comparison of tenders, the Railway or its authorized person may ask the tenderer(s) for clarification(s), if needed, for such examination, evaluation and comparison. The request for such clarification etc and the response thereof shall be in writing.

27. NEGOTIATION:

- The accepting authority reserve the right to enter into negotiations with the L-1 or more (in special case) tenderer(s) before acceptance of the tender in order to clarify special conditions or reduction of rates or for changes in scope of the work etc, at its sole discretion.
- L-1 should be defined as the lowest, valid, eligible and technically acceptable tenderer.
- Should such negotiation with the tenderer(s) be entered into, the tenderer(s) shall not be permitted to increase their quoted rates under any circumstances, even if it includes withdrawal / modification of such special conditions as are given by the tenderer(s) along with their original tender.

28. LETTER OF ACCEPTANCE:

- (a) The acceptance of the tender shall be communicated by e-mail/mobile no. as given by the tenderer in these tender documents. The letter of acceptance will remain operative till a formal Contract/Agreement is executed and signed by and between the Contractor and competent officer of the Railway, for and on behalf of the President of India, after which the letter of acceptance will merge in the said formal agreement.
- (b) The Railway shall not intimate to the tenderer whose tenders have not been accepted and the result of their tender(s). However, Bid Security will be refunded as per rules.

29.LETTER OF CREDIT AS MODE OF PAYMENT:

It has been decided by Board (MRS, MTR, ME, FC, CRB) that henceforth, all works tenders or service tenders invited by railways through e-tendering on IREPS, having advertised value of ₹ 10 lakh and above, shall include in tender conditions, an option for the contractor to take payment from Railways through a letter of credit (LC) arrangement.

All detail conditions regarding LC, as per Railway Board Letter No.- 2018/CE-I/CT/9 dt. 04.06.2018 with related amendment/correction slip is applicable.

Signature of Tenderer(s)

Date:

Witness:

1.

2.

Annexure-1

Request letter from Executive branch to Accounts Office for opening of LC

Office of---- ----Railway

No. -----

Dated-----

The PFA/ Sr. DFM/ Dy. FA
HQ/ Division/ Workshop/ Cost

Sub: Opening of LC

Ref: Supply Order/ Contract Agreement No .-----

It is requested to open a sight LC against the above referred Order/ Agreement in favour of-----
 ----- . The details of beneficiary are as under:

- (i) Name of Contractor/Supplier
- (ii) Vendor Code
- (iii) Address
- (iv) Tender No.
- (v) Contract Agreement No.
- (vi) Description of Goods/ Service
- (vii) Value of Contract
- (viii) Stages of payment
- (ix) Expected payment within 6 months (LC Amount)
- (x) Beneficiary bank details:
 - a) Bank name
 - b) Address
 - c) Account No.
 - d) IFSC code

It is certified that the supplier/ contractor has exercised the option of taking payment due against the tender, through LC arrangement in IREPS portal at the time of bidding itself and the option has been flagged in the IREPS. This has the approval of-----

- (xi) Validity/period for which LC is to be opened.

(Signature)

Name: -----

Designation:-----

(Official Seal)

LCDA No. (18 DIGIT IPAS GENERATED No.)

Dated:-----

DOCUMENT OF AUTHORIZATION

Reference: (i) Works Contract/Supply Contract No.----- Dated-----

(ii) Inland Letter of Credit No.----- Dated -----

This document is issued against contract No.----(FROM IREPS)----- dated-----for supply/work of----- (DESCRIPTION OF GOODS! WORK FROM IREPS)-----

The beneficiary of the aforementioned Letter of Credit M/s----- (NAME AND VENDOR CODE)----- (Vendor Code----- as per IRPES-----) is entitled to receive payment aggregating INR-----\$\$\$----- (FROM ABSTRACT OF BILL PASSED)----- out of a total LC amount of INR----- (FROM MASTER TABLE OF LC OPENED)----- against the first/second* commercial Invoice No.(FROM IPAS)----- dated-----FROM IPAS-----for INR(FROM IPAS)--- ----- raised against the above contract from State Bank of India----- (branch-FROM LC MASTER TABLE)----- on the strength of this Certificate.

The details of payments already made to the beneficiary under this Letter of Credit are as follows:

S. No.	Invoice No.	Invoice Date	Invoice Amount (INR)	LCDA No.	LCDA Date	Amount Paid (INR)
Total Paid						

THIS PAYMENT:----- \$\$\$-----

LC BLANCE AFTER THIS PAYMENT:-----

(Signature of authorized Railway authority)

Name

Designation

Official Seal

DETAILS OF WORK AWARDED TO THE TENDERER DURING LAST SEVEN YEARS

[illegible]

Note:-

- i) Supporting documents/certificates (duly attested by Gazette Government Officer) from the organizations for whom worked/ are working, duly signed by authorized signatories, should be enclosed.
- ii) Certificate from private individuals for whom, such works are executed/ being executed shall not be accepted.
- iii) Re-type ANNEXURE-I, if spaces given are considered inadequate.
- iv) Certificates/documents for satisfactory working and completion of works from each organization should be enclosed.

CHAPTER-III

Annexure-II

DECLARATION REGARDING ASSOCIATION OF RLY. OFFICER(S) OR RETIRED RLY. OFFICER(S) WITH TENDERER(S)

Sl. No.	Name	Status with the tenderer	If working in Rly. on the date of tendering, designation & place of posting	Date of retirement	Status at retirement	Particulars of permission taken for associating with the tenderer

CHAPTER-III

Annexure-III

CERTIFICATE OF NO RELATIVE BEING AN EMPLOYEE OF MCF/RBL

(To be filled by tenderer)

I/WE THE UNDER SIGNED HEREBY SOLEMNLY DECLARE AND CERTIFY THAT I /WE DO NOT HAVE ANY OF OUR RELATIVE/RELATIVES EMPLOYED IN THE MCF/RBL (Mechanical Department/Any other department of MCF/RBL) EXCEPT THE NAMES MENTIONED HEREIN UNDER:

1.....

2.....

3.....

AND SO ON.

NOTE:- NAMES, DESIGNATION, NAME OF OFFICE, HEADQUARTER OF THE TENDERER'S RELATIVE IN MCF (Mechanical Department/ Any other department of MCF/RBL) TO BE MENTIONED BY THE TENDERER/TENDERERS IN 1, 2, 3 AND SO ON ABOVE.

SIGNATURE OF TENDERER(s)

CHAPTER-III

Annexure-V

**FORMAT FOR CERTIFICATE TO BE SUBMITTED / UPLOADED BY TENDERER
ALONGWITH 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 ofas per the tender No. of Modern Coach Factory/Raebareli, 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 website 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 requirements.
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 us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the Bid Security and may also lead to any action provided in contract including banning of business for the period of upto two year, Further, I/we (insert name of the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.

9. I/we also understand that if the contents of the certificate submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/Security Deposit and Performance guarantee and may also lead to any other action provided in the contract including banning of business for a period of upto two year.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed)

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

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

Reference -Para 6.1 of ITI

(This certificate is to be given by attorney/authorized signatory/each member of Partnership firm/Joint Venture (JV) I Hindu Undivided Family (HUF) I 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/JV/ member of the partnership firm/LLP
2. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfill all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed),

SEAL AND SIGNATURE OF THE
CONSTITUENT FIRM/CONSTITUENT PARTNER

Place:

Dated:

CHAPTER-III

Annexure-VI

DECLARATION

I/We hereby solemnly declare that I/We visited the sites of work personally and have made myself/ourselves fully conversant of the conditions therein and I/We have quoted my/our rates for various items in tender schedule taking into account all the above factors also.

I/We hereby solemnly declare that my/our firm M/s. shall complete the awarded work within stipulated time.

I/We hereby solemnly also declare that my/our firm M/s. must follow the compliance of related statutory laws like minimum wages act etc. Failing which, severe action may be initiated as per extant rules mentioned in the document/GCC.

Annexure-VI-A

UNDERTAKING FOR NOT BLACKLISTED OR DEBARRED

I/We M/s.....declares that I/We am/are not blacklisted or debarred by railways or any other ministry/departments/PSU of Govt. of India from participation in tender on the date of inviting of bids, either in individual capacity or as a member of the partnership firm or JV in which he was/is of partner/member. Concealment/wrong information in regard to above shall make the contract liable for determination under clause-62 of the General Condition of Contract.

SEAL AND SIGNATURE
OF THE TENDERER(S)

Annexure–VIB

(Bidder must fill in this form)

Name of Bidder/ Name of Firm:-

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

UDIN :_____

(Seal)

CHAPTER – IV

STANDARD GENERAL CONDITIONS OF THE CONTRACT

It shall be governed through Indian Railway's General Conditions of Contract (GCC- APRIL'2022), with all correction slips up-to-date.

Note:

For ready reference, "GCC-APRIL'2022" may be downloaded from Ministry of Railways (Railway Board)- Indian Railway Website, whose download link is https://indianrailways.gov.in/railwayboard/uploads/directorate/civil_engg/pdf/2022/GCC_April-2022_2022_CE-I_CT_GCC-2022_POLICY_27_04_22.pdf

- Indian Railway's Standard General Conditions of Contract (GCC-APRIL'2022) and it's all the amendments/correction slips are an integral part of this tender document.
- The Standard General Conditions of Contract (GCC-APRIL'2022) of Indian Railways as amended by updated correction slips till the date of tender opening shall also applicable as integral part of this tender document The hard/physical copy of Standard General Conditions of Contract, (GCC-APRIL'2022 of Indian Railways may be obtained from the office of the Dy. Chief Mechanical Engineer/Fur, Production wing , Modern Coach Factory, Raebareli Uttar Pradesh-229120 on payment of ₹ 500/- in form of DD in favour of PFA/MCF/RBL payable at Lalganj, Raebareli, Uttar Pradesh-229120.

Signature _____ of _____ Tenderer(s)
Date: _____

Witness:

- 1.
- 2.

Note- Performance Guarantee and Performance Security shall be applicable as per Indian Railway's General Conditions of Contract (GCC- APRIL'2022).

1. Security Deposit: The Security Deposit shall be 5% of the contract value. The Bid Security deposited by the Contractor with his tender will be retained 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 April 2022.

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

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

- A. Final Payment of the Contract as per clause 51.(1) of Standard General Conditions of Contract April 2022 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.

(ii) Forfeiture of Security Deposit: Whenever the contract is rescinded as a whole under clause 62 (1) of Standard General Conditions of Contract, 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), the Security Deposit shall not be forfeited.

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

2. PERFORMANCE GUARANTEE: The procedure for obtaining Performance Guarantee is outlined below:

- (a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21(Twenty one) days, i.e. from 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 Deposit and other dues payable against that contract. In case a tenderer has not submitted Bid Security Deposit on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

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

- (b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the original contract value and additional Performance Guarantee as per clause 16(4)(h) in any of the following forms

- i) A deposit of Cash;
- ii) Irrevocable Bank Guarantee;
- iii) Insurance Surety Bond as per attached annexure- E

Note: In case of extension of Date of Completion, selected bidder needs to submit extended Insurance Surety Bond/Fresh Insurance Surety Bond/fresh Performance Security, in any form as given above, before expiry of existing Insurance Surety Bond.

- (iv) Government Securities including State Loan Bonds at 5% below the market value;
 - (v) Pay Orders and Demand Drafts tendered by all 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 upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor is based on original contract value and shall not change due to subsequent variation(s) in the original contract value
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed in addition to forfeiture of Security Deposit available with railway.
- (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 the GCC.
- (h) If a tender is accepted on the quoted rates of bidder which is below the advertised tender value, an additional Performance security shall be submitted by the bidder as below:

Bid quoted in % of advertised cost	Additional Performance Guarantee (%)
Below 0 – 5%	Nil
Below – 5%	5%

3. (i) Bank guarantee to be submitted in the format enclosed as Annexure-D of Chapter-IV.
(ii) Insurance Surety Bond to be submitted in the format enclosed as Annexure-E of Chapter-IV.
4. **Force Majeure:** 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, 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 7 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 of delay in performance, and works/services 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 Manager as to whether the works/services 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.
5. **Extension of Time:** Subject to any requirement in the contract as to completion of any portions 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. However, care may be taken to ensure that the extension in the service contract (other than Consultancy contracts) is on the ground that new contract has not been finalized.
 - 5.1 **Extension Due to Modification:** If any modifications have been ordered which in the opinion of the Manager have materially increased the magnitude of the services, then such extension of the contracted date of completion may be granted as shall appear to the Manager 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 and in any case not less than one month before the expiry of the date fixed for completion of the services.
 - 5.2 **Extension for Delay Not Due to Railways or Contractor:** If in the opinion of the Manager, the progress of services 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 4.20 of GCC or in executing the work/service 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 Manager pending arbitration or in consequences of the Contractor not having received in due time necessary instructions from the Railway for which she shall have specially applied in writing to the Manager or her authorized representative then upon happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Manager within 15 days of such happening, but shall nevertheless make constantly her best endeavors to bring down or make good the services and shall do all that may be reasonably required of her to the satisfaction of the Manager to proceed with the services.

The Contractor may also indicate the period for which the service is likely to be delayed and shall be bound to ask for necessary extension of time. The Manager on receipt of such request from the contractor shall consider the same and shall grant such extension of time as in her 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.
 - 5.3 **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 site necessary for the execution of the services or to give the necessary notice to commence the services, 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 Railways may grant such extension or extensions of the completion date as may be considered reasonable.

5.4 Extension of Time for Delay Due to Contractor:

1. The time and uninterrupted delivery of services shall be deemed to be the essence of the contract and the service must be completed not later than the date(s) as specified in the contract. If the Contractor fails to complete the services within the time/manner as specified in the contract for the reasons other than the reasons specified in Clause 5.1 of GCC, the Railways may, if satisfied that the service can be completed by the Contractor within reasonable short time thereafter, allow the Contractor for further extension of time as the Manager may decide. On such extension, the Railway Shall 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 a sum equivalent to 0.10 % of the contract value of the service for each week or part of the week.

- 2 For the purpose of this clause, the contract value of the services shall be taken as value as per contract agreement including any supplementary contract agreement issued. Provided also, that the total amount of liquidated damages under this condition shall not exceed 5%. In lieu, competent authority while granting extension to the currency of contract under clause 5.2 of GCC may also consider levy of token penalty, as deemed fit based on the merit of the case of total value of the contract.

This section does not limit Indian Railways for imposing any penalties under other provisions and such penalties shall be applicable concurrently.

Provided further, that if the Railway is not satisfied that the service can be completed by the Contractor and in the event of failure on the part of the contractor to complete the service 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 Performance Guarantee and rescind the contract under clause 7.4 of these conditions, whether or not actual damage is caused by such default.

- 6.(1) **Illegal Gratification:** Any bribe, commission, gift or advantage given, promised or offered by or on behalf to the Contractor or her partner, agent or servant or anyone on her behalf, to any officer or employee of the Railway, or to any person on her behalf in relation to obtaining or execution of this or any other contract with the Railway shall, in addition to any criminal liability which she 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 any moneys due to the Contractor(s) under this contract or any other contracts with the Railway.
- (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 she 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 or 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 she shall consider fit and sufficient and her decision shall be final and conclusive. In the event of rescission of the contract under this clause, the Contractor shall not be paid any compensation whatsoever except payments for the work/services rendered up to the date of rescission.

7. Variation in Quantities During Execution of Service Contracts:

The procedure detailed below shall be adopted for dealing with variations in quantities during execution of service contracts:-

1. Individual NS items in contracts shall be operated with variation of plus or minus 25% and payment would be made as per the agreement rate. For this, no finance concurrence would be required.
2. 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 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;
 - (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 the 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 associate 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 shall 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 PFA and approval of General Manager.
8. (a) The Contractor shall ensure comply clause 55(c) of GCC - (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.
- (b) While processing payment of any 'On Account Bill' or 'Final Bill' or release of 'Advances' or 'Performance Guarantee / Security Deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramik kalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

Signature of Tenderer

Registered Acknowledgement Due

**PROFORMA OF 7 DAYS NOTICE FOR WORKS AS A WHOLE/ IN PARTS
(DETAILS OF PART OF WORK TO BE MENTIONED)**

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/Chief Engineer's office 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 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

Registered Acknowledgement Due

PROFORMA OF 48 HRS. NOTICE FOR WHOLE WORK
RAILWAY
(Without Prejudice)

To
M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. **Seven days' notice under Clause 62 of 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 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

Registered Acknowledgement Due

PROFORMA OF TERMINATION NOTICE
RAILWAY

(Without Prejudice)

No. _____

Dated _____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

Forty eight hours (48 hrs.) 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 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.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the President of India

Form XIV (See Rule 76)
The contract Labour (Regulation & Abolition) Central Rules, 1971

Employment Card

Name and address of contractor.....

Name and address of Establishment in /under which contract is carried on-----

Name of work and location of work

Name and address of Principle
Employer

1. Name of the worker -----
 2. S. No. in the register of workers employed -----
 3. Nature of employment/Designation -----
 4. Wage rate (with particulars of unit in case of piece-work) -----
 5. Wage period -----
 6. Tenure of employment -----
 7. Remarks -----
-

Signature of Contractor

Form XIX [See Rule 78(1)(b)]

The Contract Labour (Regulation & Abolition) Central Rules, 1971

Wage Slip

Name and address of contractor-----

Name of Worker-----

Name of Parent/spouse of the worker-----

Nature and location of work-----

For the week/fortnight/month ending-----

1. No. of days worker-----

2. No. of units worked in case of piece rate workers-----

3. Rate of daily wages/piece rate-----

4. Amount of overtime wages-----

5. Gross wages payable-----

6. Deductions, if any-----

7. Net amount of wages paid-----

Signature of the contractor or their
representative

FORM XXIV {See Rule 82(1)}**The Contractor Labour (regulation & Abolition) Central Rules, 1971****Return to be sent by the Contractor to the Licensing Officer**

(Every contractor shall send half return in Form XXIV (in duplicate) so as to reach the Licensing Officer concerned not later than 30 days from the close of the half year and a copy of the same should also be sent to the Indian Railways at the same time)

Half -Year-Ending-----

1. Name and address of the Contractor -----
2. Name and address of the Establishment -----
3. Name and address of the Principal employer -----
4. Duration of Contractor from.....to.....
5. No. of days during half year on which-
 - (a) The establishment of the principal Employer had worked
 - (b) The contractor's establishment had worked.....
6. Maximum number of contract labour Employed on day during the half year-

Men	Women	Children	Total
-----	-------	----------	-------
7. (i) Daily hours of work and spread over-
 - (ii) (a) Whether weekly holiday observed and on what day-
 - a. If so, whether it was paid for-
 - (iii) No. of work hours (man-hours) of overtime worked
8. No. of work-days (man-days) worked by-

Men	Women	Children	Total
-----	-------	----------	-------
9. Amount of wages paid-

Men	Women	Children	Total
-----	-------	----------	-------
10. Amount of deduction from wage, if any-

Men	Women	Children	Total
-----	-------	----------	-------
11. Whether the following have been Provided-

(i)	Canteen..	...	...	...
(ii)	Rest Room	....	.....	.....
(iii)	Drinking water	....	.....	.....
(iv)	Creches	....	.....	.....
(v)	First-Aid	.....	.....	.....

(If the answer is 'Yes' state briefly standards provided)

Place.....

Signature of the Contractor

Date.....

THE SCHEDULE [See rule 2(1)]

FORM A

FORMAT OF EMPLOYEE REGISTER

[Part-A: For all Establishment]

Name of the Establishment.....LIN.....

Sl No	EmployeeCode	Name	Surname	Father'sName	Date ofBirth*	Nationality	Education Level	Date ofJoining	Designation
1	2	3	4	5	6	7	8	9	10
Category	Type ofEmployment	Mobile	UAN	PAN	ESIC IP	LWF	AADHAR	PresentAddress	Permanent Address
11	12	13	14	15	16	17	18	19	20
Service BookNo	Date of Exit	Reasonfor Exit	Mark ofIdentification	Photo	Specimen Signature	Remarks			
21	22	23	24	25	26	27			

Note: In case the age is between 14 to 18 years, mention the nature of work, daily hours of work and Intervals of rest in the RemarksColumn.

FORM B**FORMAT FOR WAGE REGISTER**

Rate of Minimum Wages and since the date.....		
	Semi-Skilled	Un Skilled
Minimum Basic		
DA		
Overtime		

Name of the Establishment_____ LIN

Wage period From _____ To _____ (Monthly Rated)

Sl No in Employee register	Name	No of Days worked	Overtime hours worked	Basic	Spl. Basic	DA	PaymentsOvertime	HRA	Others	Total
1	2	3	4	5	6	7	8	9	10	11

Deductions PF	ESIC	Income Tax	Society	Insurance	Others	Recoveries	Total	Net Payment	Employer Share PF Welfare Fund	Receipt by Employee
12	13	14	15	16	17	18	19	20	21	22

Date of Payment	Remarks									
23	24									

FORM C**FORMAT OF REGISTER OF LOANS / RECOVERIES**

Name of Establsihment _____ LIN _____

Sl No in Employee register	Name	Recovery (Damage/loss/fine/advance/loans)	Type	Particulars	Date of damage/Loss*	Amount	
1	2	3		4	5	6	
Whether show cause issued*	Explanation heard In presence of*	Number Installments	of	First Month/year	Last Month/year	Date of complete Recovery	Remarks
7	8	9		10	11	12	13

*Applicable only in case of damage/loss/fine

FORM D**FORMAT OF ATTENDANCE REGISTER**

Name of Establishment _____ LIN _____ For the Period From To

Sl No in Employee register	Name	Place of Work*	Dates	1	2	3	4	5	6	...	31	No of Days worked	Summary No of hours worked
			IN										
			OUT										
1	2	3	4	5							6	7	

*Place of Work in case of Mines only (Underground/Opencast/Surface)

In case an employee is not present the following to be entered: (R for Rest/ L for Paid Leave/ A for absent/ O for Weekly Off/ C for Establishment Closed)

MODEL FORM OF BANK GURANTEE BOND

Bank Guarantee No.

Date-----

PFA

Modern coach Factory, Raebareli

Lalganj-229120

1. It consideration of the President of India acting through PFA, Modern Coach Factory, Raebareli, Lalganj-229120 (herein after called "the Government") having agreed to exempt (hereinafter called "the said Contractor's) from the demand, under the terms and conditions of an Agreement/Acceptance letter No dated made between and..... for..... (hereinafter called "the said Agreement") , of security for performance Guarantee for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said Agreement, on production of bank Guarantee for ₹ (₹only) we (herein after referred to as "the Bank", indicate the name of the bank) at the request of (Contractor's) 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 amounts due, amount payable under this guarantee without any demur, merely on a demand from the Government stating that amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Government by reason of breach by the said contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the contractor(s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.
3. We (indicate the name of the bank) under-take to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/supplier(s) in any suite or proceeding pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s)/supplier(s) shall have no claim against us for making such payment.
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..... Office / Department) 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 discharged from all liability under this guarantee thereafter.
5. We, (indicate the name of the bank) further agree with the government that the Government shall have the fullest liberty without our consent and without effecting 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 the time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said

agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Government or any indulgence by the Government to the said Contractor(s) or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee shall not be discharged due to the change in the constitution of the Bank or the Contractor(s)/Supplier(s).
7. We, 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 the bank)

Insurance Surety Bond for Performance Security

Name of the issuer of surety bond:

President of India,
Acting through.....,
Railway.
Date:.....

Surety Bond No:
Amount of Bond:

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

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

AND

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

SB No:

Date:

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

1. KNOW ALL MEN by these present that I/We, the undersigned [Insert name(s)
of authorized representatives of the Surety], being fully authorized to sign and
incur obligations for and on behalf of the Surety, confirm that the Surety,
hereby, unconditionally and irrevocably Bond to pay the Railway the full
amount in the sum of XXXX (**Rupees XXXX Only**) as above stated.
2. The Surety undertakes to immediately pay on presentation of demand by the
Railway any amount up to and including aforementioned full amount without
any demur, reservation or recourse. Any such demand made by the Railway on
the Surety shall be final, conclusive and binding, absolute and unequivocal
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 fulfillment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, tribunal, arbitrator or any other authority.

14. The Bond shall be in addition to and without prejudice to any other security Bond (s) of the contractor in favour of the Railway available with the Railway. The Surety, under this Bond, shall be deemed as Principal Debtor of the Railway.

Notwithstanding anything to the contrary contained in these presents,

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

Dated..... the day of 2026

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

Place.....

Bank's Seal and authorized signature(s)

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

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

[*P/Attorney*] No.

Witness

- 1.
- 2.

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

Annexure –VIA

(Bid Security)

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

Name of the Bank: -----

President of India,

Acting through,

.....Railway,

Beneficiary: Railway

Date:.....

Bank Guarantee Bond No.:

Date:-----

In consideration of the President of India acting through---- ***(Designation & address of Contract Signing Authority)***, Railway,, (hereinafter called "The Railway") having invited the bid for_____through Notice inviting tender (NIT) No.,_____, We have been informed that [Insert name of the Bidder]..... ***(hereinafter called "the Bidder")*** intends to submit its bid ***(hereinafter called "the Bid")*** .

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

AND

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

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

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

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

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

Date

Place.....

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

Witness:

1 Signature, Name & Address & Seal

2 Signature, Name& address & Seal

Bank's Seal [P/Attorney]No.

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

Chapter-V

SCHEDULE OF RATES

(TO BE FILLED IN BY THE TENDERER)

Tender No.:- :M-200/MCF/RBL/FUR-ACTIVITIESACCOACH/F-84, Date. 29.04.2026

Name of work: - Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBCAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBCAC (LHB AC hot buffet with air suspension) coaches as per scope of work.

Quantity- 48 LWACCW (LHB 2T) Coaches: Schedule A & B, 19 LFCWAC coaches :Schedule-C, 169 LWACCN Coaches : Schedule D, 19 LWCBCAC (increased Heating Capacity) : Schedule E ,26 LWCBCAC (Intermediate Capacity): Schedule F

Approximate Cost- ₹ 4,19,11,978.07 (Rs. Four Crore Nineteen Lakh Eleven Thousand Nine Hundred Seventy Eight and Seven Paise) only.

Non Standard Schedule of Rates (SSOR) Items AND QUANTITY-

SL	Description of Item of Work	Approximate Quantity	Unit	Rates (In Rs.)		Total Amount in Rs.
				In figure	In words	
1.	Schedule-A	48 LWACCW Coaches	Per Coach			
	Interior Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches without Pantry as per scope of work.					
2.	Schedule-B	48 LWACCW Coaches	Per Coach			
	Complete wiring work including handling and installation of equipment in LHB LWACCW Coaches-Regarding					
3.	Schedule-C	19 LFCWAC Coaches	Per Coach			
	Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies as per scope of work.					
4.	Schedule-D	169 LWACCN Coaches	Per Coach			
	Interior Mechanical Furnishings & Fittings in LWACCN EOG LHB type AC SS trough Coaches including plumbing work as per scope of work.					
5.	Schedule-E	19 LWCBCAC Coaches (increased Heating Capacity)	Per Coach			
	Complete interior Mechanical Furnishings & Fittings Activities in LWCBCAC (LHB AC hot buffet with increased Heating Capacity) Coaches as per scope of work.					
6.	Schedule-F	26				

	Complete interior Mechanical Furnishings & Fittings Activities in LWCBAC (LHB AC hot buffet with air suspension) Coaches as per scope of work.	LWCBAC Coaches (Intermediate Capacity)	Per Coach			
7.	Discount if any					
8.	GST 18% as applicable on total value					
9.	Grand Total value					

Declaration by the Bidder:

This is to certify that I/We before signing this tender have read and fully understood all the terms and conditions contained therein and undertake myself/ourselves to abide by them.

Note:

- i) The quantities shown in above Schedule are approximate and are as a guide to give the tenderer(s) an idea of quantum of work involved. The Railway reserves the right to increase/ decrease and/or delete or include any of the quantities given above and no extra rate will be allowed on this account.
- ii) The Tenderer(s) shall quote his / their rates in the Schedule through Indian Railways portal www.ireps.gov.in and must tender for all the items shown in the Schedule.
- iii) All the bidders/tenders should ensure that they are GST compliant and their quoted tax structure/rates are as per GST law.
- iv) The rates quoted above are inclusive of all applicable taxes, GST as applicable, uniform and PPE i.e. safety helmet, hand gloves, safety shoes & nose mask etc.
- v) There would be no increase in rates during the contract period except as per provision under the terms and conditions.

Name, Seal & Signature of Tenderer (s)

Date:

SPECIAL TERMS AND CONDITIONS of CONTRACT (Technical)**(A) SCOPE OF WORK:**

Under this contract, the Contractor shall be executing works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches including plumbing work, LWCBAC (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBAC (LHB AC hot buffet with air suspension) coaches as per scope of work.

(B) FACILITIES TO BE PROVIDED BY RAILWAYS TO CONTRACTOR:

The Contractor shall be provided free of charge, the following facilities during the operation of the Contract by the Administration near the site of work.

- a) Power Supply for execution of work for operation of tool/equipment, Compressed Air and water will be provided free of cost. However, the firm may examine the actual site conditions for the last mile arrangements which to be done by the firm for taking the compressed air and water from nearest tapping point (of compressed air and water) provided by Railways to the site and quote the rates, keeping in view these costs. All other facilities to be arrange by contractor himself.
- b) Railways shall provide adequate space inside covered shed (not enclosed) subject to maximum 200 Sq m free of cost to the Contractor for keeping the material & tools required for day to day work. However, Contractor shall arrange the requisite lockers, cup boards, almirah etc of standard size for keeping the tools, materials, belongings etc. in safety in an orderly manner. Contractor shall arrange standard tool kit with locker arrangement within one month of issuing of LOA otherwise appropriate penalty as deemed suitable by Railway Administrative would be levied.
- c) Railway shall provide suitable crane for loading of RMPU and fork lifters with driver for handling of bulky materials free of cost for work.

(C) MISCELLANEOUS TERMS AND CONDITIONS-

1. These special conditions of Contract shall govern the works done under this contract in addition to and/or in part supersession of the "General Conditions of Contract" and specifications.
2. Where any of the terms and conditions specified in these special conditions of Contract is at variance with any of the terms of the "Standard General Conditions of the Contract", the special conditions will prevail.
3. Any special condition stated by the Contractor (s) in covering letter submitted along with the Contract shall be deemed as part of contract to such extent only as have explicitly been accepted by the Railway.
4. MCF/RBL will provide the coach shells with complete brake system in the coach. Railway shall also provide Bio-Toilets, CBC etc. Railway shall also provide Painting of the shell and external marking/lettering to be done by Railway, as per the existing LHB Coaches applicable layout, will be provided by Railway in the coach.
5. The skilled manpower for execution of above work shall be arranged by contractor.
6. All hand tools like screw driver, spanner, multimeter, megger etc required for the work are to be arranged by the tenderer. Safety equipments, calibration, testing & inspection etc are to be arranged by the contractor. All consumables like cloth, soap/detergents/, hand gloves, safety consumables are to be arranged by contractor himself,
7. The Contractor will have to arrange all required tools for the work like drill machines, screw drivers sets, spanners, wire cutter, grinders, Hot Air guns, crimping tools, ratchet, hydraulic trolley, Water lifting pump and all type of wrenches.

D) SPECIAL CONDITIONS-

1. Works contract for exterior-interior Electrical and Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work and Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies, LWACCN EOG LHB type AC SS trough Coaches

including plumbing work, LWCBA (LHB AC hot buffet with increased Heating Capacity) coaches and LWCBA (LHB AC hot buffet with air suspension) coaches as per scope of work shall be done as per latest applicable drawings and work instructions.

2. The Contractor will be required to employ qualified technicians and supervisor to meet out the production requirement. In which at least 60% employee should be deployed by contractor to have stipulated qualification as per norms given below –

A) Contract worker /technician Qualification Schedule : Part A

S. N.	Qualification
1	Class 10th + ITI with in Fitter / Carpenter / Plumber trade
2	Class 10th + TTC/MCF Certified
3	Class 10th + Trained / Certified with PM Kausal Vikash Yojana in Fitter/ Carpenter/ Plumber trade

B) Supervisor Qualification Schedule: Part B

S. N.	Qualification
1	Diploma in Mechanical or Production Engineering
2	Graduate in Mechanical or Production Engineering
3	Graduate + TTC/MCF Certified.

C) Contract supervisor, worker /technician Qualification Schedule (For “A” S.N.2 and “B” S.N.3): Part C

- I. Before deployment for the furnishing works in the shops, all the proposed contract's supervisors, workers /technicians shall have to undergo a “EVALUATION TEST/GRADATION/ SCREENING ” at TTC/MCF/RBL or respective shop officer , which is subjected to revision in due course of time by senior authorities.
 - II. Those Contract Supervisor and worker who successfully pass the evaluation test/Screening at TTC/MCF/RBL or respective shop officer should be given a certificate with validity contract period or less as decided by TTC/MCF/RBL or respective shop officer.
 - III. Unless the workers qualifies the “EVALUATION TEST/GRADATION/SCREENING ” from TTC/MCF/RBL or respective shop officer , He/she should not be allowed to work in the MCF premises under this tender.
 - IV. The contractor should not deploy worker/ technician without valid “EVALUATION TEST/GRADATION/SCREENING “ from TTC/MCF/RBL or respective shop officer & submit all relevant document in this regard .
3. 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.

1	<p>The Contractor must ensure and provide documentary evidence for the following:-</p> <p>A. All the workers or labour employed directly or indirectly by the contractor must be enrolled under the Pradhan Mantri Jan Dhan Yojana (PMJDY), a scheme that aims to provide all the citizens of India a bank account, credit facility, insurance cover and debit card.</p> <p>B. All the workers or labour employed directly or indirectly by the contractor between the ages 18-70 years must be enrolled under the Pradhan Mantri Suraksha Bima Yojana (PMSBY), an accident insurance scheme which will be a one year cover, renewable from year to year, offering accidental death and disability cover for death or disability on account of an accident. The contractor will be responsible to pay the premium per annum per member for all her workers during the contract period.</p> <p>C. All the workers or labour employed directly or indirectly by the contractor between the ages 18-50 years must be enrolled under the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), an insurance scheme which will be a one year cover, renewable from year to year, offering life insurance cover for death due to any reason. The contractor will be responsible to pay the premium per annum per member for all her workers during the contract period.</p>
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	<p>D. All the workers or labour employed directly or indirectly by the contractor must be enrolled under the Ayushman Bharat- Pradhan Mantri Jan Arogya Yojna (AB-PMJAY) as per applicability. The contractor will be responsible to pay the premium per annum per member for all her workers (if any) during the contract period.</p> <p>E. The contractor must submit documentary evidence to show the coverage of all her workers or labour under the above mentioned schemes at all times during the contract period on an annual basis.</p>
2	The tenderer is required to be registered with the EPFO. The tenderer has to submit the registration certificate/relevant document along with the tender/bid, failing which the bid shall be summarily rejected.
3	<p>The successful tenderer, upon award of the contract, shall submit duly filled EPF Form No. 11/declaration form for each manpower/worker proposed to be engaged at MCF. This is required to ascertain whether the individual is already a member of the Employees' Provident Fund (EPF) scheme.</p> <p>The contractor shall be solely responsible for ensuring the accuracy and authenticity of the information provided in the forms. Any discrepancy or false declaration shall be treated as a violation of statutory compliance, and necessary action may be initiated as per applicable laws and contract terms.</p>
4	Payment to the contractor shall only be made after verifying that the statutory PF payments have been made to EPFO by verifying the copy of ECR and payment receipt/Challans received from the contractor.
5A	<p>Classes of employees entitled and required to join the fund shall be dealt as per the Para no.26 of EPFS-1952 which is reproduced below:-</p> <p>“26. Classes of employees entitled and required to join the fund</p> <p>a. (a) Every employee employed in or in connection with the work of a factory or other establishment to which this scheme applies, other than an excluded employee, shall be entitled and required to become a member of the Fund from the day this paragraph comes into force in such factory or other establishment.</p> <p>(b) Every employee employed in or in connection with the work of a factory or other establishment to which this Scheme applies, other than an excluded employee, shall also be entitled and required to become a member of the fund from the day this paragraph comes into force in such factory or other establishment if on the date of such coming into force, such employee is a subscriber to a provident fund maintained in respect of the factory or other establishment or in respect of any other factory or establishment (to which the Act applies) under the same employer:</p> <p>Provided that where the Scheme applies to a factory or other establishment on the expiry or cancellation of an order of exemption under section 17 of the Act, every employee who but for the exemption would have become and continued as a member of the Fund, shall become a member of the Fund forthwith.</p> <p>b. After this paragraph comes into force in a factory or other establishment, every employee employed in or in connection with the work or that factory or establishment, other than an excluded employee, who has not become a member already shall also be entitled and required to become a member of the Fund from the date of joining the factory or establishment.</p> <p>c. An excluded employee employed in or in connection with the work of a factory or other establishment, to which this Scheme applies shall, on ceasing to be such an employee, be entitled and required to become a member of the Fund from the date he ceased to be such employee.</p> <p>d. On re-election of an employee or a class of employees exempted under paragraph 27 or paragraph 27 –A to join the Fund or on the expiry or cancellation of an order under that paragraph, every employee shall forthwith become a member thereof.</p> <p>e. Every employee who is a member of a private provident fund maintained in respect of an exempted factory or other establishment and who but for exemption would have become and continued as a member of the fund shall, on joining a factory or other establishment to which this Scheme applies, become a member of the fund forthwith.</p> <p>f. Notwithstanding anything contained in this paragraph [an officer not below the rank of an Assistant Provident Fund Commissioner] may, on the joint request in writing, of any employee of a factory or other establishment to which this Scheme applies and his employer, enroll such employee as a member or</p>

	allow him to contribute more than rupees [fifteen thousand rupees] of his pay per month if he is already a member of the Fund and there upon such employee shall be entitled to the benefits and shall be subject to the conditions of the Fund, provided that the employer gives an undertaking in writing that he shall pay the administrative charges payable and shall comply with all statutory provisions in respect of such employee.”
5B	<p>The retention of membership shall be dealt as per Para 26A of EPFS scheme 1952 which is reproduced below:-</p> <p>“26A. Retention of membership</p> <p>(1) A member of the Fund shall continue to be member until he withdraws under paragraph 69 the amount standing to his credit in the Fund or is covered by a notification of exemption under section 17 of the Act or an order of exemption under paragraph 27 or paragraph 27A.</p> <p>(2) Every member employed as an employee other than an excluded employee, in a factory or other establishment to which this Scheme applies, shall contribute to the Fund, and the contribution shall be payable to the Fund in respect of him by the employer. Such contribution shall be in accordance with the rate specified in paragraph 29 :</p> <p>Provided that subject to the provisions contained in sub-paragraph (6) of paragraph 26 and [in paragraph 27], or sub-paragraph (1) of paragraph 27- A, where the monthly pay of such a member exceeds [fifteen thousand rupees] the contribution payable by him, and in respect of him by the employer, shall be limited to the amounts payable on a monthly pay of [fifteen thousand rupees] including [dearness allowance, retaining allowance (if any) and] cash value of food concession]”</p>
6	The EPF-related conditions mentioned in this document are not exhaustive . The contractor must ensure full compliance with all applicable provisions of the EPF Act, 1952, and its schemes, including any amendments or notifications issued by EPFO from time to time. In case of any typographical error, the EPF Act-1952 and its scheme shall be referred.

4. The contractor shall ensure that its employees have their account under PMJDY: Pradhan Mantri Jan Dhan Yojna and are enrolled for Welfare Schemes of Govt. such as PMSBY: Pradhan Mantri Suraksha Bima Yojna , PMJJBY: Pradhan Mantri Jeevan Jyoti Bima Yojna etc. Documentary evidence for such enrollment should be submitted to MCF/Administration.

5. The firm must have a valid Electrical License issued by any state within India and shall upload documentary proof of the same, failing which offer shall be summarily rejected.

6. 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.

7. Contractor shall deploy one safety supervisor exclusively to look after the issues related to the safety of his labour. This supervisor shall also be training all the incumbents regarding the safety at work place and also maintain FAB (First Aid Box) exclusively for the contract labour.

8. Contractor shall also deploy 01 supervisor to look after housekeeping and quality related work and 01 supervisor to look after the material and also the furnishing work.

9. The Contractor will be responsible for the compliance of factory act, 1948 and he will appoint a manager to supervise his area of work. This work should be completed within a month of the work commencement for the perusal of the Railway authority.

10. The following set of registers should be maintained at the worksite by the contractor and should be shown to be Statutory Authority (i.e. the Labour Enforcement Officer, etc.). Form –III under rule 21(2) of the contract labour (Regulation and Abolition) Central Rule 1971 [see rule 2(1)]. All register must be witnessed by the respective MCF/RBL Supervisor.

Sl. No.	FORM NO.	REGISTERS
1.	Form A	Format of employee Register
2.	Form B	Format of wage Register
3.	Form C	Format for wage register of loan recoveries
4.	Form D	Format of attendance Register
5.	Form XIV	Employment Card- to be issued to each worker.
6.	Form XIX	Wage Slip
7.	Form XXIV	Half Yearly return to be sent to the Labour Office.
8.	Firm will comply all related form of Factory act of their employee also i.e. Form No. 11,12,14 and 16 etc.	

11. Contractor shall abide by all laws of the land including, factories act.1948, Labour Laws (ESI, PF BONUS Income Tax, Service Tax or any other extra taxes levied by the Government) Companies Act, TAX Deduction liabilities, Welfare measures of its employees and all other obligations that enjoin in such cases and are not essentially enumerated and defined herein, though any such onus if applicable shall be the exclusive responsibility of the Contractor, and it shall not involve the Railway in any way what-so ever.
12. Payment to laborers has to be made, as per the Minimum Wages Act, revised from time to time and 100% by bank through NEFT/ A/c payee cheque/Net banking. Proof of monthly bank statement of the labourer's payment to be submitted to MCF/RBL along with the bill. Proof of payment to the labour in their bank account should also be submitted. Without this statement no further bill will be processed. In case of continuous non compliance, the contract shall be terminated.
13. GST, Income Tax, Water charges, Conservancy charges shall be charged as per extant rules as applicable from time to time and will be deducted from the bills of the Contractor.
14. The Contractor shall take all precautionary safety steps to prevent any untoward incident inside the Railway premises.
15. The work has to be carried out in Modern Coach Factory, Rae Bareli premises and therefore every precaution shall be taken by Contractor to protect their labour. The Contractor shall adhere to all applicable Labour rules/laws including Workman compensation Act and other Laws. The Contractor must ensure that all workers working as a part of this contract are paid minimum wages as per Minimum Wage Act. The Contractor shall be responsible for any dispute arising due to Labour Laws/rules and it shall be binding on Contractor to abide the decision of Labour commissioner in the matter. For any act of Contractor or in case of any dispute in making payment to any individual/organized body or institution, Railway shall not be liable for any payment in any condition.
16. The Contractor shall note that no compensation due to any loss of life/material or any other account shall be given by the Railway and Contractor shall have to pay all compensation in case of any accident, injury to the labour.
17. The firm shall apply for and obtain necessary permit for the staff and laborers for working inside the factory area. The normal working hours shall be between 8.00 hrs to 17.30 hrs from Monday to Friday with lunch break between 12.00 hrs and 13.00 hrs. On Saturday, the working hours will be from 8.00 hrs to 13.30 hrs. However if required the contractor may take permission to work in other timings as well depending on the work load and also on Sundays and holidays. The Contractor has to work round the clock in three shifts and deploy more manpower in case the need arises when the number of coaches to be executed goes up.
18. The Contractor shall coordinate with concerned departments and other agencies of MCF/LLJ connected to this and have to work in close liaison with them. The Contractor shall maintain close co-ordination with the Engineer-in-charge of the work.
19. Contractor should issue the appointment letter/order to his labourers to start the work.
20. All the contract labour have to come to the factory in the prescribe dress with Personnel Protective Equipments such as safety shoes, leather hand gloves and helmets, which will be arranged by contractor himself. Contractor has to ensure that no worker is without PPE.
21. The Firm supervisor will supervise the work and maintain necessary documentation. The labour attendance should be submitted to nominated representative of MCF on daily basis and attendance register may be surprised checked by railway representative at any time. The Contractor shall provide additional manpower at no extra cost, whenever required to accomplish the work specified in the scope.
22. The Contractor shall undertake orientation course in safety and other production activities of its labourers before the commencement of the work on the coaches and keep a record for the same for the perusal of Railway authority.
23. The Contractor shall be responsible for safety of his staff and no claim will be given by MCF in case of any incident.
24. The contractor will furnish complete details of the labour, proposed to be deployed with supervisor giving the working timing. The list of names of all labour along with supervisor will

submitted to the consignee/ Railway representative before start of the work by the contractor .No change of his labour list is allowed ,without prior permission of related Dy. HOD.

25. All the labourers of the Contractor should have identity cards & no labourer shall be allowed to work without having the Identity Cards & the prescribed dress. Further, their character certificate should be verified by local police/Gram Pardhan/Chairman Municipality/Gazetted officer and Police verification also and submitted to the Railway Administration.
27. The contractor should furnish complete details of the labour, proposed to be deployed with supervisor giving the working timing. The list of names of all labour along with supervisor should be submitted to the consignee.
28. The firm shall meet the Environmental Management System requirements in accordance with the rules and regulations of the Railway and the Factory Act.
29. The firm shall take all precautionary measures in order to ensure the protection of their own personnel moving about or working on the Railway premises and should confirm to the Rules and Regulations of the Railway and the Factory Act.
30. The contractor shall comply with the latest provisions of the Factory Act, Employee's Compensation Act or the fatal accidents act or any other loss relating thereto and rules made from time to time and maintain relevant records.
31. The Contractor shall prepare and maintain history sheet of each coach, which will be jointly signed with MCF representative after completion of coaches. One dedicated supervisor (apart from staff) with proper communication system (Mobile phone etc.) should be available in duty hours.
32. Contractor has to educate and ensure that all the workers dispose of the scrap arising during the course of work in the nominated bins only. Housekeeping around the allotted sheds for the Contractors should be tidy & neat. Any body found not cleaning the work area and mixing the scrap in the bins, the Contractor shall be liable to a penalty of Rs. 500.00 per event.
33. Work done by the Contractor as mentioned in the scope of work shall conform to the quality norms of MCF/RBL. In case of deviation from quality norms the Contractor shall rectify the deviation at his own cost. Any permanent damage arising out of bad workmanship by the Contractor, the cost of such damage shall be recovered from the Contractor. Decision of MCF/RBL on this cost shall be final.
34. If any type of fraudulent practice is observed while execution of work awarded; the complete cost of the loss caused due to that will be recovered from the security deposit or any other dues pending with Railways and legal action will also be initiated and the firm may be blacklisted.
35. Inspection of the work shall be carried out by the Inspection Department of MCF/RBL or by any such person deputed by the competent authority from time to time.
36. The Contractor shall offer for inspection in writing after completion of work duly indicating the date of work and shell/Coach number. Any inspection points raised on the installation work done till the dispatch of the coach, shall be cleared by the Contractor.
37. If found satisfactory the Inspection Department/any such person deputed by the competent authority shall issue the completion certificate for the work which should be submitted by the firm with the bill for claiming payment.
38. All the tools machines viz. Drilling Machines, welding machine etc and Lighting arrangement inside the coach etc. and work bench, ladder & working platform etc as required to execute work as per scope of work shall be arranged by the Contractor.
39. Final installation and commissioning of coach furnishing items shall be done to meet the applicable drawings, working procedure given in this tender document.
40. The Contractor shall ensure cleaning of coach before handing over to Railways. Moreover, Procedure, process precautions and safety precautions have to be followed as per Working Instruction to be provided by MCF.
41. The Contractor shall use safe tools. Proper extension boards shall be used. Extension wires with joints and without insulation shall not be used. All the tools should have proper plugs unless penalty will be imposed Rs. 500.00 per event.
42. The Contractor shall meet the (IMS) Integrated management system/IRIS requirement in accordance with rules & regulations of Railway and Factory Act.

43. INSURANCE:

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 accident of person who shall be employed by the contractor in or about the site of the contractors office 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.

44. OCCUPATIONAL HEALTH:

- a. Comply with applicable legal and other requirements to which it subscribes that relate to occupational health & safety hazards.
- b. Prevent injury & ill-health by minimizing adverse occupational health & safety impact from its operation by reducing, minimizing or eliminating the generation and release of pollutants to the work environment.
- c. Integrate occupational health & safety concept in to its business and operation planning.
- d. Evaluate its occupational health & safety system and adopt appropriate objective & target to achieve continual improvement.
- e. Educate and engage employees in the company's efforts to optimize educational health & safety performance.

45. Railway reserves the right to increase/decrease/short close in the overall quantity.

46. First aid box shall also be provided by the Contractor.

47. No claim for idle labour and or idle machinery etc., on any account will be entertained. Similarly, no claim shall be entertained for business loss or any such loss.

48. If on any day of work the number of workers employed by the Contractor is equal to or exceeds 20 (twenty) persons, the Contractor shall obtain Labour License from the Licensing Officer as per Contract Labour Act 1970 before commencement of the work and shall follow the latest guidelines as laid down by the Labour Commissioner rate, revised from time to time.

49. Non-compliance to the Production target set by MCF/RBL may even lead to termination of the contract at any stage while execution of the work awarded.

50. **FINAL AUTHORITY:** GM/MCF/RBL shall be the final authority for settling the disputes, if any.

51. Time Schedule:

52. (i) For LWACCW coaches- The Contractor has to deploy adequate man power & supervisors so as to get quality clearance of coaches within a cycle time 15 days for submission of SIP /Completion + 03 days for final quality clearance and also to give productivity of around 12-15 LWACCW coaches (This number is subject to change as per coach production requirement of Railway. The firm cannot make any claim for quantum of this stated number) per month. The contractor may have to work in 3-shifts working by deployment of sufficient manpower in case of increase in target / requirement of MCF.

(ii) For LFCWAC coaches- The Contractor has to deploy adequate man power & supervisors so as to get LFCWAC coaches within a cycle time of 21 days for SIP submission + 03 days for quality clearance and also to give productivity of around 5 LFCWAC coaches (This number is subject to change as per coach production requirement of Railway. The firm cannot make any claim for quantum of this stated number) per month or as per requirement of MCF. The contractor may have to work in 3-shifts working by deployment of sufficient manpower in case of increase in target / requirement of MCF.

(iii) For LWACCN coaches- The Contractor has to deploy adequate man power & supervisors so as to get LWACCN coaches within a cycle time of 15 days for SIP submission + 03 days for quality clearance and also to give productivity of around 45-48 LWACCN coaches (This number is subject to change as per coach production requirement of Railway. The firm cannot make any claim for quantum of this stated number) per month or as per requirement of MCF. The contractor may have to work in 3-shifts working by deployment of sufficient manpower in case of increase in target / requirement of MCF.

(iv) For LWCBAC Coaches - The Contractor has to deploy adequate man power & supervisors so as

to get LWCBCAC (increased Heating Capacity) coaches within a cycle time of 21 days for SIP submission + 03 days for quality clearance and also to give productivity of around 5 LWCBCAC (increased Heating Capacity) (This number is subject to change as per coach production requirement of Railway. The firm cannot make any claim for quantum of this stated number) per month or as per requirement of MCF. The contractor may have to work in 3-shifts working by deployment of sufficient manpower in case of increase in target / requirement of MCF.

(v) For LWCBCAC (Intermediate Capacity) - The Contractor has to deploy adequate man power & supervisors so as to get LWCBCAC (Intermediate Capacity) coaches within a cycle time of 21 days for SIP submission + 03 days for quality clearance and also to give productivity of around 7-8 LWCBCAC(Intermediate Capacity) coaches (This number is subject to change as per coach production requirement of Railway. The firm cannot make any claim for quantum of this stated number) per month or as per requirement of MCF. The contractor may have to work in 3-shifts working by deployment of sufficient manpower in case of increase in target / requirement of MCF.

53. PERIOD OF COMPLETION:

The work must be completed within 12 Months or earlier from the date as specified in the letter of acceptance.

54. INSPECTION & Quality Control:

Dy. CQM, MCF/RBL or his representatives on his behalf will conduct inspection of the areas after completion of work.

55. PENALTY CLAUSES/LIQUIDITY DAMAGES:

- I. If after several reminder the safety instruction are not adhered to and the contract worker are found without PPEs and dress, penalty for the same shall be applied @ Rs. 100/person/day.
- II. Contractor shall arrange standard tool kit with locker arrangement within one month of issuing of LOA otherwise appropriate penalty as deemed suitable by Railway Administrative would be levied.
- III. Chewing of Pan/Gutka/ any intoxicant is strictly prohibited at work place, ignoring this penalty @ Rs. 500/person shall be applied.
- IV. The Contractor shall ensure removal of unnecessary items/off cuts before handing over to Railways otherwise, if not complied, the Contractor shall be penalized for Rs. 500.00 per incident.
- V. Variable Penalty for non completion of the coach work as per the limit specified: Variable Penalty per coach per days shall be levied upon the contractor if he/she is not able to clear the coach from the quality for his/her scope of work in limit specified in the order of the following:

Delay up to	Penalty per coach per days delayed
5 days	Rs. 2,000.00
6-10 days	Rs. 3,000.00
11 days onwards	Rs. 4,000.00

Note:- (i) Variable Delay Penalty will remain applicable on Schedule-B also.

(ii) If the firms complete any lot of coaches and gets them cleared from quality before said cycle time days of coaches respectively, then those earned days will be adjusted against penalty (if levied) as bonus @ Rs 500.00 per day/coach. The bonus so earned shall only be adjusted against penalties up-to the limit of penalty imposed. In no circumstances shall the bonus earned above be claimed as additional payment (over and above adjustment of the penalty) on the lot of fitment and installation report requested by the contractor. The bonus so earned shall not be adjusted against bills already cleared/paid or in any future bills.

- VI. Food items taken at the work place: All the food to be consumed in canteen. If any Contractor worker found eating in the coaches, Contractor shall be penalized for Rs. 500.00 per incident.
- VII. Contractor staff dumps sweepings, garbage here and there: Contractor has to educate and ensure that all the workers dispose of the scrap arising during the course of work in the nominated bins only. Any body found not cleaning the work area and mixing the scrap in the bins, the Contractor shall be liable to a penalty of Rs. 1000.00 per event.

- VIII. Penalty for rectification work or left over work done by MCF staff:- Penalty shall be levied upon the contractor if Railway Manpower is deployed for rectification work if any done or to complete left over work of the contractor at the cost of MCF staff in addition to a penalty of Rs. 2000/- per coach per day.
- IX. In the QCI of Quality Inspection, only up to 50 defect points is accepted, if more defect points come, then a penalty of Rs 50 per defect point will be imposed on each of the points above 50 defect points and all defect points have to be rectified by the firm at the earliest.
- X. Before offering for quality inspection (QCI) coaches should be cleaned by contractor. If contractor will not comply this point, penalty of Rs.500/- per coach will be imposed.
- XI. **Quality of work and quality of workmanship:** - Contractor has to ensure the good quality of work and workmanship. If poor workmanship observed while routing/ surprise check ,a penalty of Rs.1000 per incidence shall be imposed.
51. **PAYMENT TERMS:**
- a) The Contractor can raise bills for payment on monthly basis or in multiple of months. The payment to the Contractor will be made through NEFT System. The details required for payment are as under:
- 1) Bank' name
 - 2) Type of A/c (Saving Bank/ Current A/c / Cash/ Credit A/c),
 - 3) Ledger Folio No. / GST Invoice No.
 - 4) A/c No. along with proof i.e. blank cancelled cheque.
- b) Contractor should submit a bill in proper format on Monthly basis or in multiple of months, for the completed coach work done to authorized Railway representative of MCF/RBL. The Railway representative will be authorized by Dy. CME/Fur/Co-ordination & Dy. CEE/Production (only for schedule- B) Railway representative will certify/get certification of the work mentioned in the bill & forward the bill to Dy.CME/Fur/Co for payment along with his detailed report. Bill formats & Measurement book is required to be signed by Railway representative (authorized by Dy. CME/Fur/Co. and Dy. CEE/Production (only for schedule- B))& Contractor.
- c) Bill passing authority shall be Dy. CME/Furnishing/Co. and Bill payment authority shall be FA&CAO-/MCF/RBL or his authorized officer.
- d) 25% of the bill amount payable to the Contractor shall be withheld in case of non compliance of EPF & ESI contribution (If applicable) towards the staff and paid only when it furnishes evidence that EPF & ESI obligations have been discharged.
52. **CONSERVANCY CHARGE:** Recovery of conservancy charges shall be made from the bills at following rates or as latest applicable rates:

Recovery to be made from	Avg. no. of laborers/ workmen employed per day.	Conservancy charges per month (Rs.)
Engineering work Contractors of Civil, Electrical, Mechanical and Signal & Telecom Departments.	1 to 5	159
	6 to 10	312
	11 to 25	785
	26 to 50	1143
	51 to 100	1534
	101 and above	As per applicable rates for Slabs.

The rates are subject to revision by Railway Board and recovery shall be made as per revised rates at the time of making the payment.

53. **MAINTENANCE/WARRANTY PERIOD:** If any imperfection is noticed or any defect arises during the warranty-period (03 years) due to improper material used or due to bad workmanship, the Contractor shall be bound to set right the defect/imperfection on free of cost basis in the country where the coaches are running in service.
54. **CONTRACTORS RESPONSIBILITY FOR DISCREPANCIES:**
- (a) The rates quoted by the contractors shall be based on the rough study of the nature and quantum of work covered under this contract.
- (b) The Contractor shall be solely responsible for the correctness of the work according the approved drawing.

- (c) The contractor shall during the process of work, be entirely responsible for the custody of this store of equipments, for the works executed at the site until provisional acceptance certificate is issued to the Contractor.
- (d) The Contractor shall arrange his own arrangement for safety of their tools and machinery.
55. If the Contractor persistently disregards the instructions of the Engineer or disregard persistently provisions of contract his security deposits may be forfeited or contract may be terminated or both actions may be taken.
56. **Condition in regard to distribution of tendered quantity to more than one bidder(Optional)**
(As per CME/CC's letter no. M-200/MCF/Split/C02 dated 11.09.2018).
 Tenderer should fulfill the eligibility criteria/conditions stipulated for the entire value of the Contract. The quantity distribution between L-1 and L-2 tenderers will be done as per extant procedures depending upon the price differential between L-1 and L-2 as given below:-

Price differential between L-1 and L-2	Quantity distribution ratio between L-1 and L-2
Up to 3%	60:40
More than 3% and upto 5%	65:35
More than 5%	At least 65% on the L-1 tenderer. For the quantity to be ordered on the L-2 Tenderer, TC/TAA shall decide.

The price differential between L-1 and L-2 tenderers would mean:

- 1) When no price negotiation has been called for, the original rates and obtained at the time of tender opening.
- 2) When price negotiation has been called for, the reference L-1 rate for assessment of ratio will be the original rate of L-1 tenderer.

Chapter – VII

(A) Schedule-A**SCOPE OF WORK**

1. **Contractor shall complete the work of “Interior Mechanical Furnishings & Fittings in EOG/ LHB AC 2T SS trough Coaches including Retro fitment of Additional water filling arrangement as per scope of work.”.**
 2. Work will be carried out in MCF, Rae Bareli premises at Lalganj, (Uttar Pradesh), as per relevant drawing, working procedure, working instructions etc as mentioned in Annexure-I to III in this tender document.
 3. The drawings and working instructions mentioned in Annexure-I ,II and III in this document are indicative, In case of any update, work shall be done as per latest drawing and working instructions.
 4. The Contractor shall ensure cleaning of coach before handing over to Railways.
 5. The shell shall be offered as per the availability. However, if there is exigency, the Contractor will have to make suitable arrangement for the early completion of the coaches offered to him/her.
 6. The Contractor will have to get the stage quality Clearance before proceeding further to the next stage as under daily basis and produce a record for the same while claiming the bills.
- a) **Flooring stage:**
 - I. After the application of Decoupling rubber & fixing strip and before starting the floor board laying from SSE/JE/Flooring & PVC/Incharge of LWACCW.
 - II. After completion of floor board laying & starting of the PVC from SSE/JE/Flooring & PVC/Incharge of LWACCW.
 - b) **Partition stage:** After the fitment of the partition and starting of the side wall paneling from SSE/JE/Partition/. Incharge of LWACCW
 - c) **Panel Stage:**
 - I. After the completion of the side wall paneling & starting of the ceiling paneling work from SSE/JE/Paneling Incharge of LWACCW.
 - II. Before the starting of the AC loading (RMPU) from SSE/JE/Paneling/ Incharge of LWACCW.
 - d) **Ceiling stage:** After the completion of the ceiling work & before the starting of the seat & berth work from SSE/JE/Window & Ceiling/ Incharge of LWACCW.
 - e) **Moulding:** Before starting of Seat & Berth work, clearance has to be taken from moulding stage from SSE/JE/Moulding Incharge of LWACCW .
 - f) **Lavatory section:** before start of lavatory work clearance has to be taken from window ceiling stage/moulding stage / Incharge of LWACCW.
 - g) **Seat and berth:** before start of seat and berth fitment clearance has to be taken from Partion section/Window ceiling section /Panel section / Incharge of LWACCW.
 - h) **Plumbing Stage:-** Before starting of pluming work, clearance has to be taken from Lav. stage from SSE/JE/Incharge.
 - i) **Lowering Stage:-** before start of lowering work clearance has to be taken from Air brake section and electrical department .
 - j) Co-ordinate with electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance like partition, sidewall paneling and ceiling paneling. however if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done. However the Contractor has to closely liaison with the electrical wing to get all sorts of electrical clearances required for his area of work.

Annexure-I**1. List of Furnishing activities covered under scope of work:**

- I. Fitment of foot step and entrance hand rail, Fixing & Fitment of D-Coupling rubber with fixing strip, UIC Vestibule, Gang Way Bridge mounting, Bottom Plate (Chequered Sheet), Step Rail, Door Stopper, Tail Lamp Bracket, Floor Board fixing and PVC laying in LWACCW , Thermo Welding of

PVC Floor, Bottom Plate (Chequered Sheet) and Chair angle in EOG Type Coaches with FIAT Bogies as per latest applicable drawings.

- II. Fixing & Fitment of Partition pillars and honey comb partition in compartment area as per latest applicable drawings.
- III. Fixing & Fitment of all type of Window Gluing, Window opening & Refixing and Window Rubber fitment as per latest applicable drawings.
- IV. Fixing of knock down various type lavatories , Lavatory Air Exhauster, Lavatory Ceiling, , inside Wash Basin and Drain Pipe cover, Lavatory Bowl Facing-2, Euro Bowl assembly complete and Lavatory Bowl Facing-2 Mounting, Fitment of ceiling ,fitment of all lavatory accessories ,Attachment Wall arrangement, furnishing plate in coaches.
- V. Fixing & Fitment of End Wall Panel and Moulding NPPE/PPE end, Corner Panels, in coaches.
- VI. Fixing & Fitment of Seat and Berths arrangement, Ladders, Compartment Mirror, Foldable Bottle Holder, Swivel Coat Hooks and Snack table in coaches.
- VII. Fitment of Linen Rooms & manufacturing of Almirah etc. along with Holding Extrusions as per latest applicable drawings.
- VIII. Fixing & Fitment of Side Wall Panels, Extrusions for Curtains, Roof Mounted AC unit, Return Air Grills, Air Circulation/Supply installations its related work as per latest applicable drawings.
- IX. Fixing the Air Inlet Duct, Aluminum Extrusions with Roof Members and Fixing of Passenger Room/compartment Ceiling including Diffuser assemblies with Extrusions & Gangway/Doorway/Vestibule area (Non AC Area) Ceiling along with Members as per latest applicable drawings.
- X. Fixing & Fitment of Curtains, Seats & Berths with all accessories & mountings for LWACCW EOG Type coaches with FIAT Bogies as per latest applicable drawings.
- XI. Fixing & Fitment of Entrance Doors, Compartment Doors, Vestibule Doors & its related paneling & moulding work for LWACCW EOG Type coaches with fiat bogies as per latest applicable drawings.
- XII. Lowering of coach -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines.
- XIII. Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , bibcock fitment, additional water filling arrangement , LIP, LOP, LIC, LOC, water filling, additional water filling arrangement and testing etc. of LWACCW coaches as per latest drawing.
- XIV. Fitment of RFID as per latest applicable drawings.

APPLICABLE REFERENCE DRAWINGS

	REFERENCE DRAWING	DESCRIPTION
1	LW 90069	GENERAL INSTALLATION
2.	LW 90056	LAYOUT OF LHB/EOG AC TWO TIER COACH WITHOUT PANTRY
3.	LW 10014	LAYOUT OF PARTITION FRAME
4.	LW 41107 and LW41108	COACH FLOOR COMPLETE FOR LHB AC 2T COACHES
5.	LW 41109	D COUPLING ELEMENT ARRANGEMENT IN AC2 T COACHES
6.	LA 41115	FLOOR COVERING ARRANGEMENT
7.	LW44788	INTERIOR PANELLING ARRANGEMENT OF 2T
8.	LW42107	LAY OUT OF SIDE WALL PANELLING OF 2T COACHES
9.	2 10113.0.21.220.124	DOOR GUIDANCE COVERING COMPLETE
10.	LW44770	PASSENGER ROOM CEILING ARRANGEMENT FOR AC2T
11.	1 10113.0.21.530.001/	ATTACHMENT WALL MOUNTING
12.	LW56004	LAY OUT OF DOORS ARRANGEMENT
13.	MI 007545	ENTRANCE DOOR ARRANGEMENT
14.	LW56558	DOUBLE ACTING COMPARTMENT DOOR
15.	LW 54001	LAYOUT OF WINDOW ARRANGEMENT FOR AC2T

16.	LW 54130	EMERGENCY WINDOW FOR LHB AC SLEEPER COACHES
17.	LW 54147	FIXED WINDOW FOR LHB AC SLEEPER COACHES
18.	LW 54188	LAVATORY WINDOW WITH FIXED LOUVERS
19.	LW 62124	LOCATION OF INTERIOR FITTINGS
20.	CC64110	SWIVEL COAT HOOK
21.	LW64136	MIRROR COMPLETE
22.	1 10113.0.24.100.001	INTER CAR GANGWAY MOUNTING.
23.	1 10113.0.24.120.001	GANGWAY BRIDGE MOUNTING.
24.	LW64218	SNACK TABLE WITH BOTTLE HOLDER
25.	LW64185/LW64269	LINEN ROOM ARRANGEMENT FOR AC 2T COACHES
26.	LW61008	SEATS AND BERTHS ARRANGEMENT.
27.	LW44013	AC-SYSTEM ARRANGEMENT FOR AC 2T COACHES.
28.	1 10113.0.29.200.001	AIR CONDITIONING PLANT MOUNTING
29.	LW44385	AIR INLET DUCT COMPLETE MOUNTING FOR AC 2T
30.	LE63001	SANITARY FACILITIES COMPLETE
31.	LW 64237	EXHAUST PIPE MOUNTING
32.	LE63154	ATTACHMENT WALL
33.	1 10113.0.30.000.015	SOAP DISPENSER
34.	ICF/SK-6-3-481	ARRANGEMENT FOR MUG
35.	1 10113.0.30.000.003	LAVATORY MODULE ORIENT. MOUNTING.
36.	1 10113.0.30.000.013	LAVATORY MODULE ORIENT-1 COMPLETE.
37.	2 10113.0.30.095.172	OUT FLOW MOUNTING /DRAIN PIPE
38.	LW36150	ROOF WATER TANK MOUNTING 30L
39.	LE63142	MOUNTING OF WATER TANK ON UNDER FRAME
40.	LE63227	PIPE ARRANGEMENT FOR OVERHEAD AUX WATER TANK
41.	LW44216	EXHAUST AIR ARRANGEMENT FOR LAV.
42.	LW41106	STEP COMPLETE COMPLETE
43.	1 10113.0.75.100.001	FIRE EXTINGUISHER ARRANGEMENT MOUNTING
44.	LW64011	CURTAIN ARRANGEMENT
45.	LW26125/MI004202	ENTRANCE HAND RAIL
46.	LE24103	HANDLE
47.	LW41112	FLOOR END PROFILE
48.	LW64169	LOCATION OF HAMMER BOX
49.	MI004112	DOOR STOPPER.
50.	2 10113.0.21.200.012	BOTTOM PLATE FOR ENTRANCE.
51.	2 10113.0.21.200.011	BOTTOM PLATE FOR ENTRANCE.
52.	LW26125/CC26248	TAIL LAMP BRACKET.
53.	LW64012	LAY OUT OF EXTRUSIONS.
54.	LW44452	NON AC AREA CEILING
55.	LW44386	CIRCULATING AIR DUCT NPPE
56.	LW44387	CIRCULATING AIR DUCT PPE
57.	2 10113.0.12.095.001	PILLAR COMPLETE.
58.	1 10113.0.12.220.001	WASTE BIN ARRANGEMENT AND MOUNTING.
59.	1 10113.0.12.095.004	WASTE BIN COMPLETE.
60.	2 10113.0.12.095.012	COVER COMPLETE.
61.	MI004544	BASIN SHELVES 2, MOUNTING.
62.	MI004545	BASIN SHELVES 2, MOUNTING.
63.	LA62102	LUGGAGE RACK
64.	LW62124	LOCATION OF INTERIOR FITTINGS

65.	LE43001	MOUNTING OF FRP DOORFRAME PORTAL
66.	1 10113.0.21.320.001	END WALL PANEL NPPE/PPE COMPLETE MOUNTING
67.	LW56424	LAV. DOOR WITH FRAME LEFT, MOUNT.
68.	LW56475	LAV. DOOR WITH FRAME RIGHT, MOUNT.
69.	LE64007	WINDOW CURTAINF ARRANGEMENT
70.	LW64117	CURTAIN ARRGT. OF LONGITUDINAL BERTH COMPARTMENT
71.	LW64112	CURTAIN ARRGT. OF TRANSVERSE BERTH COMPARTMENT
72.	1 10113.0.12.220.001	WASTE BIN ARRANGEMENT AND MOUNTING

Note:

- i. Modified drawings or drawing of latest alteration shall be applicable.
- ii. Apart from above work, contractor may be given any other minor allied/subsidiary modification/alteration activity as and when required depending upon site condition.

Annexure-II**A. WORKING PROCEDURES**

S N	ACTIVITY	WORKING PROCEDURE
1.	FIXING & FITMENT OF TAIL LAMP BRACKET IN LWACCW COACHES	A. Set & fix the tail lamp bracket on end wall with the help of screws & washers as per respective drawing.
2.	FIXING & FITMENT OF FOOT STEP IN LWACCW COACHES	A. Set & fix the Footstep arrangement on all doors with the help of adequate hardware as per respective drawing.
3.	FIXING & FITMENT OF ENTRANCE HAND RAIL IN LWACCW COACHES	A. Fix the entrance hand rail for all doors with door corners with the help of adequate hardware as per respective drawing. SIKAFLEX 221 or 243 to be provided between door corner and entrance hand rail as per respective drawings.
4.	FIXING & FITMENT OF GANG WAY BRIDGE MOUNTING IN LWACCW COACHES	A. Clean the holes on the end wall and Re-tap all the holes.
		B. Set & fix clamping piece and plate spring on head stock with the help of adequate hardware as per respective drawing.
		C. Set & fix the roller with Gangway Bridge with the help of adequate hardware as per respective drawing.
		D. Set the gangway bridge in sliding block as per respective drawing.
		E. Set & fix the support block (LH & RH) with sliding block with the help of adequate hardware as per respective drawing.
5.	FIXING & FITMENT OF INTER CAR GANG WAY MOUNTING/UIC VESTIBULE IN LWACCW COACHES	F. Check the functioning of Gangway Bridge after application of proper lubrication.
		A. Clean the holes on the end wall and Re-tap all the holes.
		B. Fix the studs on all re-tapped holes and ensure the tightness of all studs.
		C. Paste the rubber packing on locking plates of lateral side flange as well as upper flange assemblies with the help of general purpose adhesive.
		D. While loading of lateral side flange & upper flange assemblies care should be taken to ensure that the Special screw should match with the studs provided in the End walls, where UIC vestibule is to be fixed.

		E. Ensure that proper matching of concave position of the lateral side flange & convex position of the upper flange.
		F. Fix the lateral side flange with the help of adequate hardware from the bottom side & than top side of the flange.
		G. Set & fix the upper flange with the help of adequate hardware from both ends as per respective drawing.
6.	FIXING OF DECOUPLING ARRANGEMENT IN LWACCW COACHES	A. Clean the channel before fixing/inserting the absorption strip.
		B. Insert/Fix the absorption channel pre-welded on the trough floor as per respective drawing.
		C. Insert the stainless steel strip into the absorption strip as per respective drawing.
		D. Check the level with the help of straight bar.
		E. Rubber packing provided on the top of absorption strip with the help of glue whereas required for proper leveling.
7.	<p>FIXING OF FLOOR BOARD IN LWACCW COACHES</p> <p>NOTE:</p> <p>1. ALL PACKING MAY BE USED FROM OFF CUTS.</p> <p>2. NECESSARY CUT-A-WAYS IN COMPREG BOARDS & PVC SHEET TO BE MADE TO SUIT AT SITE</p> <p>3. NO BOARD HAVING A WARPING OF MORE THAN 4 MM ON ITS WIDTH SHOULD BE USED.</p> <p>4. AFTER FURNISHING, THE FLOOR MAY BE CHECKED TO ENSURE THAT THERE ARE NO UNEVEN JOINTS OR SAGGING. IT MAY BE CHECKED WITH THE HELP OF STRAIGHT EDGE. JOINTS HAVING MORE THAN 02 MM STEP OR SAGGING OF MORE THAN 2.5 MM BETWEEN THE ADJACENT CROSS</p>	A. Clean the entire trough floor area for unwanted/foreign material before loading the required floor board inside the respective coach.
		B. Load the required Makore/Compreg board inside the respective coach as per respective drawing.
		C. Lay floor board inside the coach in passenger compartment,
		D. Doorway and gangway area with proper matching with each other from one end as per respective drawing.
		E. Provide suitable packing below lav. module bottom collar in gangway and door way side as per respective drawing.
		F. Half lap joints of floor board should be properly matching with each other and then fix the floor board on D-coupling with the help of screws as per respective drawing.
		G. Set & fix the skirting with side wall/lav. Module on floor board with the help of adequate hardware as per respective drawing.
		H. Set & paste the FRP profile above PVC on skirting in lav. With approved brand of glue as per respective drawing.
		I. Apply putty on the floor board joints and grind with the help of grinder.
		J. Seal all the joints in doorway, gangway & side wall with the help of sealing material as per respective drawing.
		K. The head of screw should be leveled by applying epoxy putty. This will ensure smooth level for perfect laying of PVC flooring sheet & also avoid water seepage through screw holes or joints.

	<p>BEARERS SHOULD NOT BE PERMITTED.</p> <p>5. COMPREG BOARDS SHOULD BE PLAIN ON BOTH SIDES.</p> <p>6. ALL GAPS TO BE SEALED WITH SEALANT – SIKAFLEX – 221.</p>	
8.	FIXING OF FLOOR END PROFILE IN LWACCW COACHES	A. Set & fix shim, Al. extrusion and floor profile with floor board & body side wall pillar with the help of adequate hardware as per respective drawing.
9.	<p>PVC LAYING & WELDING IN LWACCW COACHES</p> <p>Note:- This has to be done after the activity of putty application and grinding. Appropriate time has to be given for putty drying and thereafter to be grinded for better adhesion. Proper cleaning of the floor to be ensured before applying PVC.</p>	<p>A. Clean the Plywood floor surface for any dust and foreign particles so as to achieve a good adhesion between PVC and Plywood.</p> <p>B. Spread open the PVC roll and spread a thin and even layer of adhesive with the help of notched trowel (secretor) on the plywood floor.</p> <p>C. Also apply adhesive on the rough reverse side of PVC roll/sheet thinly and evenly as above.</p> <p>D. Allow some time for solvent evaporation to prevent solvent vapors being entrapped. As soon as the adhesive becomes touch dry both on the floor and the PVC flooring, press down the sheet in position gently and gradually from one end taking care to prevent air from being entrapped. Follow same procedure for the other half of the same roll.</p> <p>E. After adhesive of the first roll is over, apply pressure on the flooring with a steel roller of 25 kg (approx.) so as to obtain perfect adhesion between PVC flooring and plywood floor and to eliminate air being entrapped.</p> <p>F. The second roll/sheet shall be laid in position, overlapping the first roll/sheet by about 5 to 10mm while spreading the roll.</p> <p>G. "Trim in" the length by placing a straight edge along the centre of over lapped edges and with a sharp knife cut through both thickness of PVC flooring at the same time. Pull out the overlapped edges of top and bottom of PVC flooring and press the same to the plywood floor to obtain perfect butt joint.</p> <p>H. Proper thermo-welding of PVC flooring is almost necessary for obtaining satisfactory bonding results. Thermo-welding of PVC flooring provides impervious continuous floor surface.</p>
10.	FIXING OF BOTTOM PLATE (CHEQUERED SHEET) IN LWACCW COACHES	<p>A. Mark, drill & counter sunk the Aluminum chequered sheet /Bottom plate for fixing purpose over PVC sheet/Floor boards as per drawing</p> <p>B. Clean the surface of PVC, set & fix the aluminum chequered sheet over PVC sheet/Floor board with the help of adequate hardware as per drawing</p> <p>C. Apply the adhesive on the periphery of the chequered sheet so that the dust particles & water could not be entered in between the PVC sheet & chequered sheet.</p>
11.	FIXING OF DOOR	A. Mark, Drill, Set & fix the door stoppers for body side doors

	STOPPER IN LWACCW COACHES	on doorway area with the help of adequate hardware as per respective Drawing.
12.	FIXING OF STEP RAIL IN LWACCW COACHES	<p>A. Mark, Drill & tap the door way members and chequered sheet for fixing of step rails with the help of adequate hardware as per respective drawing.</p> <p>B. Set & fix the step rail on above said position with the help of adequate hardware as per respective drawing.</p>
13.	LAYING OF FALSE PVC/TETRON SHEET. IN LWACCW COACHES	<p>A. Cover the floor area with false PVC/Tetron sheet with the help of cobbler nails to save the laid PVC from damage, unwanted marks & dust which shall be removed at time of Gate out of coaches from MCF/RBL</p>
14.	FIXING OF PARTITION FRAMES IN COMPARTMENT AREA (TRANSVERSE/LONGI TUDINAL SIDE) IN LWACCW COACHES	<p>A. Load the partitions on the coach carefully for fitment.</p> <p>B. Set & align the honeycomb P/FRAMES with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing.</p> <p>C. Set the honeycomb P/FRAMES on the above fitted al. extrusions and fix with side wall & roof member with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level.</p> <p>D. Set & fix the al. extrusions on the floor to the other side of partition frames with the help of adequate hardware as per respective drawing.</p> <p>E. In case of AC3T coaches the fixing of partition frames with roof members is to be done through Angle extrusion with the help of adequate hardware as per respective drawing.</p> <p>F. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position.</p> <p>G. Drill and tap the holes on above marked position as per respective drawings.</p> <p>H. Set the pillar assemblies with P/FRAMES and fix on the floor & roof members with the help of adequate hardware as per respective drawing.</p> <p>I. In case of AC3T coaches, first fix the channel extrusions on the pillar assemblies as per drawing, then Set the pillar assemblies with P/FRAMES and fix on the floor & roof members with the help of adequate hardware as per respective drawing. Fix the partition frames with the channel extrusions with the help of adequate hardware as per respective drawings.</p>
15.	FOR FIXING THE PARTITION FRAMES IN OTHER THAN COMPARTMENT AREA IN LWACCW COACHES	<p>A. Load the partitions in the coach for fitment.</p> <p>B. Set & align the honeycomb P/FRAMES with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing.</p> <p>C. Set the honeycomb P/FRAMES on the above fitted al. extrusions and fix with side wall/roof member/pillar assembly (already fitted) with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level.</p> <p>D. Set & fix the al. extrusions on the floor to the other side of partition frames with the help of adequate hardware as per respective drawing.</p>

		E. In case of AC3T coaches the fixing of partition frames with roof members is to be done through Angle extrusion with the help of adequate hardware as per respective drawing.
		F. Mark and fix the channel extrusions on the pillar assemblies as per respective drawings.
		G. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position.
		H. Drill and tap the holes on above marked position as per respective drawings.
		I. Set the pillar assemblies with P/Frames and fix on the floor & roof members with the help of adequate hardware as per respective drawing.
		J. Fix the partition frames with the channel extrusions with the help of adequate hardware as per respective drawings.
16.	FOR FITMENT OF AIR INLET DUCT COMPLETE WITH ROOF MEMBERS IN LWACCW COACHES	A. Fix the insulation material on the outer surface of ducts as per respective drawing.
		B. Load the ducts in the coach and apply the sealing material on the sealing surfaces as per drawings.
		C. Insert, align & fix the air ducts to each other and with roof members in sequence (starting from one end to other end) with the help of adequate hardware as per respective drawings.
		D. Set and fix the connection part, compensation part and connector at the both ends with the help of adequate hardware as per respective drawings.
		E. Paste the Insulation at the bottom side of connection box as per respective drawings.
		F. Set and fix the perforated metal sheets on the ducts with the help of adequate hardware as per respective drawings.
17.	FOR FITMENT OF CIRCULAR AIR SYSTEM/DUCT COMPLETE NPPE & PPE WITH ROOF MEMBERS IN LWACCW COACHES	A. Set and align the End connections/Return air ducts/Circulating air box/connecting ducts at the both ends of coach with the help of sealing material as per respective drawings.
		B. Fix the End connections/Return air ducts/Circulating air box/connecting ducts with the help of clamp/adequate hardware as per respective drawings.
		C. Set and fix the Grills on the return air ducts with the help of sealing/insulation & adequate hardware as per respective drawings.
		D. Mark, set & fix/embedded/laminated the Bracket for hygrostat mounting & Brackets for temperature sensor mounting with the help of adequate adhesive/hardware as per respective drawings.
18.	FIXING THE ALUMINUM EXTRUSIONS WITH ROOF MEMBERS AND FIXING OF CEILING ARRANGEMENT/ DIFFUSER ASSEMBLIES WITH EXTRUSIONS & SIDE WALL MEMBERS IN COMPARTMENT &	A. First set and fix the Aluminum Extrusions with roof members with the help of brackets & appropriate hardware as per respective drawings. The center ceiling profiles, if applicable (as in IInd Class AC chair car) are to be fixed with roof members using the mounting caliber with the help of shim, thread plate, bracket & appropriate hardware as per respective drawings.
		B. Set and fix the hammer head bolts in the extrusions with the help of appropriate hardware as per respective drawings.
		C. Set and fix the sealing strips/ sealing angles/ mounting angles/ back moldings with partition frames/ side wall members/ roof members with the help of appropriate hardware/ supporting

	GANGWAY/ DOORWAY/ VESTIBULE AREA IN LWACCW COACHES	brackets/ aluminum extrusions/ spacer as per respective drawings. D. Fix the sealing foam/ self adhesive insulation where as required on the sealing strips/ angles as per respective drawings. E. Set, align and fix the ceiling assemblies/ diffuser assemblies with extrusions & side wall members with the help of angles/ brackets/ shims & appropriate hardware as per respective drawings. F. Set, align and fix the ceiling plates in position with the help of angles/ brackets/ shims & appropriate hardware in gangway/ doorway/ vestibule area as per respective drawings.
19.	FOR GLUING & FIXING OF THE FIXED WINDOWS, EMERGENCY WINDOWS AND LAVATORY/ PIVOT WINDOW WITH SIDE WALL IN LWACCW COACHES	A. Load the windows in the coach and remove the packing. B. Clean the sealing area of windows with cleaner, flashing off and cover by using adhesive tape as per respective drawings. C. Clean the windows cut outs with cleaner, flashing off and cover by using adhesive tape as per respective drawings. D. Apply the primer on window elements and flashing off as per respective drawing. E. Apply the remover on window cut out and flashing off as per respective drawing. F. Marking and glue the plates in equal distance to the outer surface of window frame as per respective drawings. G. Sealing the opening between horizontal member and window column with Sika flex as per respective drawing before fitment of windows. H. Apply the Sika flex on the window element, insert, align & fix the windows in the sidewall cutouts with the help of clamping fixture as per respective drawings. I. Remove the Sika flex from the outer surface of windows; polish the surface with the help of Sika polish for smoothness as per respective drawings. J. Remove the adhesive tapes from the outer surface and clean the surface with cleaner as per drawings. K. Remove the clamping fixture after proper fixing & drying of Sika flex of windows with the side wall after 24 hours (approx.).
20.	FOR FIXING OF SIDE WALL PANELS ON NPPE & PPE AREA IN LWACCW COACHES	A. Paste the RKE plates on the side wall members with the help of suitable adhesive as per respective drawings. B. Remove the SIKa from the area where the panels are to be mounted with the help Sika remover, clean the surface with the help of Sika cleaner and after cleaning, primer the surface with the help of Sika primer as per respective drawings. C. Paste the shims on the side wall members with the help of suitable adhesive and apply the sealing beads with Sika flex as per respective drawings. D. Positioning, aligning & drilling the holes (with the help of drilling machine) of HPL side wall panels and mount with side wall members with the help of appropriate hardware as per respective drawings. E. Fill the gaps at the joints with sealing material as per respective drawings.
21.	FOR FIXING OF SIDE WALL PANELS IN LWACCW COACHES	A. Mark the locations on side wall members for mounting of brackets/compreg plywood/MDF packing. Drill the holes on above marked positions and tap as per respective drawings.

		B. Fix the all brackets for switch board mounting/(brackets/ compreg plywood/MDF packing) for panel mounting/brackets for luggage rack & mirror mounting/ with side wall members with the help of appropriate hardware as per respective drawings.
		C. Mark and cut the sealing in required dimension as per respective drawing.
		D. Clean the surface of side wall area where the sealing is to be glued.
		E. Paste the ceiling on side wall/side wall panels for leveling purpose as per respective drawings.
		F. Marking, drilling and Tapping in side wall member for mounting of curtain extrusion as per respective drawings.
		G. Set and fix the curtain extrusion with side wall member with the help of mouldings and appropriate hardware as per respective drawings.
		H. Marking, Drilling and Tapping in side wall member, brackets and panels for fixing of 3-M pressure lock as per respective drawings.
		I. Set and fix the 3-M pressure lock on above said position with the help of moulding/shim and appropriate hardware as per respective drawings.
		J. Set & align the side wall panels at the location, press and fix with the help of 3-M pressure lock (already provided with side wall members & panels) as per respective drawings.
		K. Drill the holes in window area with the help of drilling machine & fix the panels with side wall member with the help of appropriate hardware as per respective drawings.
22.	FOR MOUNTING OF AC SYSTEM ARRANGEMENT RMPU LODING AND FIXING IN LWACCW COACHES	A. Set and fix the fresh air bellow, return air duct bellow, circulation air duct bellow with shell member with the help of appropriate hardware as per respective drawings
		B. Set and fix the brackets with stud (already welded with roof element) with the help of appropriate hardware as per respective drawings.
		C. Set and fix the mounting pad on all brackets with the help of appropriate hardware as per respective drawings.
		D. After proper fixing of RMPU, Lift the RMPU unit with the help of mobile Crane, align, set & fix on the mounting pad with the help of appropriate hardware as per respective drawings. .
		E. Set and fix another end of all bellow with AC unit with the help of appropriate hardware as per respective drawings. .
		F. Provide wooden packing between body shell and AC unit if necessary and applying Sika flex
23.	FIXING OF DOOR FRAME PORTAL IN LWACCW COACHES	A. Positioning the C-type rail with shell member at door area, marking, drilling the holes and fix with the help of adequate hardware as per respective drawings.
		B. Insert the hammer head bolts in the C-rails and fix the brackets with bolts with the help of adequate hardware as per respective drawings.
		C. Set the door frame panels at the location, drilling, tapping and fix with shell member with the help of adequate hardware as per respective drawings.

24.	FOR FIXING OF VISIBLE DOORS /END WALL DOOR FOR LWACCW COACHES	A. Load the end wall doors in the coach carefully.
		B. Drill the holes in shell member for fixing of end wall door with the help of drilling template and tapping the holes as per respective drawings.
		C. Marking, drilling, tapping the holes in floor and fix the guide rail enclosure, guide rail side and guide rail middle with the help of adequate hardware as per respective drawings.
		D. Set, align and mount the end wall door at location with the help of adequate hardware as per respective drawings.
		E. Check the proper functioning of end wall door as per instruction given in the respective drawings.
25.	FOR FIXING OF ENTRANCE DOOR IN FOR LWACCW COACHES	A. Load the entrance doors in the coach carefully.
		B. Mark & drill the holes on shell member for fixing of door accessories with the help of drilling caliber & threading as per respective drawings.
		C. Set & fix the sealing, gasket, gasket fixing plate, upper locking, lower locking, and brackets on above marked position with the help of adequate hardware as per respective drawings.
		D. Mount the door on it hinge/pivot, aligning & make it lockable with the help of adequate hardware as per respective drawings.
		E. Set, align and fix the step complete on floor with the help of adequate hardware as per respective drawings.
		F. Drill the holes on step complete with the help of drilling template for fixing of pivoted arm complete as per respective drawings.
		G. Set and fix the pivoted arm complete with the help of adequate hardware as per respective drawings.
26.	FIXING OF SWIVEL COAT HOOKS FOR LWACCW COACHES	H. Check the proper functioning of door.
		A. Mark and drill the holes in the partition frame/side wall panel for fixing of swivel coat hooks as per respective drawings.
27.	FOR FIXING OF ALLUMINIUM EXTRUSION IN LWACCW COACHES	B. Set and fix the swivel coat hook on above marked position with the help of adequate hardware as per respective drawings.
		A. Mark and drill the hole in shell member passing through floor end profile/floor for fixing of aluminum extrusions as per respective drawings.
28.	FOR MAKING THE LINEN ROOM ARRANGEMENT IN LWACCW COACHES	B. Set and fix the aluminum extrusions at above drilled position with the help of adequate hardware as per respective drawings.
		A. Load the assemblies of plywood & LP sheet in the coach carefully.
		B. Place the plywood boards on floor in linen room area and fix with floor/partitions with the help of al. extrusions/channel moulding/angle moulding and adequate hardware as per respective drawings.
		C. Set, align and fix the other horizontal & vertical plywood boards to each other/partitions with the help of al. extrusions/channel moulding/angle moulding/piano hinges and adequate hardware as per respective drawings.
		D. Mark, set and fix the tower bolt/industrial lock with the help of adequate hardware as per respective drawings.
		E. Necessary cuts in plywood to be provided at suit at site if required.

29.	FOR FIXING OF COMPARTMENT DOORS AND SAFETY WALLS IN LWACCW COACHES	A. Set and align the mounting frame with partition pillars and mark, drill and fix with the help of adequate hardware as per respective drawings.
		B. Mark the location of holes on above mounting frame and partition pillars for fixing of channel mouldings as per respective drawings.
		C. Drilling & tapping the holes on above marked position and fix the channel mouldings with the help of adequate hardware as per respective drawings.
		D. Set and align the door at location and mark the position of holes on frame for fixing of door hinges as per respective drawings.
		E. Drilling and tapping the holes on above marked position and fix the door with frame with the help of adequate hardware as per respective drawings.
		F. Set, align and fix the safety walls with frame/partition pillars with the help of adequate hardware as per respective drawing. (The channel moulding on safety walls/compreg panel is to be fixed before assembled at the location if applicable.)
		G. Set, align and fix the arm of door closer with frame and rubber buffer with safety walls (if applicable) with the help of adequate hardware as per respective drawings.
		H. Check the proper functioning of door.
30.	FOR MAKING THE LINEN ROOM ARRANGEMENT IN LWACCW COACHES	A. Load the assemblies of makore board & HPL sheet in the coach carefully.
		B. Mark and drill the hole in side wall member for fixing of stopper and wooden packing as per respective drawings.
		C. Set, align and fix the stopper and wooden packing at above drilled position with the help of adequate hardware as per respective drawings.
		D. Set and fix the side panel with stopper and wooden packing with the help of adequate hardware as per respective drawings.
		E. Set and fix the angle moulding on side panel/back panel with the help of adequate hardware as per respective drawings.
		F. Set and fix the assemblies of makore board & HPL sheet with angle moulding and z-member with the help of adequate hardware as per respective drawings.
		G. Set, align and fix the door flap with guide rail & channel (only upper side) on upper and lower assemblies of makore board & HPL sheet with the help of adequate hardware as per respective drawings.
		H. Set and fix the hasp & staple and tower bolt on door flap with the help of adequate hardware as per respective drawings.
31.	FOR OPPOSITE SIDE LINEN ROOM	A. Load the panels in the coach carefully.
		B. Place the panels on floor in linen room area and fix with floor/partitions with the help of channel moulding/angle moulding and adequate hardware as per respective drawings.
		C. Set, align and fix the other horizontal & vertical panels to each other/partitions with the help of channel moulding/angle moulding/piano hinges and adequate hardware as per respective drawings.
		D. Mark, set and fix the handle and industrial lock on door

		panel with the help of adequate hardware as per respective drawings.
		E. Necessary cuts in panels to be provided at suit at site if required.
32.	FOR FIXING OF LINEN ROOM AND DOOR FOR LINEN ROOM IN LWACCW COACHES	A. Mark, drill, set & fix the almirah at location with the help of adequate hardware as per respective drawings.
33.	FIXING OF KNOCK DOWN LAVATORY AND FITMENT OF ALL THEIR ACCESSORIES.	A. Set & fix the locators with the bottom of lavatory module trough for easy locating of fixing hole.
		B. Set & mark the hole position on lavatory area inside the coach with the help of matching template no.93.10.72.19873 & 74 in case of Indian style and western style lavatory module respectively as per respective drawings.
		C. Remove the template and drill the hole of required size with the help of suitable drilling machine & drill for fixing the lavatory Modules in the base plate as per respective drawing.
		D. Set & fix the lavatory Module on the base with the help of required hardware as per respective drawings..
		E. Load the all sidewalls of lavatory Modules on the coach for fixing with trough.
		F. Set & fix the all required brackets with sidewall & end wall for fixing of module sidewall with the help of required hardware as per respective drawings.
		G. Set & fix the Module sidewall with trough, sidewall & end wall as per respective drawings.
		H. Set & fix the roof panels and attachment walls after completion of plumbing & electrical related work with the help of required hardware as per respective drawings.
		I. Set & fix the lavatory Door with FRP lavatory Module with the help of required hardware as per respective drawings.
		J. Set & fix the lavatory Door with FRP lavatory Module with the help of required hardware as per respective drawings.
		K. Set & adjust the lavatory Door for proper functioning.
34.	FOR FIXING OF ATTACHMENT WALL ARRANGEMENT & LOCK IN LWACCW COACHES	A. Load the attachment wall in the coach for fitment.
		B. Fix the hinge bracket with one end of attachment wall with the help of adequate hardware as per drawings.
		C. Fix the industrial lock with another end of attachment wall and on lavatory module at proper place with the help of adequate hardware as per drawings.
		D. Fix the attachment wall with side wall member with hinge bracket with the help of adequate hardware as per drawings.
		E. Close the attachment wall with industrial lock at the second end.
35.	FOR FIXING OF MIRROR IN LAVATORY IN LWACCW COACHES	A. Fix the mirror cushion packing in mirror holder as per drawing.
		B. Fix the mirror in mirror holder.
		C. Fix the mirror with mirror holder with drilling & tapping during mounting as required.
		D. Cut the required length of VHB tape with the help of suitable knife for mirror fixing as per respective drawing.

		<p>E. Clean the mirror surface where VHB tape to be pasted with the help of suitable solvent.</p> <p>F. Paste the VHB tape on the cleaned surface of the mirror.</p> <p>G. Fix the mirror LH mounting with the help of 3M VHB TAP 4956, as per respective drawing.</p>
36.	LORO FITTING & OUTFLOW MOUNTING & ADDITIONAL HOLE LORO	
37.	INSTALLATION OF EXHUST SYSTEM IN LAVS	<p>A. shall be done as per applicable drawings ensuring job quality, fitment quality & Coach Aesthetics as par standard.</p>
38.	ALL LAVATORY CEILING, ADDITIONAL WALL & ATTACHMENT WALL OPENING & REFITTING	
39.	FOR FIXING OF LAVATORY CEILING IN LWACCW COACHES	
40.	FOR FIXING OF NAME PLATE (BUILDER PLATE) IN LWACCW COACHES	A. Load the lavatory ceiling parts in the coach for fitment.
		B. Fix the all parts of lavatory ceiling in the lavatory with lavatory ceiling frame with the help of adequate hardware as per the appropriate drawings.
		C. Set & fix the name plate (builder plate) on sole bar above foot step with the help of adequate hardware as per respective drawings.
41.	FOR FIXING OF LUGGAGE RACK IN LWACCW COACHES	A. Mark the location for holes in side wall members as per respective drawings.
		B. Drilling the holes at above marked position and tapping as per respective drawings.
		C. Set, align & fix the luggage racks at above location with the help of adequate hardware as per respective drawings.
42.	FOR FIXING OF MIRROR IN LWACCW COACHES	A. Mark and drill the holes in side wall as per respective drawing for fixing of mirrors.
		B. Set & fix the one end of hinge of mirror assembly at above drilled position with the help of adequate hardware as per respective drawings.
43.	FOR FIXING OF BOTTLE HOLDER IN LWACCW COACHES	A. Mark and drill the holes in partition frame/partition pillar/side wall for fixing of bottle holder as per respective drawings.
		B. Set & fix the bottle holder at above drilled position with the help of adequate hardware as per respective drawings.
44.	FOR FIXING OF SNACK TABLE IN LWACCW COACHES	A. Marking, drilling and tapping (if required as per drawing) the holes in side wall for fixing of snack table/folding table as per respective drawings.
		B. Set and fix the snack table at above said position with the help of adequate hardware as per respective drawings.
45.	FOR FIXING OF	A. Mark and drill the hole in partition frame and fix the folding

	FOLDING SEAT IN LWACCW COACHES	seat/attendant seat at location with the help of adequate hardware as per respective drawings.
46.	FOR FIXING OF SEAT & BERTH ARRANGEMENT IN LWACCW COACHES	A. Load the components of seats arrangement in the coach carefully.
		B. Marking, drilling and tapping the holes in side wall members for fixing of chair angle/support for back rest as per respective drawings.
		C. Set and fix the chair angles/ support for back rest with side wall members with the help of adequate hardware as per respective drawings.
		D. Marking, drilling and tapping the holes in floor for fixing of chair angle (except longitudinal Side in AC-2T (SG) with ICF bogie) as per respective drawings.
		E. Set and fix the chair angles with floor and partition pillar (pre drilled & taped hole) with the help of adequate hardware as per respective drawings.
		F. Mark, drill and fix the arm rest complete LH & RH and bearing brackets (side wall side) on the chair angles with the help of adequate hardware as per respective drawings.
		G. Set & fix the seat complete (lower) with chair angles with the help of adequate hardware as per respective drawings.
		H. Set the back rest at location with bearing bracket (side wall side), insert the other bearing bracket in back rest and fix the bearing bracket with chair angle with the help of adequate hardware as per respective drawings.
		I. Marking, drilling and tapping the hole in side wall member for fixing of mounting angle (for upper berth) as per respective drawings.
		J. Set and fix the mounting angle with side wall and mounting bracket (longitudinal side) with side wall and partition pillar with the help of adequate hardware as per respective drawings.
		K. Set & fix the upper berth (longitudinal and transverse Side) with mounting angle/mounting bracket with the help of adequate hardware as per respective drawings.
		L. Mark, drill and tape the hole in upper berth for fixing of safety rail as per respective drawings.
		M. Set and fix the safety rail on upper berth with the help of adequate hardware as per respective drawings.
		N. Mark and drill the hole in longitudinal side back rest for fixing of tower bolt assembly as per respective drawings.
		O. Set, align and fix the tower bolt assembly with longitudinal side back rest with the help of adequate hardware as per respective drawing.
47.	FOR FIXING ARRANGEMENT OF CONDUCTOR'S BERTH IN LWACCW COACHES	A. Mark and drill the holes on linen room partition for fixing of plate/bearing piece/bracket complete/bracket as per respective drawings.
		B. Insert the seat in bracket, bracket complete and set & fix the seat with bracket, bracket complete on linen room partition with the help of adequate hardware as per respective drawings.
		C. Set and fix the bearing piece/plate on linen room partition with the help of adequate hardware as per respective drawing.
		D. Fix the chain assembly with bearing piece/plate as per

		respective drawings.
		E. Marking, drilling and tapping the holes on linen room partition for fixing of catch arrangement as per respective drawings.
		F. Fix the catch arrangement on partition with the help of adequate hardware as per respective drawings.
48.	FOR FIXING OF CURTAIN ARRANGEMENT IN LWACCW COACHES	A. Insert the rollers in extrusion as per respective drawings.
		B. Set and fix the curtain with rollers as per respective drawings.
49.	LOWERING OF COACH	Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items- Link pin, Swing Link pin, Yaw Damper, Spring Plate, Swing Nut, Centering Disc, U sim, Ring sim-4 mm, Ring sim -2 mm, Hex Head nut, Application of grease, Application of emery paper, Application of Corrosion protector, Before handing over checking the height of C.B.C.
50.	FOR FIXING OF OTHER MINOR FURNISHING ITEMS FOR WHOM WORKING PROCEDURE NOT MENTIONED ABOVE.	A. MARK, SET & FIX THE ITEMS WITH SUITABLE HARDWARE'S AS INDICATED IN APPLICABLE DRAWINGS.
		B. ENSURE THE AESTHETICS & QUALITY FITMENT OF ITEMS WITH APPLICABLE HARDWARE'S AS PER APPLICABLE DRAWINGS.

Note:

- Modified drawings or drawing of latest alteration shall be applicable.
- Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
- In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.

Annexure-III**1. Plumbing Activities to be carried out-**

- Under Frame plumbing.
- Under Frame clamping.
- SFME (side filler module equalizing).
- Pump connection.
- Water filling.
- Auxiliary water tank assembly & fitment, Lavatory inside plumbing & Lavatory outside plumbing.
- Lavatory inside clamping & Lavatory outside clamping.
- Health faucet pipe and bracket fitting.
- Water circulation system testing.
- Other Miscellaneous plumbing work.
- Water Tank (2 X 685), (1 x 450) ltr. Loading.

2. List of Furnishing activities covered under scope of work:

The scope of work covers following activities as per the respective drawings, working procedure.

2.1 Activities/Process and precautions:-

Measuring, marking, cutting ,and fitting , operations on plumbing components as per railway applicable drawings.

2.2 **Process precautions:**

- i) Latest applicable versions of the drawings are to be followed as per design master list.
- ii) Suitable drilling/tapping should be done with the help of drilling machine for fixing/mounting of items/assemblies as per respective drawings.
- iii) All hardware is to be fitted as per respective drawing.
- iv) Hammering of screws is strictly prohibited.
- v) Broken head screw, loose screw is not at all acceptable.
- vi) Don't leave extra screws scattered in the coach.
- vii) Excess scrap and scattered material should be removed from the coach after completion of stage work.
- viii) Always use standard m/c & hand tools during working.
- ix) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires.
- x) There should not be any metal contact with water tank.
- xi) Water tank should be loaded on coach carefully to avoid any defect due to mishandling.
- xii) All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.
- xiii) Pipe ends shall have taper pipe threads to IS: 554-85, ISO 7/1 R1/2.
- xiv) Tightened the screws at the proper torque mentioned in respective drawings.
- xv) Metallic part to be painted with red oxide zinc chromate primer to IS: 2074-79 with 12-15 microns DFT before fitment.
- xvi) Clamping to be done at the pitch of 500 mm.
- xvii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
- xviii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
- xix) Suitable drilling/ tapping should be done with the help of drilling machine for fixing/ mounting of items/ assemblies as per respective drawings.
- xx) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires as an extension board.

2.3 **Procedure for fixing of roof water tank 30 liters NPP end, PP end in LHB coaches:**

- i) Fix the assembly of vacuum valve, hex. Double nipple, plug & equal tee female thread with the water tank as per respective drawing.
- ii) Fix the assembly of automatic float air vent valve, hex. Reduction & male female elbow with the other end of water tank as per respective drawing. Set & align the water tank (30 Liters) NPP/PP End in lavatories & fix with shell member with the help of taut bend & adequate hardware as per respective drawing.
- iii) Apply the sealing paste on the threads as per respective drawing to prevent leakage of water.
- iv) Load the water tank in the coach carefully.
- v) Set & align the water tank 30 liters NPP End/PP End in lavatories and fix with shell member with the help of taut bend and adequate hardware as per respective drawing.

2.4 **Procedure for fixing of piping arrangement for over head aux. water tanks:-**

- i) Set and fix the plug with aux. water tanks as per respective drawing.
- ii) Connect the ball valve with pipes and join the pipes to each other with the help of equal tee as per respective drawing.
- iii) Set and fix the composite pipes with aux. water tanks with the help of female elbow & hex nipple as per respective drawing.
- iv) Set and fix the composite pipes with lav. wall with the help of supporting bracket, clip and adequate hardware as per respective drawing.

2.5 **Procedure for fixing of pipe laying for water under the coach in LHB coaches:-**

- i) Set & fix the brackets/bracket complete on under-frame with the help of adequate hardware as per respective drawing.

- ii) Putting together and adjusting of adequate pipes, mounting on under frame with add-on parts & fastening with tube clip & pipe brackets with the help of adequate hardware as per respective drawing.
 - iii) Set and fix the protective sheet complete and connection hose flexible on under frame with the help of adequate hardware as per respective drawing.
 - iv) Set the adequate pipes installation of lavatory cells and fix the help of adequate hardware as per respective drawing.
 - v) Check the pipes for tightness after fitment.
 - vi) Fix the Hex nipple, Elbow, Bush and coach watering inlet with strainer at one end of water tanks and other end with the help of fixing clip as per respective drawing.
 - vii) Weld the Clamp of filling flap & Angle complete with under frame as per respective drawing.
- 2.6 **Common procedure for fixing of pipe laying for water at ORIENT-2, ORIENT-1 & EURO lavatory in coaches:-**

- i) Set & fix the composite pipes with water tank with the help of hex nipple, equal elbow & adequate hardware as per respective drawing.
- ii) Connect the pipes with the help of composite internal seal tee, ball valve and adequate hardware as per respective drawing.
- iii) Fix the pipes with wall with the help of brackets & adequate hardware as per respective drawing.
- iv) Fix the bib cock with wall with the help of elbow equal & adequate hardware as per respective drawing.
- v) Fix the pipe in health faucet with the help of bracket, clamp & adequate hardware and fix the gravity coke with pipe for lotah filler as per respective drawing.
- vi) Fix the drain pipe with integrated connecting socket with the help of adequate hardware as per respective drawing.

Tentative Applicable Drawings .-

LE90007; LW90025; LW63150; LE63106; LE63160; LE63161; LE63157 ; LW63167 ;
LE63227; LE63142;

3. Scope or work of retro fitment of additional water filling arrangement in LHB Coaches-

ACTIVITY TO BE CARRIED OUT BY FIRM

1. Additional side filling arrangement for water tank (2X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63279.
2. Additional side filling arrangement for water tank (1X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63281 Alt'a'.

PROCESS PRECAUTION

Retro fitment of Additional water filling arrangement in LHB type coaches has to be done to increase the water filling rate in LHB coaches for which following additional item required for which firm has to take care at the time of Installation

- Elbow male female 32 bore
- Elbow 40 borex135 degree
- Hex nipple 40 bore
- Hex bush 40x25 bore
- Hex bush 32x25 bore
- Hex bush 50 x25 bore
- Hex nipple 32 bore
- Tee equal 32 bore
- Reducing nipple 32x15 bore
- Reducing bush 50x40 bore
- Elbow equal 40 bore
- Elbow male/female 50 bore

- Horizontal check valve
- Uclamp 25 bore
- SS Pipe Dia 33.4x3.38x620 mm.
- SS Pipe Dia 48.26X3.68X180 mm.
- Modified coach watering inlet (Additional 4 Nos.)

PROCEDURE FOR FIXING OF ADDITIONAL WATER FILLING ARRANGEMENT IN COACHES.

1 .Additional side filling arrangements for water tanks (2x685) should be implemented at the 32 bore overflow point, where overflow from one end of the lavatories occurs. This will involve the installation of a horizontal 15 bore check valve to check water flow in the overflow pipe during tank filling. On the opposite end, a side filling connection should be established at the existing 32 bore point, which is currently plugged.

2. For all filling arrangements outlined above, 25 bore stainless pipes must be utilized, along with appropriate hex bushings (32x25 bore, 40x25 bore, and 50x25 bore) as per the provided drawings.

3. To secure the pipes, 25 bore clamps are to be employed. Flats and brackets need to be welded onto the underframe at suitable locations, in accordance with the provided drawings.

4. There should not be any metal contact with watertank. All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape(Teflon tape),M-seal,Araldite &red oxide zinc chromate paste.

Note-

4. Scope of work for coach Lowering:-

- a) Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done.
- b) Coach lowering is highly safety related work for coach as well as man , Hence Man power will be deployed accordingly.
- c) Contractor will be always ready to increase the coach lowering gang at short notice, when required to railway.
- d) **Scope of Work is for Lowering of Coaches is given below** -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items-
 - i. Link pin
 - ii. Swing Link pin
 - iii. Yaw Damper
 - iv. Spring Plate
 - v. Swing Nut
 - vi. Centering Disc
 - vii. U sim
 - viii. Ring sim-4 mm
 - ix. Ring sim -2 mm
 - x. Hex Head nut
 - xi. Application of grease
 - xii. Application of emery paper
 - xiii. Application of Corrosion protector
 - xiv. Before handing over checking the height of C.B.C.

NOTE:

1. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.

2. In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.
For guideline/Working instruction of installation and fitment of plumbing shall be provided by MCF/RBL/LLJ.
3. If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.

(B) Schedule-B

SCOPE OF WORK

Name of work: - Work of “Complete wiring work including handling and installation of equipments in LHB LWACCW Coaches at MCF/RBL.”

1. **Under frame and Roof Wiring work in LWACCW Coaches:-** Roof conduiting, Roof wiring, PP side dressing with clamp fixing, NPP side dressing, Fitment of RMPU End fitting, Branch wiring, Conduit provision & clamping on side wall (LHS) & for emergency brake wiring, switch plates, pantry equipments, jumper wiring, wiring for Hot Case & Bottle cooler, Fitment of roof tray, AEL, speaker & light wiring, laptop/mobile charging point wiring, fixing & connection, Feeder pipe cutting, Fitment of feeder pipe, Removal of shell defect, if any for feeder pipe fitment, Feeder pipe wiring, Fitment of feeder junction box, Fitment of feeder junction box cover, Tightness of feeder junction box, Fitment of through box, Fitment of through box cover, Crimping & tightening feeder pipe of U/F, R/Hose, Fitment of under frame cable tray, Capacitor bank wiring, connection and earthing, Removal of shell defect, if any for under frame tray, Under frame wiring, Wiring up to PP, Tightness of U/F cable tray, U/F RVH dressing with tube clamps, Fitment of dummy socket & Battery fuse box, Fitment of PA WAGO bracket, PA WAGO connection, Fitment & connection of pre cooling socket, Feeder connection, IV coupler crimping & connection, Feeder junction box cable Crimping & connection, Earthing of Feeder junction box, 5KVA transformer wiring, connection & Earthing, Fitment of BRL(All berth) WAGO, Jumper wiring for BRL, BRL connection, Fitment of BRL light, Fitment of cabin WAGO & connection (cabin no.1,2,3,4,5,6,7,8,9), charging socket(All bearth) Wago fitment & connection (cabin no.1,2,3,4,5,6,7,8,9), Lavatory WAGO connection & dressing, alarm connection, Fitment of compartment Light, Fitment of WC Light, Fitment of PARCIL light, Fitment of AEL light, Fitment of NON AC area Light, Fitment of Socket/Switch plate assembly, Pump connection & earthing, Battery & battery Fuse box Connection & earthing, dump valve earthing, 60 KVA Transformer connections & earthing, earthing of air brake unit, WSP Box Fitment, WSP Top & Bottom Connection, Air Brake connection, Microprocessor Fixing and connection, Sensor Cable Fixing and connection, WSP Testing, Tightness of feeder junction box, air break connection, coach earthing with RMPU and bogie Earthing, provision of safety Chain for IV coupler, replacement of defective equipments, Rectification work, if any. Any other allied activity/work, if required. Movement of materials/items from TL PCO /main stores to site is included. The firm will arrange its own hydraulic trolley/FLT along with manpower for transportation of materials from TLPCO/Main Store.
2. **Equipment Loading for LWACCW Coaches:-**
 - a. Switch Board Cabinet loading, Securing, earthing.
 - b. 60 KVA and 5 KVA transformer loading, securing, connection, earthing along with fitment of Safety wire rope assembly.
 - c. RBC loading, Securing , connection and earthing,
 - d. Battery box and battery loading with battery internal connection & securing with battery box cover welding.
 - e. Pump & Pump Controller loading & securing with pump controller connection.
 - f. Capacitor Bank loading & securing.
 - g. Pantry Equipment loading, securing, connection, earthing (if required).
 - h. Any other allied activity/work, if required.
 - i. **Earthing:-** Complete earthing of all equipments including SBC & RMPU as per standard norms .
3. **Coach activity clearance schedule for timely dispatch of coach**

Allotment Date say, -'D' (The day on which the coach has been allotted to the firms)

LWACCW coach:

SN	Activity Description	Max. Time Schedule	Penalty /Day (Rs)	Remark
i)	Wago Connection complete	D' +1 day	500/-	Cabin wago & Alarm Conn. After complete roof wiring with shell defect if any.
ii)	Lowering Clearance + ceiling clearance	D' + 2 days	500/-	Complete under frame wiring along with feeder, tray & addition wiring if any, with shell defect for lowering
iii)	Equipments Loading	D' + 2 days	500/-	Equipments loading complete with shell defect if any
iv)	Lights fitment & all connection, roof if any & Under frame along with electrical equipments complete.	Ceiling + 1 day	500/-	All lights along with AEL, PACIL fitment & connection, Switch Plate assembly & Charging socket fitment, connection. And all under frame connection with electrical equipments.
v)	Quality rectification	Testing offer + 1 day	5000/-	QCI & Testing points to be attended within time to avoid dispatch delay

NOTE:-

- (i) Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
 - (ii) In case of any modification of referred/relevant drawings/Spec., the latest drawing/Spec. shall be applicable and work shall be done accordingly, without any cost escalation.
 - (iii) The Firm will required to work in three shifts as per work load.
 - (iv) Firm will required to submit the Police verification certificate of all staffs deployed against this tender.
 - (v) Firm will arrange its own crimping machine with suitable dies along with calibration certificate. The crimping tools of reputed make e.g. IZUME or similar make shall only be used. Firms shall submit details of these same.
 - (vi) Firm will provide proper uniform with firm logo at suitable location to its staffs.
 - (vii) **Shell Defects:** Contractor will required to attend minor shell defects, like cutting, hole enlargement, hole welding etc. contractor must have necessary drill machine, welding machine, air plasma cutting machine etc.
 - (viii) **Scrap Management:** Firm will required to remove from furnishing shop/ finishing shop to nominated place like the wooden packing/cartoon boxes/ Plastic materials used in packing of harness box, SBC panel, Transformer, monoblock pump Assembly, Fan, Light, switches. Unpacking of material is to be done at nominated place only. Any violation will attract penalty @Rs 5000/- per occurrence.
 - (ix) **Poor Workmanship:** The contractor is expected to maintain quality of work as per standard specification /Technical instructions. In case, reporting of poor workmanship is observed, a penalty of Rs 500/- per incidence per coach will be imposed. If same/similar incidence of poor workman ship is repeated then a penalty of 1000/- per incidence, per coach will be imposed beyond that.
4. Contractor will require attending the rectification on the same day when offered for testing and replace the equipment if found defective during testing, any delay will be suitably penalized.
5. Apart from above work, contractor may be given any other allied/subsidiary relevant activity as and when required depending upon site condition subject decision of competent authority

6. In case of any modification of drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.

7. Contractor will be required to clear the coach from quality on or before dispatch date as per dispatch plan issued by Railway.

(C). Schedule-C

(1)Scope of work:-

Name of work: - Interior Mechanical Furnishings & Fittings in SS trough LFCWAC EOG LHB type AC Coaches with FIAT Bogies :-

a) Flooring stage: (Clearance to start the work)

I. After the application of Decoupling rubber & fixing strip and before starting the floor board laying from SSE/JE/Inchage.

II. After completion of floor board laying & starting of the PVC from SSE/JE/ Inchage.

a) Partition stage: (Clearance to start the work)

After the fitment of the partition and starting of the side wall paneling from SSE/JE/ Inchage.

b) Panel Stage: (Clearance to start the work)

I. After the completion of the side wall paneling & starting of the ceiling paneling work from SSE/JE/ Inchage.

II. After the pasting of trough and before the starting of the AC loading from SSE/JE/ Inchage.

a) Ceiling stage: (Clearance to start the work)

After the completion of the ceiling work & before the starting of the seat & berth work from SSE/JE/ Inchage.

b) Moulding: (Clearance to start the work)

Before starting of Seat & Berth work, clearance has to be taken from moulding stage from SSE/JE/ Inchage. Co-ordinate with electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance like partition, sidewall paneling and ceiling paneling. however if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done. However the Contractor has to closely liaison with the electrical wing to get all sorts of electrical clearances required for his area of work.

A. List of Furnishing activities covered under scope of work:

- I. Fixing & Fitment of D-Coupling rubber with Fixing strip, UIC Vestibule, Gang Way Bridge mounting, Foot Step, Entrance Hand Rail, Bottom Plate (Chequered Sheet), Step Rail, Door Stopper, Tail Lamp Bracket, Floor Board fixing and PVC laying pasting for LFCWAC and Thermo Welding of PVC Floor in EOG Type Coaches with FIAT Bogies as per latest applicable drawings.
- II. Fitment of Partition Pillar, Honeycomb Partition, Linen Rooms & Almirah etc. along with Holding Extrusions as per latest applicable drawings.
- III. Fixing & Fitment of Side Wall Panels, Extrusions for Curtains, FRP AC Trough, Roof Mounted AC unit, Return Air Grills, Air Circulation/Supply installations its related work as per latest applicable drawings.
- IV. Gluing and Fixing of Lavatory Window in Lavatory, Fixed and gluing of emergency window arrangement and Emergency Window, Window opening & Refixing and Window Rubber fitment as per latest applicable drawings.
- V. Fixing of Side Wall Panels, Panelling & Moulding of Lavatory Sidewall, Longitudinal Berth Side and other area, Roof Ceiling/Roof Panels, Doorway Ceiling, Panelling & Moulding for Ceiling of Gangway and doorway area in coaches.
- VI. Fixing the Air Inlet Duct, Aluminum Extrusions with Roof Members and Fixing of Passenger Room Ceiling including Diffuser assemblies with Extrusions & Gangway/ Doorway/Vestibule area (Non AC Area) Ceiling along with Members as per latest applicable drawings. RMPU loading and fixing.
- VII. Fixing & Fitment of Lavatory Air Exhauster, , Loading & Fixing of Lavatory Module/ knock down lavatory module along with all accessories & all mountings for LFCWAC EOG Type coaches with FIAT Bogies as per latest applicable drawings. inside Wash Basin and Drain Pipe cover, Lavatory Door arrangement R.H. & L.H, Mirror in Lavatory, Lavatory Bowl Facing-2, Euro Bowl assembly complete and Lavatory Bowl Facing-2 Mounting, Mounting the Wash Basin outside Lavatory, Waste Bin arrangement, Attachment Wall arrangement , Additional wall ,Lavatory ceiling

furnishing plate in coaches.

- VIII. Fixing & Fitment of End Wall Panel and Moulding NPPE/PPE end, Fitment of end Wall Doors, fitment of Entrance Door, Corner Panels and Compartment doors & its related paneling & moulding work for LFCWAC EOG Type coaches with fiat bogies as per latest applicable drawings, Swivel Coat Hooks in coach.
- IX. Fixing & Fitment of Seat and Berths arrangement, Ladders, Compartment Mirror, Foldable Bottle Holder, holding table, in coaches.
- X. Fixing & Fitment of Curtains, Seats & Berths with all accessories & mountings for LFCWAC EOG Type .
- XI. Coach Lowering:- Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment etc as per MCF guidelines.
- XII. Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , bibcock fitment, additional water filling arrangement LOP,LOC,LIC,LIP ,water filling, Additional water filling arrangement and testing etc. of LFCWAC coaches as per latest drawing.
- XIII. Fitment of RFID as per latest applicable drawing .

• **APPLICABLE REFERENCE DRAWINGS**

	REFERENCE DRAWING	DESCRIPTION
1	WA90006	GENERAL INSTALLATION
2	LW41106	STEP COMPLETE MOUNTING
3	LE24103	HANDLE
4	LE24101	HAND BAR MOUNTING
5	WA41109	FLOOR COMPLTE
6	WA42118	PANELLING AND MOULDING OF SIDEWALL AND END WALL.
7	WA44150	FLAT CIELING
8	WA44151	ROOF CEILING ARRANGEMENT
9	MI004112	DOOR STOPPER.
10	1 10113.0.24.100.001	INTER CAR GANGWAY MOUNTING.
11	1 10113.0.24.120.001	GANGWAY BRIDGE MOUNTING.
12	2 10113.0.10.300.001	TAIL LAMP BRACKET.
13	WA44166	AC SYSTEM MOUNTING ARRANGEMENT
14	LA51100	DOOR ARRANGEMENT
15	WA54002	LAY OUT OF WINDOW ARRANGEMENT
16	WA56003	INTERIOR DOORS
17	WA61002	SEAT AND BERTH ARRANGEMENT
18	WA63003	SANITARY FACILITIES COMPLETE
19	WA64002	LINEN ROOM ARRANGEMENT
20	WA64005	CURTAIN ARRANGEMENT
21	WA64118	ALUMINIUM EXTRUSIONS
22	LE64152	ATTACHMENT WALL MOUNTING ARRANGEMENT
23	LW64169	HAMMER BOX FOR BREAKING WINDOW GLASS IN CASE EMERGENCY
24	CC64181	FIRE EXTINGUISHER

Note:

- iii. Modified drawings or drawing of latest alteration shall be applicable.
- iv. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.

Annexure-II

WORKING PROCEDURES

S N	ACTIVITY	WORKING PROCEDURE
1.	FIXING & FITMENT OF TAIL LAMP BRACKET IN	A. Set & fix the tail lamp bracket on end wall with the help of screws & washers as per respective drawing.

	LFCWAC COACHES	
2.	FIXING & FITMENT OF FOOT STEP IN LFCWAC COACHES	A. Set & fix the Footstep arrangement on all doors with the help of adequate hardware as per respective drawing.
3.	FIXING & FITMENT OF ENTRANCE HAND RAIL IN LFCWAC COACHES	A. Fix the entrance hand rail for all doors with door corners with the help of adequate hardware as per respective drawing. SIKAFLEX 221 or 243 to be provided between door corner and entrance hand rail as per respective drawings.
4.	FIXING & FITMENT OF GANG WAY BRIDGE MOUNTING IN LFCWAC COACHES	A. Clean the holes on the end wall and Re-tap all the holes.
		B. Set & fix clamping piece and plate spring on head stock with the help of adequate hardware as per respective drawing.
		C. Set & fix the roller with Gangway Bridge with the help of adequate hardware as per respective drawing.
		D. Set the gangway bridge in sliding block as per respective drawing.
		E. Set & fix the support block (LH & RH) with sliding block with the help of adequate hardware as per respective drawing.
		F. Check the functioning of Gangway Bridge after application of proper lubrication.
5.	FIXING & FITMENT OF INTER CAR GANG WAY MOUNTING IN LFCWAC COACHES	A. Clean the holes on the end wall and Re-tap all the holes.
		B. Fix the studs on all re-tapped holes and ensure the tightness of all studs.
		C. Paste the rubber packing on locking plates of lateral side flange as well as upper flange assemblies with the help of general purpose adhesive.
		D. While loading of lateral side flange & upper flange assemblies care should be taken to ensure that the Special screw should match with the studs provided in the End walls, where UIC vestibule is to be fixed.
		E. Ensure that proper matching of concave position of the lateral side flange & convex position of the upper flange.
		F. Fix the lateral side flange with the help of adequate hardware from the bottom side & than top side of the flange.
		G. Set & fix the upper flange with the help of adequate hardware from both ends as per respective drawing.
6.	FIXING OF DECOUPLING ARRANGEMENT IN LFCWAC COACHES	A. Clean the channel before fixing/inserting the absorption strip.
		B. Insert/Fix the absorption channel pre-welded on the trough floor as per respective drawing.
		C. Insert the stainless steel strip into the absorption strip as per respective drawing.
		D. Check the level with the help of straight bar.
		E. Rubber packing provided on the top of absorption strip with the help of glue whereas required for proper leveling.
7.	FIXING OF FLOOR BOARD IN LFCWAC E COACHES NOTE: I. ALL PACKING MAY BE USED FROM OFF CUTS. II. NECESSARY CUT-A-WAYS IN COMPREG BOARDS & PVC SHEET TO BE MADE TO SUIT AT SITE III. NO BOARD HAVING A WARPING OF MORE THAN 4 MM ON ITS WIDTH SHOULD BE USED. IV. AFTER FURNISHING, THE FLOOR MAY BE CHECKED TO ENSURE THAT THERE ARE	A. Clean the entire trough floor area for unwanted/foreign material before loading the required floor board inside the respective coach.
		B. Load the required Makore/Compreg board inside the respective coach as per respective drawing.
		C. Lay floor board inside the coach in passenger compartment,
		D. Doorway and gangway area with proper matching with each other from one end as per respective drawing.
		E. Provide suitable packing below lav. module bottom collar in gangway and door way side as per respective drawing.
		F. Half lap joints of floor board should be properly matching with each other and then fix the floor board on D-coupling with the help of screws as per respective drawing.
		G. Set & fix the skirting with side wall/lav. Module on floor board with the help of adequate hardware as per respective drawing.
		H. Set & paste the FRP profile above PVC on skirting in lav. With approved brand of glue as per respective drawing.
		I. Apply putty on the floor board joints and grind with the help of grinder.
		J. Seal all the joints in doorway, gangway & side wall with the help of sealing material as per respective drawing.

	<p>NO UNEVEN JOINTS OR SAGGING. IT MAY BE CHECKED WITH THE HELP OF STRAIGHT EDGE. JOINTS HAVING MORE THAN 02 MM STEP OR SAGGING OF MORE THAN 2.5 MM BETWEEN THE ADJACENT CROSS BEARERS SHOULD NOT BE PERMITTED.</p> <p>V. COMPREG BOARDS SHOULD BE PLAIN ON BOTH SIDES.</p> <p>VI. ALL GAPS TO BE SEALED WITH SEALANT .</p>	<p>K. The head of screw should be leveled by applying epoxy putty. This will ensure smooth level for perfect laying of PVC flooring sheet & also avoid water seepage through screw holes or joints.</p>
8.	FIXING OF FLOOR END PROFILE IN LWFAC COACHES	<p>A. Set & fix shim, Al. extrusion and floor profile with floor board & body side wall pillar with the help of adequate hardware as per respective drawing.</p>
9.	<p>PVC LAYING & WELDING IN LWFAC COACHES</p> <p>Note:- This has to be done after the activity of putty application and grinding. Appropriate time has to be given for putty drying and thereafter to be grinded for better adhesion. Proper cleaning of the floor to be ensured before applying PVC.</p>	<p>A. Clean the Plywood floor surface for any dust and foreign particles so as to achieve a good adhesion between PVC and Plywood.</p> <p>B. Spread open the PVC roll and spread a thin and even layer of adhesive with the help of notched trowel (secretor) on the plywood floor.</p> <p>C. Also apply adhesive on the rough reverse side of PVC roll/sheet thinly and evenly as above.</p> <p>D. Allow some time for solvent evaporation to prevent solvent vapors being entrapped. As soon as the adhesive becomes touch dry both on the floor and the PVC flooring, press down the sheet in position gently and gradually from one end taking care to prevent air from being entrapped. Follow same procedure for the other half of the same roll.</p> <p>E. After adhesive of the first roll is over, apply pressure on the flooring with a steel roller of 25 kg (approx.) so as to obtain perfect adhesion between PVC flooring and plywood floor and to eliminate air being entrapped.</p> <p>F. The second roll/sheet shall be laid in position, overlapping the first roll/sheet by about 5 to 10mm while spreading the roll.</p> <p>G. "Trim in" the length by placing a straight edge along the centre of over lapped edges and with a sharp knife cut through both thickness of PVC flooring at the same time. Pull out the overlapped edges of top and bottom of PVC flooring and press the same to the plywood floor to obtain perfect butt joint.</p> <p>H. Proper thermo-welding of PVC flooring is almost necessary for obtaining satisfactory bonding results. Thermo-welding of PVC flooring provides impervious continuous floor surface.</p>
10.	FIXING OF BOTTOM PLATE (CHEQUERED SHEET) IN LFCWAC COACHES	<p>A. Mark, drill & counter sunk the Aluminum chequered sheet /Bottom plate for fixing purpose over PVC sheet/Floor boards as per drawing</p> <p>B. Clean the surface of PVC, set & fix the aluminum chequered sheet over PVC sheet/Floor board with the help of adequate hardware as per drawing</p> <p>C. Apply the adhesive on the periphery of the chequered sheet so</p>

		that the dust particles & water could not be entered in between the PVC sheet & chequered sheet.
11.	FIXING OF DOOR STOPPER IN LFCWAC COACHES	A. Mark, Drill, Set & fix the door stoppers for body side doors on doorway area with the help of adequate hardware as per respective Drawing.
12	FIXING OF STEP RAIL IN LFCWAC COACHES	A. Mark, Drill & tap the door way members and chequered sheet for fixing of step rails with the help of adequate hardware as per respective drawing. B. Set & fix the step rail on above said position with the help of adequate hardware as per respective drawing.
13.	LAYING OF FALSE PVC/TETRON SHEET. IN LFCWAC COACHES	B. Cover the floor area with false PVC/Tetron sheet with the help of cobbler nails to save the laid PVC from damage, unwanted marks & dust which shall be removed at time of Gate out of coaches from MCF/RBL
14.	FIXING OF PARTITION FRAMES IN COMPARTMENT AND COUPE AREA IN LFCWAC COACHES as per drawings.	A. Load the partitions on the coach carefully for fitment. B. Set & align the honeycomb P/FRAMES with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing. C. Set the honeycomb P/FRAMES on the above fitted al. extrusions and fix with side wall & roof member with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level. D. Set & fix the al. extrusions on the floor to the other side of partition frames with the help of adequate hardware as per respective drawing. E. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position. F. Drill and tap the holes on above marked position as per respective drawings. G. Set the pillar assemblies with P/FRAMES and fix on the floor & roof members with the help of adequate hardware as per respective drawing.
15	FOR FIXING THE PARTITION FRAMES IN OTHER THAN COMPARTMENT AREA IN LFCWAC COACHES .	A. Load the partitions in the coach for fitment of Attendant Room. B. Set & align the honeycomb P/FRAMES with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing. C. Set the honeycomb P/FRAMES on the above fitted al. extrusions and fix with side wall/roof member/pillar assembly (already fitted) with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level. D. Set & fix the al. extrusions on the floor to the other side of partition frames with the help of adequate hardware as per respective drawing. E. Mark and fix the channel extrusions on the pillar assemblies as per respective drawings. F. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position. G. Drill and tap the holes on above marked position as per respective drawings. H. Set the pillar assemblies with P/FRAMES and fix on the floor & roof members with the help of adequate hardware as per respective drawing. I. Fix the partition frames with the channel extrusions with the help of adequate hardware as per respective drawings.
16.	FOR FITMENT OF AIR INLET DUCT COMPLETE WITH ROOF MEMBERS IN	A. Load the ducts in the coach and apply the sealing material on the sealing surfaces as per drawings. B. Insert, align & fix the air ducts to each other and with roof

	LFCWAC COACHES.	members in sequence (starting from one end to other end) with the help of adequate hardware and fitment of al. extrusion. per respective drawings.
		C. Set and fix the connection part, compensation part and connector at the both ends with the help of adequate hardware as per respective drawings.
		D. Paste the Insulation at the bottom side of connection box as per respective drawings.
17.	FOR FITMENT OF CIRCULAR AIR SYSTEM/DUCT COMPLETE NPPE & PPE WITH ROOF MEMBERS IN LFCWAC COACHES.	A. Set and align the End connections/Return air ducts/Circulating air box/connecting ducts at the both ends of coach with the help of sealing material as per respective drawings.
		B. Fix the End connections/Return air ducts/Circulating air box/connecting ducts with the help of clamp/adequate hardware as per respective drawings.
		C. Set and fix the Grills on the return air ducts with the help of sealing/insulation & adequate hardware as per respective drawings.
		D. Mark, set & fix/embedded/laminated the Bracket for hygrostat mounting & Brackets for temperature sensor mounting with the help of adequate adhesive/hardware as per respective drawings.
18.	FIXING THE ALUMINUM EXTRUSIONS WITH ROOF MEMBERS AND FIXING OF CEILING ARRANGEMENT/DIFFUSER ASSEMBLIES WITH EXTRUSIONS & SIDE WALL MEMBERS IN COMPARTMENT & GANGWAY/ DOORWAY/ VESTIBULE AREA IN LFCWAC COACHES	A. First set and fix the Aluminum Extrusions with roof members with the help of brackets & appropriate hardware as per respective drawings.
		B. Set and fix the hammer head bolts in the extrusions with the help of appropriate hardware as per respective drawings.
		C. Set and fix the sealing strips/ sealing angles/ mounting angles/ back moldings with partition frames/ side wall members/ roof members with the help of appropriate hardware/ supporting brackets/ aluminum extrusions/ spacer as per respective drawings.
		D. Fix the sealing foam/ self adhesive insulation where as required on the sealing strips/ angles as per respective drawings.
		E. Set, align and fix the ceiling assemblies/ diffuser assemblies with extrusions & side wall members with the help of angles/ brackets/ shims & appropriate hardware as per respective drawings.
		F. Set, align and fix the ceiling plates in position with the help of angles/ brackets/ shims & appropriate hardware in gangway/ doorway/ vestibule area as per respective drawings.
19.	FOR GLUING AND FIXING OF THE FIXED WINDOWS, EMERGENCY WINDOWS AND LAVATORY WINDOW WITH SIDE WALL IN LFCWAC COACHES	A. Load the windows in the coach and remove the packing.
		B. Clean the sealing area of windows with cleaner, flashing off and cover by using adhesive tape as per respective drawings.
		C. Clean the windows cut outs with cleaner, flashing off and cover by using adhesive tape as per respective drawings.
		D. Apply the primer on window elements and flashing off as per respective drawing.
		E. Apply the remover on window cut out and flashing off as per respective drawing.
		F. Marking and glue the plates in equal distance to the outer surface of window frame as per respective drawings.
		G. Sealing the opening between horizontal member and window column with Sika flex as per respective drawing before fitment of windows.
		H. Apply the Sika flex on the window element, insert, align & fix the windows in the sidewall cutouts with the help of clamping fixture as per respective drawings.
		I. Remove the Sika flex from the outer surface of windows; polish the surface with the help of Sika polish for smoothness as per respective drawings.
		J. Remove the adhesive tapes from the outer surface and clean the

		surface with cleaner as per drawings.
		K. Remove the clamping fixture after proper fixing & drying of Sika flex of windows with the side wall after 24 hours (approx.).
20.	FOR FIXING OF SIDE WALL PANELS IN LFCWAC COACHES	A. Mark the locations on side wall members for mounting of brackets/compreg plywood/MDF packing. Drill the holes on above marked positions and tap as per respective drawings.
		B. Fix the all brackets for switch board mounting/(brackets/ compreg plywood/MDF packing) for panel mounting/brackets for luggage rack & mirror mounting/ with side wall members with the help of appropriate hardware as per respective drawings.
		C. Mark and cut the sealing in required dimension as per respective drawing.
		D. Clean the surface of side wall area where the sealing is to be glued.
		E. Paste the ceiling on side wall/side wall panels for leveling purpose as per respective drawings.
		F. Marking, drilling and Tapping in side wall member for mounting of curtain extrusion as per respective drawings.
		G. Set and fix the curtain extrusion with side wall member with the help of mouldings and appropriate hardware as per respective drawings.
		H. Marking, Drilling and Tapping in side wall member, brackets and panels for fixing of 3-M pressure lock as per respective drawings.
		I. Set and fix the 3-M pressure lock on above said position with the help of moulding/shim and appropriate hardware as per respective drawings.
		J. Set & align the side wall panels at the location, press and fix with the help of 3-M pressure lock (already provided with side wall members & panels) as per respective drawings.
		K. Drill the holes in window area with the help of drilling machine & fix the panels with side wall member with the help of appropriate hardware as per respective drawings.
21	FOR MOUNTING OF AC SYSTEM ARRANGEMENT IN LFCWAC COACHES	A. Clean the surface of roof element complete where the RMPU is to be mounted.
		B. Lift RMPU with help of over head crane and load at coaches with match with Bkt and using the rubber shock observer and to be tight with adequate /prescribed hardware.
22	FIXING OF DOOR FRAME PORTAL IN LFCWAC COACHES	A. Positioning the C-type rail with shell member at door area, marking, drilling the holes and fix with the help of adequate hardware as per respective drawings.
		B. Insert the hammer head bolts in the C-rails and fix the brackets with bolts with the help of adequate hardware as per respective drawings.
		C. Set the door frame panels at the location, drilling, tapping and fix with shell member with the help of adequate hardware as per respective drawings.
23.	FOR FIXING OF END WALL DOOR FOR LFCWAC COACHES	A. Load the end wall doors in the coach carefully.
		B. Drill the holes in shell member for fixing of end wall door with the help of drilling template and tapping the holes as per respective drawings.
		C. Marking, drilling, tapping the holes in floor and fix the guide rail enclosure, guide rail side and guide rail middle with the help of adequate hardware as per respective drawings.
		D. Set, align and mount the end wall door at location with the help of adequate hardware as per respective drawings.
		E. Check the proper functioning of end wall door as per instruction given in the respective drawings.
24.	FOR FIXING OF ENTRANCE DOOR IN FOR LFCWAC COACHES	A. Load the entrance doors in the coach carefully.
		B. Mark & drill the holes on shell member for fixing of door accessories with the help of drilling caliber & threading as per respective drawings.
		C. Set & fix the sealing, gasket, gasket fixing plate, upper locking, lower locking, and brackets on above marked position with the help of adequate

		hardware as per respective drawings.
		D. Mount the door on it hinge/pivot, aligning & make it lockable with the help of adequate hardware as per respective drawings.
		E. Set, align and fix the step complete on floor with the help of adequate hardware as per respective drawings.
		F. Drill the holes on step complete with the help of drilling template for fixing of pivoted arm complete as per respective drawings.
		G. Set and fix the pivoted arm complete with the help of adequate hardware as per respective drawings.
		H. Check the proper functioning of door.
25.	FIXING OF SWIVEL COAT HOOKS FOR LFCWAC COACHES	A. Mark and drill the holes in the partition frame/side wall panel for fixing of swivel coat hooks as per respective drawings.
		B. Set and fix the swivel coat hook on above marked position with the help of adequate hardware as per respective drawings.
26.	FOR FIXING OF ALLUMINIUM EXTRUSION IN LFCWAC COACHES	A. Mark and drill the hole in shell member passing through floor end profile/floor for fixing of aluminum extrusions as per respective drawings.
		B. Set and fix the aluminum extrusions at above drilled position with the help of adequate hardware as per respective drawings.
27.	FOR MAKING THE LINEN ROOM ARRANGEMENT IN LFCWAC COACHES	A. Load the assemblies of plywood & LP sheet in the coach carefully.
		B. Place the plywood boards on floor in linen room area and fix with floor/partitions with the help of al. extrusions/channel moulding/angle moulding and adequate hardware as per respective drawings.
		C. Set, align and fix the other horizontal & vertical plywood boards to each other/partitions with the help of al. extrusions/channel moulding/angle moulding/piano hinges and adequate hardware as per respective drawings.
		D. Mark, set and fix the tower bolt/industrial lock with the help of adequate hardware as per respective drawings.
		E. Necessary cuts in plywood to be provided at suit at site if required.
28.	FOR FIXING OF COMPARTMENT DOORS AND SLOON SLIDING DOORS IN LFCWAC COACHES	A. Set and align the mounting frame with partition pillars and mark, drill and fix with the help of adequate hardware as per respective drawings.
		B. Mark the location of holes on above mounting frame and partition pillars for fixing of channel mouldings as per respective drawings.
		C. Drilling & tapping the holes on above marked position and fix the channel mouldings with the help of adequate hardware as per respective drawings.
		D. Set and align the door at location and mark the position of holes on frame for fixing of door hinges as per respective drawings.
		E. Drilling and tapping the holes on above marked position and fix the door with frame with the help of adequate hardware as per respective drawings.
		F. Set, align and fix the safety walls with frame/partition pillars with the help of adequate hardware as per respective drawing. (The channel moulding on safety walls/compreg panel is to be fixed before assembled at the location if applicable.)
		G. Set, align and fix the arm of door closer with frame and rubber buffer with safety walls (if applicable) with the help of adequate hardware as per respective drawings.
		H. Check the proper functioning of door.
29.	LOADING AND FIXING OF LAVATORY MODULAR/KNOCK DOWN LAVATORY MODULAR TOILET WITH DOORS AND	A. Remove the all packing from MODULE TOILET and unwanted material from inside coach lavatory trough floor area.
		B. Load the complete Lavatory MODULE TOILET through cut out provided in roof for AC trough with the help of movable crane safely and in case of power car and non AC coaches, load through doorway after dismantling the sidewalls, trough, attachment walls & roof of the FRP lavatory Module.

	ACCESSORIES IN LFCWAC COACHES	C. Set & fix the locators with the bottom of lavatory module trough for easy locating of fixing hole.
		D. Set & mark the hole position on lavatory area inside the coach with the help of matching template no.93.10.72.19873 & 74 in case of Indian style and western style lavatory module respectively as per respective drawings.
		E. Remove the template and drill the hole of required size with the help of suitable drilling machine & drill for fixing the lavatory Modules in the base plate as per respective drawing.
		F. Set & fix the lavatory Module on the base with the help of required hardware as per respective drawings.
		G. Load the all sidewalls of lavatory Modules on the coach for fixing with trough.
		H. Set & fix the all required brackets with sidewall & end wall for fixing of module sidewall with the help of required hardware as per respective drawings.
		I. Set & fix the Module sidewall with trough, sidewall & end wall as per respective drawings.
		J. Set & fix the roof panels and attachment walls after completion of plumbing & electrical related work with the help of required hardware as per respective drawings.
		K. Set & fix the lavatory Door with FRP lavatory Module with the help of required hardware as per respective drawings.
		L. Set & adjust the lavatory Door for proper functioning.
30.	FIXING OF ATTACHMENT WALL ARRANGEMENT & LOCK IN LFCWAC COACHES	A. Load the attachment wall in the coach for fitment.
		B. Fix the hinge bracket with one end of attachment wall with the help of adequate hardware as per drawings.
		C. Fix the industrial lock with another end of attachment wall and on lavatory module at proper place with the help of adequate hardware as per drawings.
		D. Fix the attachment wall with side wall member with hinge bracket with the help of adequate hardware as per drawings.
		E. Close the attachment wall with industrial lock at the second end.
31.	FIXING OF MIRROR IN LAVATORY IN LFCWAC COACHES	A. Fix the mirror cushion packing in mirror holder as per drawing.
		B. Fix the mirror in mirror holder.
		C. Fix the mirror with mirror holder with drilling & tapping during mounting as required.
		D. Cut the required length of VHB tape with the help of suitable knife for mirror fixing as per respective drawing.
		E. Clean the mirror surface where VHB tape to be pasted with the help of suitable solvent.
		F. Paste the VHB tape on the cleaned surface of the mirror.
		G. Fix the mirror LH mounting with the help of 3M VHB TAP 4956, as per respective drawing.
32.	LORO FITTING & OUTFLOW MOUNTING & ADDITIONAL HOLE LORO	A. shall be done as per applicable drawings ensuring job quality, fitment quality & Coach Aesthetics as par standard.
33.	INSTALLATION OF EXHUST SYSTEM IN LAVS	
34.	ALL LAVATORY CEILING, ADDITIONAL WALL & ATTACHMENT WALL OPENING & REFITTING	

35.	FOR FIXING OF LAVATORY CEILING IN LFCWAC COACHES	<p>A. Load the lavatory ceiling parts in the coach for fitment.</p> <p>B. Fix the all parts of lavatory ceiling in the lavatory with lavatory ceiling frame with the help of adequate hardware as per the appropriate drawings.</p>
36.	FOR FIXING OF NAME PLATE (BUILDER PLATE) IN LWFAC COACHES	<p>A. Set the builder plate on sole bar & mark the location for drilling the holes for fitment as per drawings.</p> <p>B. Drilling/tapping the holes on above mark location as per respective drawings.</p> <p>C. Set & fix the name plate (builder plate) on sole bar above foot step with the help of adequate hardware as per respective drawings.</p>
37.	FOR FIXING OF LUGGAGE RACK IN LFCWAC COACHES	<p>A. Mark the location for holes in side wall members as per respective drawings.</p> <p>B. Drilling the holes at above marked position and tapping as per respective drawings.</p> <p>C. Set, align & fix the luggage racks at above location with the help of adequate hardware as per respective drawings.</p>
38.	FOR FIXING OF MIRROR IN LFCWAC COACHES	<p>A. Mark and drill the holes in side wall as per respective drawing for fixing of mirrors.</p> <p>B. Set & fix the one end of hinge of mirror assembly at above drilled position with the help of adequate hardware as per respective drawings.</p>
39.	FOR FIXING OF BOTTLE HOLDER IN LFCWAC COACHES	<p>A. Mark and drill the holes in partition frame/partition pillar/side wall for fixing of bottle holder as per respective drawings.</p> <p>B. Set & fix the bottle holder at above drilled position with the help of adequate hardware as per respective drawings.</p>
40.	FOR FIXING OF SNACK TABLE/FOLDING TABLE IN LFCWAC COACHES	<p>A. Marking, drilling and tapping (if required as per drawing) the holes in side wall for fixing of snack table/folding table as per respective drawings.</p> <p>B. Set and fix the snack table at above said position with the help of adequate hardware as per respective drawings.</p>
41.	FOR FIXING OF FOLDING SEAT IN LFCWAC COACHES	<p>A. Mark and drill the hole in partition frame and fix the folding seat/attendant seat at location with the help of adequate hardware as per respective drawings.</p>
42.	FOR FIXING OF SEAT & BERTH ARRANGEMENT IN LFCWAC COACHES	<p>A. Load the components of seats arrangement in the coach carefully.</p> <p>B. Marking, drilling and tapping the holes in side wall members for fixing of chair angle/support for back rest as per respective drawings.</p> <p>C. Set and fix the chair angles/ support for back rest with side wall members with the help of adequate hardware as per respective drawings.</p> <p>D. Set and fix the chair angles with floor and partition pillar (pre drilled & taped hole) with the help of adequate hardware as per respective drawings.</p> <p>E. Mark, drill and fix the arm rest complete LH & RH and bearing brackets (side wall side) on the chair angles with the help of adequate hardware as per respective drawings.</p> <p>F. Set & fix the seat complete (lower) with chair angles with the help of adequate hardware as per respective drawings.</p> <p>G. Set the back rest at location with bearing bracket (side wall side), insert the other bearing bracket in back rest and fix the bearing bracket with chair angle with the help of adequate hardware as per respective drawings.</p> <p>H. Marking, drilling and tapping the hole in side wall member for fixing of mounting angle (for upper berth) as per respective drawings.</p> <p>I. Set and fix the mounting angle with side wall and mounting bracket (longitudinal side) with side wall and partition pillar with the help of adequate hardware as per respective drawings.</p> <p>J. Set & fix the upper berth (transverse Side) with mounting angle/mounting bracket with the help of adequate hardware as per respective drawings.</p> <p>K. Mark, drill and tape the hole in upper berth for fixing of safety rail as per respective drawings.</p>

		<p>L. Set and fix the safety rail on upper berth with the help of adequate hardware as per respective drawings.</p> <p>M. Mark and drill the hole in longitudinal side back rest for fixing of tower bolt assembly as per respective drawings.</p>
43.	FOR FIXING ARRANGEMENT OF CONDUCTOR'S BERTH IN LFCWAC COACHES	<p>A. Mark and drill the holes on linen room partition for fixing of plate/bearing piece/bracket complete/bracket as per respective drawings.</p> <p>B. Insert the seat in bracket, bracket complete and set & fix the seat with bracket, bracket complete on linen room partition with the help of adequate hardware as per respective drawings.</p> <p>C. Set and fix the bearing piece/plate on linen room partition with the help of adequate hardware as per respective drawing.</p> <p>D. Fix the chain assembly with bearing piece/plate as per respective drawings.</p> <p>E. Marking, drilling and tapping the holes on linen room partition for fixing of catch arrangement as per respective drawings.</p> <p>F. Fix the catch arrangement on partition with the help of adequate hardware as per respective drawings.</p> <p>G. Set the gangway bridge in sliding block as per respective drawing.</p> <p>H. Set & fix the support block (LH & RH) with sliding block with the help of adequate hardware as per respective drawing.</p> <p>I. Check the functioning of Gangway Bridge after application of proper lubrication.</p>
44.	FOR FIXING OF CURTAIN ARRANGEMENT IN LFCWAC COACHES	<p>A. Insert the rollers in extrusion as per respective drawings.</p> <p>B. Set and fix the curtain with rollers as per respective drawings.</p>
45.	FOR FIXING OF OTHER MINOR FURNISHING ITEMS FOR WHOM WORKING PROCEDURE NOT MENTIONED ABOVE.	<p>A. Mark, Set & fix the items with suitable hardware's as indicated in applicable drawings.</p> <p>B. Ensure the aesthetics & quality fitment of items with applicable hardware's as per applicable drawings.</p>
46.	LOWERING OF COACH	Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items- Link pin, Swing Link pin, Yaw Damper, Spring Plate, Swing Nut, Centering Disc, U sim, Ring sim-4 mm, Ring sim -2 mm, Hex Head nut, Application of grease, Application of emery paper, Application of Corrosion protector, Before handing over checking the height of C.B.C.
47.	PLUMBING WORK.	Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , addition water filling arrangement bibcock fitment , LOP, LOC, LIC,LIP, water filling and testing etc. of LFCWAC coaches as per latest drawing.

Annexure-III**2. Plumbing Activities to be carried out-**

- i) Under Frame plumbing.
- ii) Under Frame clamping.
- iii) SFME (side filler module equalizing).
- iv) Pump connection.
- v) Water filling.
- vi) Auxiliary water tank assembly & fitment, Lavatory inside plumbing & Lavatory outside plumbing.
- vii) Lavatory inside clamping & Lavatory outside clamping.
- viii) Health faucet pipe and bracket fitting.
- ix) Water circulation system testing.
- x) Other Miscellaneous plumbing work.
- xi) Water Tank (2 X 685), (1 x 450) ltr. Loading.

3. List of Furnishing activities covered under scope of work:

The scope of work covers following activities as per the respective drawings, working procedure.

3.1 **Activities/Process and precautions:-**

Measuring, marking, cutting ,and fitting , operations on plumbing components as per railway applicable drawings.

3.2 **Process precautions:**

- i) Latest applicable versions of the drawings are to be followed as per design master list.
- ii) Suitable drilling/tapping should be done with the help of drilling machine for fixing/mounting of items/assemblies as per respective drawings.
- iii) All hardware is to be fitted as per respective drawing.
- iv) Hammering of screws is strictly prohibited.
- v) Broken head screw, loose screw is not at all acceptable.
- vi) Don't leave extra screws scattered in the coach.
- vii) Excess scrap and scattered material should be removed from the coach after completion of stage work.
- viii) Always use standard m/c & hand tools during working.
- ix) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires.
- x) There should not be any metal contact with water tank.
- xi) Water tank should be loaded on coach carefully to avoid any defect due to mishandling.
- xii) All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.
- xiii) Pipe ends shall have taper pipe threads to IS: 554-85, ISO 7/1 R1/2.
- xiv) Tightened the screws at the proper torque mentioned in respective drawings.
- xv) Metallic part to be painted with red oxide zinc chromate primer to IS: 2074-79 with 12-15 microns DFT before fitment.
- xvi) Clamping to be done at the pitch of 500 mm.
- xvii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
- xviii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
- xix) Suitable drilling/ tapping should be done with the help of drilling machine for fixing/ mounting of items/ assemblies as per respective drawings.
- xx) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires as an extension board.

3.3 **Procedure for fixing of roof water tank 30 liters NPP end, PP end in LHB coaches:**

- vi) Fix the assembly of vacuum valve, hex. Double nipple, plug & equal tee female thread with the water tank as per respective drawing.
- vii) Fix the assembly of automatic float air vent valve, hex. Reduction & male female elbow with the other end of water tank as per respective drawing. Set & align the water tank (30 Liters) NPP/PP End in lavatories & fix with shell member with the help of taut bend & adequate hardware as per respective drawing.
- viii) Apply the sealing paste on the threads as per respective drawing to prevent leakage of water.
- ix) Load the water tank in the coach carefully.
- x) Set & align the water tank 30 liters NPP End/PP End in lavatories and fix with shell member with the help of taut bend and adequate hardware as per respective drawing.

3.4 **Procedure for fixing of piping arrangement for over head aux. water tanks:-**

- v) Set and fix the plug with aux. water tanks as per respective drawing.
- vi) Connect the ball valve with pipes and join the pipes to each other with the help of equal tee as per respective drawing.
- vii) Set and fix the composite pipes with aux. water tanks with the help of female elbow & hex nipple as per respective drawing.
- viii) Set and fix the composite pipes with lav. wall with the help of supporting bracket, clip and adequate hardware as per respective drawing.

3.5 **Procedure for fixing of pipe laying for water under the coach in LHB coaches:-**

- i) Set & fix the brackets/bracket complete on under-frame with the help of adequate hardware as per respective drawing.
- ii) Putting together and adjusting of adequate pipes, mounting on under frame with add-on parts & fastening with tube clip & pipe brackets with the help of adequate hardware as per respective drawing.
- iii) Set and fix the protective sheet complete and connection hose flexible on under frame with the help of adequate hardware as per respective drawing.
- iv) Set the adequate pipes installation of lavatory cells and fix the help of adequate hardware as per respective drawing.
- v) Check the pipes for tightness after fitment.
- vi) Fix the Hex nipple, Elbow, Bush and coach watering inlet with strainer at one end of water tanks and other end with the help of fixing clip as per respective drawing.
- vii) Weld the Clamp of filling flap & Angle complete with under frame as per respective drawing.

3.6 Common procedure for fixing of pipe laying for water at ORIENT-2, ORIENT-1 & EURO lavatory in coaches:-

- i) Set & fix the composite pipes with water tank with the help of hex nipple, equal elbow & adequate hardware as per respective drawing.
- ii) Connect the pipes with the help of composite internal seal tee, ball valve and adequate hardware as per respective drawing.
- iii) Fix the pipes with wall with the help of brackets & adequate hardware as per respective drawing.
- iv) Fix the bib cock with wall with the help of elbow equal & adequate hardware as per respective drawing.
- v) Fix the pipe in health faucet with the help of bracket, clamp & adequate hardware and fix the gravity coke with pipe for lotah filler as per respective drawing.
- vi) Fix the drain pipe with integrated connecting socket with the help of adequate hardware as per respective drawing.

Tentative Applicable Drawings .-

LE90007; LW90025; LW63150; LE63106; LE63160; LE63161; LE63157 ; LW63167 ;
LE63227; LE63142;

4. Scope or work of retro fitment of additional water filling arrangement in LHB Coaches-

ACTIVITY TO BE CARRIED OUT BY FIRM

- 3. Additional side filling arrangement for water tank (2X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63279.
- 4. Additional side filling arrangement for water tank (1X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63281 Alt'a'.

PROCESS PRECAUTION

Retro fitment of Additional water filling arrangement in LHB type coaches has to be done to increase the water filling rate in LHB coaches for which following additional item required for which firm has to take care at the time of Installation

- Elbow male female 32 bore
- Elbow 40 borex135 degree
- Hex nipple 40 bore
- Hex bush 40x25 bore
- Hex bush 32x25 bore
- Hex bush 50 x25 bore
- Hex nipple 32 bore
- Tee equal 32 bore
- Reducing nipple 32x15 bore
- Reducing bush 50x40 bore
- Elbow equal 40 bore
- Elbow male/female 50 bore
- Horizontal check valve
- Uclamp 25 bore
- SS Pipe Dia 33.4x3.38x620 mm.
- SS Pipe Dia 48.26X3.68X180 mm.
- Modified coach watering inlet (Additional 4 Nos.)

PROCEDURE FOR FIXING OF ADDITIONAL WATER FILLING ARRANGEMENT IN COACHES.

1 .Additional side filling arrangements for water tanks (2x685) should be implemented at the 32 bore overflow point, where overflow from one end of the lavatories occurs. This will involve the installation of a horizontal 15 bore check valve to check water flow in the overflow pipe during tank filling. On the opposite end, a side filling connection should be established at the existing 32 bore point, which is currently plugged.

2. For all filling arrangements outlined above, 25 bore stainless pipes must be utilized, along with appropriate hex bushings (32x25 bore, 40x25 bore, and 50x25 bore) as per the provided drawings.

3. To secure the pipes, 25 bore clamps are to be employed. Flats and brackets need to be welded onto the underframe at suitable locations, in accordance with the provided drawings.

4. There should not be any metal contact with watertank. All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape(Teflon tape),M-seal,Araldite &red oxide zinc chromate paste.

5. Scope of work for coach Lowering:-

- a) Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done.
- b) Coach lowering is highly safety related work for coach as well as man , Hence Man power will be deployed accordingly.
- c) Contractor will be always ready to increase the coach lowering gang at short notice, when required to railway.
- d) **Scope of Work is for Lowering of Coaches is given below** -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items-
 - i. Link pin
 - ii. Swing Link pin
 - iii. Yaw Damper
 - iv. Spring Plate
 - v. Swing Nut

- vi. Centering Disc
- vii. U sim
- viii. Ring sim-4 mm
- ix. Ring sim -2 mm
- x. Hex Head nut
- xi. Application of grease
- xii. Application of emery paper
- xiii. Application of Corrosion protector
- xiv. Before handing over checking the height of C.B.C.

NOTE.1.:

1. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
2. In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.
3. For guideline/Working instruction of installation and fitment of plumbing shall be provided by MCF/RBL/LLJ.
4. **If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.**

(D) Schedule-D

SCOPE OF WORK

1. Contractor shall complete the work of “Interior Mechanical Furnishings & Fittings in LWACCN EOG LHB type AC SS trough Coaches including plumbing work as per scope of work.”
2. Work will be carried out in MCF, Rae Bareli premises at Lalganj, (Uttar Pradesh), as per relevant drawing, working procedure, working instructions etc as mentioned in Annexure-I and II of Chapter-VII of this tender document.
3. The drawings and working instructions mentioned in Annexure-I and II of Chapter-VII of this tender document are indicative, In case of any updation, work shall be done as per latest drawing and working instructions.

(A) Scope of work :-

- a) **Flooring stage:**
 - I. After the application of Decoupling rubber & shim and before starting the floor board laying from SSE/JE/Flooring & PVC.
 - II. After completion of floor board laying & starting of the PVC from SSE/JE/Flooring & PVC.
- b) **Partition stage:** After the fitment of the partition and starting of the side wall paneling from SSE/JE/Partition.
- c) **Panel Stage:**
 - I. After the completion of the side wall paneling & starting of the ceiling paneling work from SSE/JE/Paneling.
 - II. starting of the AC loading from SSE/JE/Paneling.
- d) **Ceiling stage:** After the completion of the ceiling work & before the starting of the seat & berth work from SSE/JE/Window & Ceiling.
- e) **Moulding:** Before starting of Seat & Berth work, clearance has to be taken from moulding stage from SSE/JE/Moulding.
- f) **Plumbing Stage:-** Before starting of plumbing work, clearance has to be taken from Lav. stage from SSE/JE/Incharge.
- g) **Lowering Stage:-** before start of lowering work clearance has to be taken from Air brake section and electrical department .
- h) Co-ordinate with electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance like partition, sidewall paneling and ceiling paneling. however if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done. However the Contractor has to closely liaison with the electrical wing to get all sorts of electrical clearances required for his area of work.

Annexure-I**B. List of Furnishing activities covered under scope of work:**

- I. Fixing & Fitment of D-Coupling rubber with shim, UIC Vestibule, Gang Way Bridge mounting, Foot Step, Entrance Hand Rail, Bottom Plate (Chequered Sheet), Step Rail, Door Stopper, Tail Lamp Bracket, Floor Board fixing and PVC laying for LWACCN, Thermo Welding of PVC Floor, Bottom Plate (Chequered Sheet) and Chair pillars in EOG Type Coaches with FIAT Bogies as per latest applicable drawings.
- II. Fixing & Fitment of Panels on Partition Frames between compartment, Compartment and Doorway, Folding Tables in coaches.
- III. Fixing & Fitment of Window in Lavatory, Side Wall Panels, Window arrangement and Emergency Window (except Lav. Windows) in Transverse, Longitudinal Berth Side and other area, Roof Ceiling/Roof Panels, Doorway Ceiling in coaches.
- IV. Fixing & Fitment of Partition Frames between Lavatory and End Wall, Lavatory Air Exhauster, Panelling & Moulding of Lavatory Sidewall, Lavatory Ceiling, Panelling & Moulding for Ceiling of Gangway, inside Wash Basin and Drain Pipe cover, Lavatory Door arrangement R.H. & L.H, Mirror in Lavatory, Panelling Pipe laying Mounting, Lavatory Bowl Facing-2, Euro Bowl assembly complete and Lavatory Bowl Facing-2 Mounting, Panelling & Moulding of Partition Frame between Doorway & Lavatory, Lavatory & Gangway, Lavatory & End Wall, Mounting the Wash Basin outside Lavatory, Waste Bin arrangement, Attachment Wall arrangement, furnishing plate and RFID in coaches.
- V. Fixing & Fitment of End Wall Panel and Moulding NPPE/PPE end, End Wall Door, Mouldings on Side Wall/Partition Frame/Roof, Entrance Door, Corner Panels, Swivel Coat Hooks in coaches.
- VI. Fixing & Fitment of Seat and Berths arrangement, Ladders, Compartment Mirror, Foldable Bottle Holder in coaches.
- VII. Fitment of Partition Pillar, Honeycomb Partition, Linen Rooms & Almirah etc. along with Holding Extrusions as per latest applicable drawings.
- VIII. Fixing & Fitment of Side Wall Panels, Extrusions for Curtains, Roof Mounted AC unit, Return Air Grills, Air Circulation/Supply installations its related work as per latest applicable drawings.
- IX. Fixing of the Air Inlet Duct, Aluminum Extrusions with Roof Members and Fixing of Passenger Room Ceiling including Diffuser assemblies with Extrusions & Gangway/ Doorway/Vestibule area (Non AC Area) Ceiling along with Members as per latest applicable drawings.
- X. Fixing & Fitment of all type of Window Gluing, Window opening & Refixing and Window Rubber fitment as per latest applicable drawings.
- XI. Fixing & Fitment of Lavatory Module (knock down) along with all accessories & all mountings for LWACCN EOG Type coaches with FIAT Bogies as per latest applicable drawings.
- XII. Fixing & Fitment of Curtains, Seats & Berths with all accessories & mountings for LWACCN EOG Type coaches with FIAT Bogies as per latest applicable drawings.
- XIII. Loading RMPU and their proper installation/ fitment .
- XIV. Fixing & Fitment of Entrance Doors, Compartment Doors, Vestibule Doors & its related paneling & moulding work for LWACCN EOG Type coaches with fiat bogies as per latest applicable drawings.
- XV. Lowering of coach -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines.
- XVI. Plumbing- Installation of complete plumbing accessories and their working i.e. loading of various tank, water piping , bibcock fitment , LIP, LOP, LIC, LOC, water filling and testing etc. of LWACCN coaches as per latest drawing.

C. APPLICABLE REFERENCE DRAWINGS

SN	REFERENCE DRAWINGS	DESCRIPTION
1.	LE90068	GENERAL INSTALLATION
2.	LE41110	FLOOR COMPLETE
3.	MI004112	DOOR STOPPER.
4.	LE24101	HAND BAR MOUNTING
5.	LW41106	STEPS COMPLETE MOUNTING.
6.	1 10113.0.24.100.001	INTER CAR GANGWAY MOUNTING.
7.	1 10113.0.24.120.001	GANGWAY BRIDGE MOUNTING.
8.	1 10113.0.39.120.002	UIC VESTIBULE ARRANGEMENT.
9.	2 10113.0.10.300.001	TAIL LAMP BRACKET.

10.	LE24103	HANDLE
11.	LE10002	LAYOUT OF PARTITION FRAME
12.	LE64223	LAYOUT OF LINEN ROOM ARRANGEMENT
13.	LE56001	DOOR ARRANGEMENT
14.	LE44118	AC SYSTEM ARRANGEMENT
15.	LE44072	SIDE WALL PANELING PASSENGER ROOM
16.	1 10113.0.29.400.007	EXHAUST AIR WC/SWITCH BOARD CAB
17.	LE44070	CIRCULATING AIR DUCT
18.	LE44100	PASSENGER ROOM CEILING
19.	LW44452	NON AC AREA CEILING
20.	LE44117	AIR INLET DUCT COMPLETE
21.	LE64001	FIXING ARRGT. OF AL. EXTRUSION
22.	LE54100	WINDOW ARRANGEMENT.
23.	LW54101	FIXED WINDOW.
24.	LW54102	EMERGENCY EXIT WINDOW.
25.	LW64169	LOCATION OF HAMMER BOX
26.	LE63100	WASTE BIN ARRANGEMENT AND MOUNTING.
27.	2 10113.0.12.095.012	COVER COMPLETE.
28.	LE44001	INTERIOR PANELLING ARRANGEMENT.
29.	LE63001	SANITARY FACILITIES COMPLETE.
30.	LE62100	LOCATION OF INTERIOR FITTING
31.	1 10113.0.21.320.001	END WALL PANELLING
32.	LW63182	MIRROR 1, MOUNTING.
33.	2 10113.0.30.095.121	SOAP DISPENCER 2 MOUNTING.
34.	2 10113.0.30.095.122	SOAP DISPENCER 2 MOUNTING.
35.	1 10113.0.30.130.005	LAVATORY BOWL EUROP., MOUNTING.
36.	1 10113.0.30.130.003	LAVATORY BOWL ORIENT, MOUNTING.
37.	1 10113.0.75.100.001	FIRE EXTINGUISHER ARRGT & MOUNTING.
38.	LE62100	LOCATION OF INTERIOR FITTINGS
39.	LA62102	LUGGAGE RACK
40.	LW64136	MIRROR COMPLETE
41.	LW64218	SNACK TABLE WITH BOTTLE HOLDER
42.	LE64004	LAYOUT OF CURTAINS ARRANGEMENT.
43.	MI007106	SEAT AND BERTH ARRANGEMENT.
44.	1 10113.0.21.320.001	END WALL PANEL NPPE/PPE COMPLETE MOUNTING

Note:

- v. Modified drawings or drawing of latest alteration shall be applicable.
- vi. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.

Annexure-II**WORKING PROCEDURES****• FOR LWACCN COACHES**

SN	ACTIVITY	WORKING PROCEDURE
6.	FIXING & FITMENT OF TAIL LAMP BRACKET IN LWACCN COACHES	B. Set & fix the tail lamp bracket on end wall with the help of screws & washers as per respective drawing.
7.	FIXING & FITMENT OF FOOT STEP IN LWACCN COACHES	B. Set & fix the Footstep arrangement on all doors with the help of adequate hardware as per respective drawing.
8.	FIXING & FITMENT OF ENTRANCE HAND RAIL IN LWACCN COACHES	B. Fix the entrance hand rail for all doors with door corners with the help of adequate hardware as per respective drawing. SIKAFLEX 221 or 243 to be provided between door corner and entrance hand rail as per respective drawings.
9.	FIXING & FITMENT OF	G. Clean the holes on the end wall and Re-tap all the holes.

	GANG WAY BRIDGE MOUNTING IN LWACCN COACHES	H. Set & fix clamping piece and plate spring on head stock with the help of adequate hardware as per respective drawing.
		I. Set & fix the roller with Gangway Bridge with the help of adequate hardware as per respective drawing.
		J. Set the gangway bridge in sliding block as per respective drawing.
		K. Set & fix the support block (LH & RH) with sliding block with the help of adequate hardware as per respective drawing.
		L. Check the functioning of Gangway Bridge after application of proper lubrication.
10.	FIXING & FITMENT OF UIC VESTIBULE IN LWACCN COACHES	H. Clean the holes on the end wall and Re-tap all the holes.
		I. Fix the studs on all re-tapped holes and ensure the tightness of all studs.
		J. Paste the rubber packing on locking plates of lateral side flange as well as upper flange assemblies with the help of general purpose adhesive.
		K. While loading of lateral side flange & upper flange assemblies care should be taken to ensure that the Special screw should match with the studs provided in the End walls, where UIC vestibule is to be fixed.
		L. Ensure that proper matching of concave position of the lateral side flange & convex position of the upper flange.
		M. Fix the lateral side flange with the help of adequate hardware from the bottom side & than top side of the flange.
6.	FIXING OF DECOUPLING ARRANGEMENT IN LWACCN COACHES	N. Set & fix the upper flange with the help of adequate hardware from both ends as per respective drawing.
		F. Clean the channel before fixing/inserting the absorption strip.
		G. Insert/Fix the absorption channel pre-welded on the trough floor as per respective drawing.
		H. Insert the stainless steel strip into the absorption strip as per respective drawing.
		I. Check the level with the help of straight bar.
7.	FIXING OF FLOOR BOARD IN LWACCN COACHES NOTE: 7. ALL PACKING MAY BE USED FROM OFF CUTS. 8. NECESSARY CUT-A-WAYS IN COMPREG BOARDS & PVC SHEET TO BE MADE TO SUIT AT SITE 9. NO BOARD HAVING A WARPING OF MORE THAN 4 MM ON ITS WIDTH SHOULD BE USED. 10. AFTER FURNISHING, THE FLOOR MAY BE	J. Rubber packing provided on the top of absorption strip with the help of glue whereas required for proper leveling.
		L. Clean the entire trough floor area for unwanted/foreign material before loading the required floor board inside the respective coach.
		M. Load the required Makore/Compreg board inside the respective coach as per respective drawing.
		N. Lay floor board inside the coach in passenger compartment,
		O. Doorway and gangway area with proper matching with each other from one end as per respective drawing.
		P. Provide suitable packing below lav. module bottom collar in gangway and door way side as per respective drawing.
		Q. Half lap joints of floor board should be properly matching with each other and then fix the floor board on D-coupling with the help of screws as per respective drawing.
		R. Set & fix the skirting with side wall/lav. Module on floor board with the help of adequate hardware as per respective drawing.
		S. Set & paste the FRP profile above PVC on skirting in lav. With approved brand of glue as per respective drawing.
		T. Apply putty on the floor board joints and grind with the help of grinder.
		U. Seal all the joints in doorway, gangway & side wall with the help of sealing material as per respective drawing.
		V. The head of screw should be leveled by applying epoxy putty. This will ensure smooth level for perfect laying of PVC flooring sheet & also avoid water seepage through screw holes or joints.

	<p>CHECKED TO ENSURE THAT THERE ARE NO UNEVEN JOINTS OR SAGGING. IT MAY BE CHECKED WITH THE HELP OF STRAIGHT EDGE. JOINTS HAVING MORE THAN 02 MM STEP OR SAGGING OF MORE THAN 2.5 MM BETWEEN THE ADJACENT CROSS BEARERS SHOULD NOT BE PERMITTED.</p> <p>11. COMPREG BOARDS SHOULD BE PLAIN ON BOTH SIDES.</p> <p>12. ALL GAPS TO BE SEALED WITH SEALANT – SIKAFLEX – 221.</p>	
8.	FIXING OF FLOOR END PROFILE IN LWACCN COACHES	B. Set & fix shim, Al. extrusion and floor profile with floor board & body side wall pillar with the help of adequate hardware as per respective drawing.
9.	<p>PVC LAYING & WELDING IN LWACCN COACHES</p> <p>Note:- This has to be done after the activity of putty application and grinding. Appropriate time has to be given for putty drying and thereafter to be grinded for better adhesion. Proper cleaning of the floor to be ensured before applying PVC.</p>	<p>I. Clean the Plywood floor surface for any dust and foreign particles so as to achieve a good adhesion between PVC and Plywood.</p> <p>J. Spread open the PVC roll and spread a thin and even layer of adhesive with the help of notched trowel (secretor) on the plywood floor.</p> <p>K. Also apply adhesive on the rough reverse side of PVC roll/sheet thinly and evenly as above.</p> <p>L. Allow some time for solvent evaporation to prevent solvent vapors being entrapped. As soon as the adhesive becomes touch dry both on the floor and the PVC flooring, press down the sheet in position gently and gradually from one end taking care to prevent air from being entrapped. Follow same procedure for the other half of the same roll.</p> <p>M. After adhesive of the first roll is over, apply pressure on the flooring with a steel roller of 25 kg (approx.) so as to obtain perfect adhesion between PVC flooring and plywood floor and to eliminate air being entrapped.</p> <p>N. The second roll/sheet shall be laid in position, overlapping the first roll/sheet by about 5 to 10mm while spreading the roll.</p> <p>O. "Trim in" the length by placing a straight edge along the centre of over lapped edges and with a sharp knife cut through both thickness of PVC flooring at the same time. Pull out the overlapped edges of top and bottom of PVC flooring and press the same to the plywood floor to obtain perfect butt joint.</p> <p>P. Proper thermo-welding of PVC flooring is almost necessary for obtaining satisfactory bonding results. Thermo-welding of PVC flooring provides impervious continuous floor surface.</p>
10.	FIXING OF BOTTOM PLATE (CHEQUERED SHEET) IN LWACCN	D. Mark, drill & counter sunk the Aluminum chequered sheet /Bottom plate for fixing purpose over PVC sheet/Floor boards as per drawing

	COACHES	E. Clean the surface of PVC, set & fix the aluminum chequered sheet over PVC sheet/Floor board with the help of adequate hardware as per drawing
		F. Apply the adhesive on the periphery of the chequered sheet so that the dust particles & water could not be entered in between the PVC sheet & chequered sheet.
11.	FIXING OF DOOR STOPPER IN LWACCN COACHES	B. Mark, Drill, Set & fix the door stoppers for body side doors on doorway area with the help of adequate hardware as per respective Drawing.
14.	FIXING OF STEP RAIL IN LWACCN COACHES	C. Mark, Drill & tap the door way members and chequered sheet for fixing of step rails with the help of adequate hardware as per respective drawing.
		D. Set & fix the step rail on above said position with the help of adequate hardware as per respective drawing.
15.	LAYING OF FALSE PVC/TETRON SHEET. IN LWACCN COACHES	C. Cover the floor area with false PVC/Tetron sheet with the help of cobbler nails to save the laid PVC from damage, unwanted marks & dust which shall be removed at time of Gate out of coaches from MCF/RBL
14.	FIXING OF PARTITION FRAMES IN COMPARTMENT AREA (TRANSVERSE/LONGITUDINAL SIDE) IN LWACCN COACHES	J. Load the partitions on the coach carefully for fitment.
		K. Set & align the honeycomb P/Frames with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing.
		L. Set the honeycomb P/Frames on the above fitted al. extrusions and fix with side wall & roof member with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level.
		M. Set & fix the al. extrusions on the floor to the other side of partition frames with the help of adequate hardware as per respective drawing.
		N. In case of AC3T coaches the fixing of partition frames with roof members is to be done through Angle extrusion with the help of adequate hardware as per respective drawing.
		O. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position.
		P. Drill and tap the holes on above marked position as per respective drawings.
		Q. Set the pillar assemblies with P/Frames and fix on the floor & roof members with the help of adequate hardware as per respective drawing.
		R. In case of AC3T coaches, first fix the channel extrusions on the pillar assemblies as per drawing, then Set the pillar assemblies with P/Frames and fix on the floor & roof members with the help of adequate hardware as per respective drawing. Fix the partition frames with the channel extrusions with the help of adequate hardware as per respective drawings.
19.	FOR FIXING THE PARTITION FRAMES IN OTHER THAN COMPARTMENT AREA IN LWACCN COACHES	K. Load the partitions in the coach for fitment.
		L. Set & align the honeycomb P/Frames with the help of plumb and mark on the floor for fixing the aluminum extrusion. Fix the aluminum extrusions on the floor with the help of adequate hardware as per respective drawing.
		M. Set the honeycomb P/Frames on the above fitted al. extrusions and fix with side wall/roof member/pillar assembly (already fitted) with the help of adequate hardware as per respective drawing. Care should be taken that the erection of partition frame should be perpendicular to the floor level.
		N. Set & fix the al. extrusions on the floor to the other side of

		partition frames with the help of adequate hardware as per respective drawing.
		O. In case of AC3T coaches the fixing of partition frames with roof members is to be done through Angle extrusion with the help of adequate hardware as per respective drawing.
		P. Mark and fix the channel extrusions on the pillar assemblies as per respective drawings.
		Q. Set & align the pillar assemblies in respect to the roof members and mark on the floor for holes position.
		R. Drill and tap the holes on above marked position as per respective drawings.
		S. Set the pillar assemblies with P/Frames and fix on the floor & roof members with the help of adequate hardware as per respective drawing.
		T. Fix the partition frames with the channel extrusions with the help of adequate hardware as per respective drawings.
20.	FOR FITMENT OF AIR INLET DUCT COMPLETE WITH ROOF MEMBERS IN LWACCN COACHES	G. Fix the insulation material on the outer surface of ducts as per respective drawing.
		H. Load the ducts in the coach and apply the sealing material on the sealing surfaces as per drawings.
		I. Insert, align & fix the air ducts to each other and with roof members in sequence (starting from one end to other end) with the help of adequate hardware as per respective drawings.
		J. Set and fix the connection part, compensation part and connector at the both ends with the help of adequate hardware as per respective drawings.
		K. Paste the Insulation at the bottom side of connection box as per respective drawings.
		L. Set and fix the perforated metal sheets on the ducts with the help of adequate hardware as per respective drawings.
21.	FOR FITMENT OF CIRCULAR AIR SYSTEM/DUCT COMPLETE NPPE & PPE WITH ROOF MEMBERS IN LWACCN COACHES	E. Set and align the End connections/Return air ducts/Circulating air box/connecting ducts at the both ends of coach with the help of sealing material as per respective drawings.
		F. Fix the End connections/Return air ducts/Circulating air box/connecting ducts with the help of clamp/adequate hardware as per respective drawings.
		G. Set and fix the Grills on the return air ducts with the help of sealing/insulation & adequate hardware as per respective drawings.
		H. Mark, set & fix/embedded/laminated the Bracket for hygostat mounting & Brackets for temperature sensor mounting with the help of adequate adhesive/hardware as per respective drawings.
22.	FIXING THE ALUMINUM EXTRUSIONS WITH ROOF MEMBERS AND FIXING OF CEILING ARRANGEMENT/ DIFFUSER ASSEMBLIES WITH EXTRUSIONS & SIDE WALL MEMBERS IN COMPARTMENT & GANGWAY/ DOORWAY/ VESTIBULE AREA IN LWACCN COACHES	G. First set and fix the Aluminum Extrusions with roof members with the help of brackets & appropriate hardware as per respective drawings. The center ceiling profiles, if applicable (as in IInd Class AC chair car) are to be fixed with roof members using the mounting caliber with the help of shim, thread plate, bracket & appropriate hardware as per respective drawings.
		H. Set and fix the hammer head bolts in the extrusions with the help of appropriate hardware as per respective drawings.
		I. Set and fix the sealing strips/ sealing angles/ mounting angles/ back moldings with partition frames/ side wall members/ roof members with the help of appropriate hardware/ supporting brackets/ aluminum extrusions/ spacer as per respective drawings.
		J. Fix the sealing foam/ self adhesive insulation where as required on the sealing strips/ angles as per respective drawings.
		K. Set, align and fix the ceiling assemblies/ diffuser assemblies with

		extrusions & side wall members with the help of angles/ brackets/ shims & appropriate hardware as per respective drawings.
		L. Set, align and fix the ceiling plates in position with the help of angles/ brackets/ shims & appropriate hardware in gangway/ doorway/ vestibule area as per respective drawings.
19.	FOR FIXING THE FIXED WINDOWS, EMERGENCY WINDOWS AND LAVATORY/ PIVOT WINDOW WITH SIDE WALL IN LWACCN COACHES	L. Load the windows in the coach and remove the packing.
		M. Clean the sealing area of windows with cleaner, flashing off and cover by using adhesive tape as per respective drawings.
		N. Clean the windows cut outs with cleaner, flashing off and cover by using adhesive tape as per respective drawings.
		O. Apply the primer on window elements and flashing off as per respective drawing.
		P. Apply the remover on window cut out and flashing off as per respective drawing.
		Q. Marking and glue the plates in equal distance to the outer surface of window frame as per respective drawings.
		R. Sealing the opening between horizontal member and window column with Sikka flex as per respective drawing before fitment of windows.
		S. Apply the Sikka flex on the window element, insert, align & fix the windows in the sidewall cutouts with the help of clamping fixture as per respective drawings.
		T. Remove the Sikka flex from the outer surface of windows; polish the surface with the help of Sikka polish for smoothness as per respective drawings.
		U. Remove the adhesive tapes from the outer surface and clean the surface with cleaner as per drawings.
		V. Remove the clamping fixture after proper fixing & drying of Sika flex of windows with the side wall after 24 hours (approx.).
21.	FOR FIXING OF SIDE WALL PANELS ON NPPE & PPE AREA IN LWACCN COACHES	F. Paste the RKE plates on the side wall members with the help of suitable adhesive as per respective drawings.
		G. Remove the SIKA from the area where the panels are to be mounted with the help Sika remover, clean the surface with the help of Sika cleaner and after cleaning, primer the surface with the help of Sika primer as per respective drawings.
		H. Paste the shims on the side wall members with the help of suitable adhesive and apply the sealing beads with Sika flex as per respective drawings.
		I. Positioning, aligning & drilling the holes (with the help of drilling machine) of HPL side wall panels and mount with side wall members with the help of appropriate hardware as per respective drawings.
		J. Fill the gaps at the joints with sealing material as per respective drawings.
21.	FOR FIXING OF SIDE WALL PANELS IN LWACCN COACHES	L. Mark the locations on side wall members for mounting of brackets/compreg plywood/MDF packing. Drill the holes on above marked positions and tap as per respective drawings.
		M. Fix the all brackets for switch board mounting/(brackets/ compreg plywood/MDF packing) for panel mounting/brackets for luggage rack & mirror mounting/ with side wall members with the help of appropriate hardware as per respective drawings.
		N. Mark and cut the sealing in required dimension as per respective drawing.
		O. Clean the surface of side wall area where the sealing is to be glued.
		P. Paste the ceiling on side wall/side wall panels for leveling purpose as per respective drawings.
		Q. Marking, drilling and Tapping in side wall member for mounting of curtain extrusion as per respective drawings.

		R. Set and fix the curtain extrusion with side wall member with the help of mouldings and appropriate hardware as per respective drawings.
		S. Marking, Drilling and Tapping in side wall member, brackets and panels for fixing of 3-M pressure lock as per respective drawings.
		T. Set and fix the 3-M pressure lock on above said position with the help of moulding/shim and appropriate hardware as per respective drawings.
		U. Set & align the side wall panels at the location, press and fix with the help of 3-M pressure lock (already provided with side wall members & panels) as per respective drawings.
		V. Drill the holes in window area with the help of drilling machine & fix the panels with side wall member with the help of appropriate hardware as per respective drawings.
		G. Set and fix the fresh air bellow, return air duct bellow, circulation air duct bellow with shell member with the help of appropriate hardware as per respective drawings.
		H. Set and fix the brackets with stud (already welded with roof element) with the help of appropriate hardware as per respective drawings.
		I. Set and fix the mounting pad on all brackets with the help of appropriate hardware as per respective drawings.
		J. After proper cleaning of AC trough, Lift the AC unit with the help of mobile Crane, align, set & fix on the mounting pad with the help of appropriate hardware as per respective drawings.
		K. Set and fix another end of all bellow with AC unit with the help of appropriate hardware as per respective drawings.
		L. Provide wooden packing between body shell and AC unit if necessary and applying Sika flex.
		M. NOTE: - In case of LHB AC coaches with conventional furnishing, the AC trough is not to be mounted and the rubber sealing is to be pasted with the shell member with the help of suitable adhesive where AC unit is to be rested as per respective drawings.
30.	FIXING OF DOOR FRAME PORTAL IN LWACCN COACHES	D. Positioning the C-type rail with shell member at door area, marking, drilling the holes and fix with the help of adequate hardware as per respective drawings.
		E. Insert the hammer head bolts in the C-rails and fix the brackets with bolts with the help of adequate hardware as per respective drawings.
		F. Set the door frame panels at the location, drilling, tapping and fix with shell member with the help of adequate hardware as per respective drawings.
31.	FOR FIXING OF END WALL DOOR FOR LWACCN COACHES	F. Load the end wall doors in the coach carefully.
		G. Drill the holes in shell member for fixing of end wall door with the help of drilling template and tapping the holes as per respective drawings.
		H. Marking, drilling, tapping the holes in floor and fix the guide rail enclosure, guide rail side and guide rail middle with the help of adequate hardware as per respective drawings.
		I. Set, align and mount the end wall door at location with the help of adequate hardware as per respective drawings.
		J. Check the proper functioning of end wall door as per instruction given in the respective drawings.
32.	FOR FIXING OF ENTRANCE DOOR IN FOR LWACCN COACHES	I. Load the entrance doors in the coach carefully.
		J. Mark & drill the holes on shell member for fixing of door accessories with the help of drilling caliber & threading as per respective drawings.
		K. Set & fix the sealing, gasket, gasket fixing plate, upper locking,

		lower locking, and brackets on above marked position with the help of adequate hardware as per respective drawings.
		L. Mount the door on it hinge/pivot, aligning & make it lockable with the help of adequate hardware as per respective drawings.
		M. Set, align and fix the step complete on floor with the help of adequate hardware as per respective drawings.
		N. Drill the holes on step complete with the help of drilling template for fixing of pivoted arm complete as per respective drawings.
		O. Set and fix the pivoted arm complete with the help of adequate hardware as per respective drawings.
		P. Check the proper functioning of door.
33.	FIXING OF SWIVEL COAT HOOKS FOR LWACCN COACHES	C. Mark and drill the holes in the partition frame/side wall panel for fixing of swivel coat hooks as per respective drawings.
		D. Set and fix the swivel coat hook on above marked position with the help of adequate hardware as per respective drawings.
34.	FOR FIXING OF ALLUMINIUM EXTRUSION IN LWACCN COACHES	C. Mark and drill the hole in shell member passing through floor end profile/floor for fixing of aluminum extrusions as per respective drawings.
		D. Set and fix the aluminum extrusions at above drilled position with the help of adequate hardware as per respective drawings.
35.	FOR MAKING THE LINEN ROOM ARRANGEMENT IN LWACCN COACHES	F. Load the assemblies of plywood & LP sheet in the coach carefully.
		G. Place the plywood boards on floor in linen room area and fix with floor/partitions with the help of al. extrusions/channel moulding/angle moulding and adequate hardware as per respective drawings.
		H. Set, align and fix the other horizontal & vertical plywood boards to each other/partitions with the help of al. extrusions/channel moulding/angle moulding/piano hinges and adequate hardware as per respective drawings.
		I. Mark, set and fix the tower bolt/industrial lock with the help of adequate hardware as per respective drawings.
		J. Necessary cuts in plywood to be provided at suit at site if required.
36.	FOR FIXING OF COMPARTMENT DOORS AND SAFETY WALLS IN LWACCN COACHES	I. Set and align the mounting frame with partition pillars and mark, drill and fix with the help of adequate hardware as per respective drawings.
		J. Mark the location of holes on above mounting frame and partition pillars for fixing of channel mouldings as per respective drawings.
		K. Drilling & tapping the holes on above marked position and fix the channel mouldings with the help of adequate hardware as per respective drawings.
		L. Set and align the door at location and mark the position of holes on frame for fixing of door hinges as per respective drawings.
		M. Drilling and tapping the holes on above marked position and fix the door with frame with the help of adequate hardware as per respective drawings.
		N. Set, align and fix the safety walls with frame/partition pillars with the help of adequate hardware as per respective drawing. (The channel moulding on safety walls/compreg panel is to be fixed before assembled at the location if applicable.)
		O. Set, align and fix the arm of door closer with frame and rubber buffer with safety walls (if applicable) with the help of adequate hardware as per respective drawings.
		P. Check the proper functioning of door.
30.	FOR MAKING THE LINEN ROOM ARRANGEMENT IN LWACCN COACHES	I. Load the assemblies of makore board & HPL sheet in the coach carefully.
		J. Mark and drill the hole in side wall member for fixing of stopper and wooden packing as per respective drawings.
		K. Set, align and fix the stopper and wooden packing at above drilled

		position with the help of adequate hardware as per respective drawings.
		L. Set and fix the side panel with stopper and wooden packing with the help of adequate hardware as per respective drawings.
		M. Set and fix the angle moulding on side panel/back panel with the help of adequate hardware as per respective drawings.
		N. Set and fix the assemblies of makore board & HPL sheet with angle moulding and z-member with the help of adequate hardware as per respective drawings.
		O. Set, align and fix the door flap with guide rail & channel (only upper side) on upper and lower assemblies of makore board & HPL sheet with the help of adequate hardware as per respective drawings.
		P. Set and fix the hasp & staple and tower bolt on door flap with the help of adequate hardware as per respective drawings.
46.	FOR OPPOSITE SIDE LINEN ROOM	F. Load the panels in the coach carefully.
		G. Place the panels on floor in linen room area and fix with floor/partitions with the help of channel moulding/angle moulding and adequate hardware as per respective drawings.
		H. Set, align and fix the other horizontal & vertical panels to each other/partitions with the help of channel moulding/angle moulding/piano hinges and adequate hardware as per respective drawings.
		I. Mark, set and fix the handle and industrial lock on door panel with the help of adequate hardware as per respective drawings.
		J. Necessary cuts in panels to be provided at suit at site if required.
47.	FOR FIXING OF ALMIRAH AND DOOR FOR LINEN ROOM IN LWACCN COACHES	B. Mark, drill, set & fix the almirah at location with the help of adequate hardware as per respective drawings.
48.	FOR MOUNTING ARRANGEMENT OF FRP COMPOSITE LAVATORY MODULE (KNOCKDOWN) WITH LAVATORY DOOR IN LWACCN COACHES	L. Remove the all packing from FRP composite lavatory Modules (knockdown) and unwanted material from inside coach lavatory trough floor area.
		M. Load the complete FRP composite lavatory module (knockdown) by suitable arrangement through doorway and assembling the sidewalls, trough, attachment walls & roof of the FRP lavatory Module (knockdown).
		N. Set & fix the locators with the bottom of lavatory module trough for easy locating of fixing hole.
		O. Set & mark the hole position on lavatory area inside the coach with the help of matching template no.93.10.72.19973 & 74 in case of Indian style and western style lavatory module respectively as per respective drawings.
		P. Remove the template and drill the hole of required size with the help of suitable drilling machine & drill for fixing the lavatory Modules in the base plate as per respective drawing.
		Q. Set & fix the lavatory Module on the base with the help of required hardware as per respective drawings.
		R. Load the all sidewalls of lavatory Modules on the coach for fixing with trough.
		S. Set & fix the all required brackets with sidewall & end wall for fixing of module sidewall with the help of required hardware as per respective drawings.
		T. Set & fix the Module sidewall with trough, sidewall & end wall as per respective drawings.
		U. Set & fix the roof panels and attachment walls after completion of plumbing & electrical related work with the help of required hardware as per respective drawings.
		V. Set & fix the lavatory Door with FRP lavatory Module with the help of required hardware as per respective drawings.

		W. Set & adjust the lavatory Door for proper functioning.
49.	FOR FIXING OF ATTACHMENT WALL ARRANGEMENT & LOCK IN LWACCN COACHES	F. Load the attachment wall in the coach for fitment.
		G. Fix the hinge bracket with one end of attachment wall with the help of adequate hardware as per drawings.
		H. Fix the industrial lock with another end of attachment wall and on lavatory module at proper place with the help of adequate hardware as per drawings.
		I. Fix the attachment wall with side wall member with hinge bracket with the help of adequate hardware as per drawings.
		J. Close the attachment wall with industrial lock at the second end.
		H. Fix the mirror cushion packing in mirror holder as per drawing.
50.	FOR FIXING OF MIRROR IN LAVATORY IN LWACCN COACHES	I. Fix the mirror in mirror holder.
		J. Fix the mirror with mirror holder with drilling & tapping during mounting as required.
		K. Cut the required length of VHB tape with the help of suitable knife for mirror fixing as per respective drawing.
		L. Clean the mirror surface where VHB tape to be pasted with the help of suitable solvent.
		M. Paste the VHB tape on the cleaned surface of the mirror.
		N. Fix the mirror LH mounting with the help of 3M VHB TAP 4956, as per respective drawing.
51.	LORO FITTING & OUTFLOW MOUNTING & ADDITIONAL HOLE LORO	B. shall be done as per applicable drawings ensuring job quality, fitment quality & Coach Aesthetics as par standard.
52.	INSTALLATION OF EXHUST SYSTEM IN LAVS	
53.	ALL LAVATORY CEILING, ADDITIONAL WALL & ATTACHMENT WALL OPENING & REFITTING	
54.	FOR FIXING OF LAVATORY CEILING IN LWACCN COACHES	C. Load the lavatory ceiling parts in the coach for fitment.
		D. Fix the all parts of lavatory ceiling in the lavatory with lavatory ceiling frame with the help of adequate hardware as per the appropriate drawings.
55.	FOR FIXING OF NAME PLATE (BUILDER PLATE) IN LWACCN COACHES	D. Set the builder plate on sole bar & mark the location for drilling the holes for fitment as per drawings.
		E. Drilling/tapping the holes on above mark location as per respective drawings.
		F. Set & fix the name plate (builder plate) on sole bar above foot step with the help of adequate hardware as per respective drawings.
56.	FOR FIXING OF LUGGAGE RACK IN LWACCN COACHES	D. Mark the location for holes in side wall members as per respective drawings.
		E. Drilling the holes at above marked position and tapping as per respective drawings.
		F. Set, align & fix the luggage racks at above location with the help of adequate hardware as per respective drawings.
57.	FOR FIXING OF MIRROR IN LWACCN COACHES	C. Mark and drill the holes in side wall as per respective drawing for fixing of mirrors.
		D. Set & fix the one end of hinge of mirror assembly at above drilled position with the help of adequate hardware as per respective drawings.
58.	FOR FIXING OF BOTTLE HOLDER IN LWACCN COACHES	C. Mark and drill the holes in partition frame/partition pillar/side wall for fixing of bottle holder as per respective drawings.
		D. Set & fix the bottle holder at above drilled position with the help of adequate hardware as per respective drawings.
59.	FOR FIXING OF SNACK TABLE/FOLDING TABLE IN LWACCN COACHES	C. Marking, drilling and tapping (if required as per drawing) the holes in side wall for fixing of snack table/folding table as per respective drawings.
		D. Set and fix the snack table at above said position with the help of

		adequate hardware as per respective drawings.
60.	FOR FIXING OF FOLDING SEAT IN LWACCN COACHES	B. Mark and drill the hole in partition frame and fix the folding seat/attendant seat at location with the help of adequate hardware as per respective drawings.
61.	FOR FIXING OF SEAT & BERTH ARRANGEMENT IN LWACCN COACHES	P. Load the components of seats arrangement in the coach carefully.
		Q. Marking, drilling and tapping the holes in side wall members for fixing of chair angle/support for back rest as per respective drawings.
		R. Set and fix the chair angles/ support for back rest with side wall members with the help of adequate hardware as per respective drawings.
		S. Marking, drilling and tapping the holes in floor for fixing of chair angle (except longitudinal Side in AC-2T (SG) with ICF bogie) as per respective drawings.
		T. Set and fix the chair angles with floor and partition pillar (pre drilled & taped hole) with the help of adequate hardware as per respective drawings.
		U. Mark, drill and fix the arm rest complete LH & RH and bearing brackets (side wall side) on the chair angles with the help of adequate hardware as per respective drawings.
		V. Set & fix the seat complete (lower) with chair angles with the help of adequate hardware as per respective drawings.
		W. Set the back rest at location with bearing bracket (side wall side), insert the other bearing bracket in back rest and fix the bearing bracket with chair angle with the help of adequate hardware as per respective drawings.
		X. Marking, drilling and tapping the hole in side wall member for fixing of mounting angle (for upper berth) as per respective drawings.
		Y. Set and fix the mounting angle with side wall and mounting bracket (longitudinal side) with side wall and partition pillar with the help of adequate hardware as per respective drawings.
		Z. Set & fix the upper berth (longitudinal and transverse Side) with mounting angle/mounting bracket with the help of adequate hardware as per respective drawings.
		AA. Mark, drill and tape the hole in upper berth for fixing of safety rail as per respective drawings.
		BB. Set and fix the safety rail on upper berth with the help of adequate hardware as per respective drawings.
		CC. Mark and drill the hole in longitudinal side back rest for fixing of tower bolt assembly as per respective drawings.
		DD. Set, align and fix the tower bolt assembly with longitudinal side back rest with the help of adequate hardware as per respective drawing.
62.	FOR FIXING OF CONDUCTOR'S BERTH ARRANGEMENT IN LWACCN COACHES	G. Mark and drill the holes on linen room partition for fixing of plate/bearing piece/bracket complete/bracket as per respective drawings.
		H. Insert the seat in bracket, bracket complete and set & fix the seat with bracket, bracket complete on linen room partition with the help of adequate hardware as per respective drawings.
		I. Set and fix the bearing piece/plate on linen room partition with the help of adequate hardware as per respective drawing.
		J. Fix the chain assembly with bearing piece/plate as per respective drawings.
		K. Marking, drilling and tapping the holes on linen room partition for fixing of catch arrangement as per respective drawings.
63.	FOR FIXING OF SEAT & BERTH ARRANGEMENT IN LWACCN COACHES	L. Fix the catch arrangement on partition with the help of adequate hardware as per respective drawings.
		A. Load the components of seats arrangement in the coach carefully.
		B. Set and fix the chair angles/ support for back rest with side wall members with the help of adequate hardware as per respective drawings.
		C. Set & fix the transverse seat/single seat with chair angles with the

		help of adequate hardware as per respective drawing.
		D. Set and fix the bearing bracket with chair angle (longitudinal side) with the help of adequate hardware as per respective drawings.
		E. Set the back rest at location with bearing bracket (side wall side), insert the other bearing bracket in back rest in longitudinal side and fix the bearing bracket with chair angle with the help of adequate hardware as per respective drawings.
		F. Mark, drill, set and fix the catch arrangement in partition for holding of back rest with the help of adequate hardware as per respective drawings.
		G. Set and fix the mounting angles for long. Upper berth on side wall and partition pillar with the help of adequate hardware as per respective drawings.
		H. Set and fix the long. Upper berth on mounting angles with the help of adequate hardware as per respective drawings.
		I. Set & fix the bearing bush/cover ring on side wall as per respective drawings.
		J. Set the middle berth at location with bearing bush/cover ring (side wall side), set the hinge bracket in the pin of berth and fix with partition pillar with the help of adequate hardware as per respective drawings.
		K. Set and fix the mounting angle for upper berth on side wall with the help of adequate hardware as per respective drawings.
		L. Set & fix the upper berth with mounting angle/mounting bracket with the help of adequate hardware as per respective drawings.
		M. Marking, drilling and tapping the hole in upper berth for fixing of safety rail as per respective drawing.
		N. Set and fix the safety rail on upper berth with the help of adequate hardware as per respective drawings.
		O. Set and fix the chain assembly with safety rail with the help of adequate hardware as per respective drawings.
		P. Mark, drill, set and fix the holding ring in transverse upper berth with the help of adequate hardware as per respective drawings.
		Q. Mark, drill, set and fix the ring below seat in transverse lower berth with the help of adequate hardware as per respective drawings.
64.	FOR FIXING OF CURTAIN ARRANGEMENT IN LWACCN COACHES	C. Insert the rollers in extrusion as per respective drawings.
		D. Set and fix the curtain with rollers as per respective drawings.
65.	LOWERING OF COACH	Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items- Link pin, Swing Link pin, Yaw Damper, Spring Plate, Swing Nut, Centering Disc, U sim, Ring sim-4 mm, Ring sim -2 mm, Hex Head nut, Application of grease, Application of emery paper, Application of Corrosion protector, Before handing over checking the height of C.B.C.
66.	FOR FIXING OF OTHER MINOR FURNISHING ITEMS FOR WHOM WORKING PROCEDURE NOT MENTIONED ABOVE.	C. Mark, Set & fix the items with suitable hardware's as indicated in applicable drawings.
		D. Ensure the aesthetics & quality fitment of items with applicable hardware's as per applicable drawings.
67	Plumbing Work	Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , bibcock fitment , LIP, LOP, LIC, LOC, water filling and testing etc. of LWACCN coaches as per latest drawing.

Note: Modified drawings or drawing of latest alteration shall be applicable.

Annexure-III**3. Plumbing Activities to be carried out-**

- i) Under Frame plumbing.
- ii) Under Frame clamping.
- iii) SFME (side filler module equalizing).
- iv) Pump connection.
- v) Water filling.
- vi) Auxiliary water tank assembly & fitment, Lavatory inside plumbing & Lavatory outside plumbing.
- vii) Lavatory inside clamping & Lavatory outside clamping.
- viii) Health faucet pipe and bracket fitting.
- ix) Water circulation system testing.
- x) Other Miscellaneous plumbing work.
- xi) Water Tank (2 X 685), (1 x 450) ltr. Loading .

4. List of Furnishing activities covered under scope of work:

The scope of work covers following activities as per the respective drawings, working procedure.

2.1 Activities/Process and precautions:-

Measuring, marking, cutting ,and fitting , operations on plumbing components as per railway applicable drawings.

4.2 Process precautions:

- i) Latest applicable versions of the drawings are to be followed as per design master list.
 - ii) Suitable drilling/tapping should be done with the help of drilling machine for fixing/mounting of items/assemblies as per respective drawings.
 - iii) All hardware is to be fitted as per respective drawing.
 - iv) Hammering of screws is strictly prohibited.
 - v) Broken head screw, loose screw is not at all acceptable.
 - vi) Don't leave extra screws scattered in the coach.
 - vii) Excess scrap and scattered material should be removed from the coach after completion of stage work.
 - viii) Always use standard m/c & hand tools during working.
 - ix) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires.
 - x) There should not be any metal contact with water tank.
 - xi) Water tank should be loaded on coach carefully to avoid any defect due to mishandling.
 - xii) All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.
 - xiii) Pipe ends shall have taper pipe threads to IS: 554-85, ISO 7/1 R1/2.
 - xiv) Tightened the screws at the proper torque mentioned in respective drawings.
 - xv) Metallic part to be painted with red oxide zinc chromate primer to IS: 2074-79 with 12-15 microns DFT before fitment.
 - xvi) Clamping to be done at the pitch of 500 mm.
 - xvii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
 - xviii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
 - xix) Suitable drilling/ tapping should be done with the help of drilling machine for fixing/ mounting of items/ assemblies as per respective drawings.
 - xx) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires as an extension board.
- 4.3 Procedure for fixing of roof water tank 30 liters NPP end, PP end in LHB coaches:**
- i) Fix the assembly of vacuum valve, hex. Double nipple, plug & equal tee female thread with the water tank as per respective drawing.
 - ii) Fix the assembly of automatic float air vent valve, hex. Reduction & male female elbow with the other end of water tank as per respective drawing. Set & align the water tank (30 Liters) NPP/PP End in

lavatories & fix with shell member with the help of taut bend & adequate hardware as per respective drawing.

- iii) Apply the sealing paste on the threads as per respective drawing to prevent leakage of water.
- iv) Load the water tank in the coach carefully.
- v) Set & align the water tank 30 liters NPP End/PP End in lavatories and fix with shell member with the help of taut bend and adequate hardware as per respective drawing.

4.4 **Procedure for fixing of piping arrangement for over head aux. water tanks:-**

- i) Set and fix the plug with aux. water tanks as per respective drawing.
- ii) Connect the ball valve with pipes and join the pipes to each other with the help of equal tee as per respective drawing.
- iii) Set and fix the composite pipes with aux. water tanks with the help of female elbow & hex nipple as per respective drawing.
- iv) Set and fix the composite pipes with lav. wall with the help of supporting bracket, clip and adequate hardware as per respective drawing.

4.5 **Procedure for fixing of pipe laying for water under the coach in LHB coaches:-**

- i) Set & fix the brackets/bracket complete on under-frame with the help of adequate hardware as per respective drawing.
- ii) Putting together and adjusting of adequate pipes, mounting on under frame with add-on parts & fastening with tube clip & pipe brackets with the help of adequate hardware as per respective drawing.
- iii) Set and fix the protective sheet complete and connection hose flexible on under frame with the help of adequate hardware as per respective drawing.
- iv) Set the adequate pipes installation of lavatory cells and fix the help of adequate hardware as per respective drawing.
- v) Check the pipes for tightness after fitment.
- vi) Fix the Hex nipple, Elbow, Bush and coach watering inlet with strainer at one end of water tanks and other end with the help of fixing clip as per respective drawing.
- vii) Weld the Clamp of filling flap & Angle complete with under frame as per respective drawing.

4.6 **Common procedure for fixing of pipe laying for water at ORIENT-2, ORIENT-1 & EURO lavatory in coaches:-**

- i) Set & fix the composite pipes with water tank with the help of hex nipple, equal elbow & adequate hardware as per respective drawing.
- ii) Connect the pipes with the help of composite internal seal tee, ball valve and adequate hardware as per respective drawing.
- iii) Fix the pipes with wall with the help of brackets & adequate hardware as per respective drawing.
- iv) Fix the bib cock with wall with the help of elbow equal & adequate hardware as per respective drawing.
- v) Fix the pipe in health faucet with the help of bracket, clamp & adequate hardware and fix the gravity coke with pipe for lotah filler as per respective drawing.
- vi) Fix the drain pipe with integrated connecting socket with the help of adequate hardware as per respective drawing.

Tentative Applicable Drawings :-

LE90007; LW90025; LW63150; LE63106; LE63160; LE63161; LE63157 ; LW63167 ;
LE63227; LE63142;

2.7. **Scope or work of retro fitment of additional water filling arrangement in LHB Coaches :-**

ACTIVITY TO BE CARRIED OUT BY FIRM
Additional side filling arrangement for water tank (2X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63279.

Additional side filling arrangement for water tank (1X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63281 Alt'a'.

PROCESS PRECAUTION-

Retro fitment of Additional water filling arrangement in LHB type coaches has to be done to increase the water filling rate in LHB coaches for which following additional item required for which firm has to take care at the time of Installation-

Elbow male female 32 bore

Elbow 40 borex135 degree

Hex nipple 40 bore

Hex bush 40x25 bore

Hex bush 32x25 bore

Hex bush 50 x25 bore

Hex nipple 32 bore

Tee equal 32 bore

Reducing nipple 32x15 bore

Reducing bush 50x40 bore

Elbow equal 40 bore

Elbow male/female 50 bore

Horizontal check valve

Uclamp 25 bore

SS Pipe Dia 33.4x3.38x620 mm.

SS Pipe Dia 48.26X3.68X180 mm.

Modified coach watering inlet (Additional 4 Nos.)

PROCEDURE FOR FIXING OF ADDITIONAL WATER FILLING ARRANGEMENT IN COACHES.

1 .Additional side filling arrangements for water tanks (2x685) should be implemented at the 32 bore overflow point, where overflow from one end of the lavatories occurs. This will involve the installation of a horizontal 15 bore check valve to check water flow in the overflow pipe during tank filling. On the opposite end, a side filling connection should be established at the existing 32 bore point, which is currently plugged.

2. For all filling arrangements outlined above, 25 bore stainless pipes must be utilized, along with appropriate hex bushings (32x25 bore, 40x25 bore, and 50x25 bore) as per the provided drawings.

3. To secure the pipes, 25 bore clamps are to be employed. Flats and brackets need to be welded onto the underframe at suitable locations, in accordance with the provided drawings.

4. There should not be any metal contact with water tank. All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape(Teflon tape),M-seal, Araldite &red oxide zinc chromate paste.

3. Scope of Work for Coach Lowering:-

- e) Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done.
- f) Coach lowering is highly safety related work for coach as well as man , Hence Man power will be deployed accordingly .
- g) Contractor will be always ready to increase the coach lowering gang at short notice, when required to railway.
- h) **Scope of Work is for Lowering of Coaches is given below** -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items-
 - I. Link pin
 - II. Swing Link pin
 - III. Yaw Damper
 - IV. Spring Plate
 - V. Swing Nut
 - VI. Centering Disc

- VII. U sim
- VIII. Ring sim-4 mm
- IX. Ring sim -2 mm
- X. Hex Head nut
- XI. Application of grease
- XII. Application of emery paper
- XIII. Application of Corrosion protector
- XIV. Before handing over checking the height of C.B.C.

NOTE:

- 4. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
- 5. In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.
- 6. For guideline/Working instruction of installation and fitment of plumbing shall be provided by MCF/RBL/LLJ.

(E) Schedule-E

Complete interior Mechanical Furnishings & Fittings Activities in LWCBAC (LHB AC hot buffet with increased Heating Capacity) Coaches:-

Conditions for Scope of work: The scope of work covers following activities as per the respective drawings, working procedure, terms & conditions as mentioned below.

- i. Contractor shall complete the work of “Complete interior Mechanical Furnishings & Fittings Activities in LWCBAC (LHB AC hot buffet with increased Heating Capacity) Coaches”.
- ii. Work will be carried out in MCF, Rae Bareli premises at Lalganj, (Uttar Pradesh), as per relevant drawings, working procedures, working instructions etc as mentioned in document.
- iii. The drawings and working instructions mentioned are indicative, In case of any up-gradation, work shall be done as per latest drawings and working instructions.
- iv. Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance like partition, sidewall paneling and ceiling paneling. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done. However the Contractor has to closely liaison with the electrical wing to get all sorts of electrical clearances required for his area of work.

1.List of Furnishing activities covered under scope of work:

- I. Fixing & Fitment of D-Coupling rubber with shim/ fixing strip , Foot Step, Entrance Hand Rail, , Door Stopper, Tail Lamp Bracket, Floor Board fixing and floor end profile, H moulding, PVC laying in compartments, PVC laying in doorway and gang way area, Thermo Welding of PVC and Bottom Plate (Chequered Sheet) etc as per latest applicable drawings.
- II. Fixing & Fitment Partition & partition Pillars between in coaches as per latest applicable drawings ..
- III. Fitment of windows and Emergency Windows, Louvered /Hopper windows in lavatory as per latest applicable drawings.
- IV. Fitment of interior paneling arrangement as per latest applicable drawings.
- V. Fixing & Fitment of Side Wall Panels and end wall panels its related work as per latest applicable drawings.
- VI. Fixing of Roof Ceiling including Gangway/ Doorway/Vestibule area Ceiling along with all Members as per latest applicable drawings.
- VII. Fitment of various types of Doors, Corner Panels and Door FRP panel etc. in LWCBAC coaches as per latest applicable drawings.
- VIII. Ventury grill fitment work as per latest applicable drawings, if provision in coach shell.
- IX. Fitment of RFID , Builder plate and Furnishing Plate as per latest applicable drawings.
- X. Fitment of all type of Seats & Berths arrangement with all accessories in coaches as per latest applicable drawings.

- XVIII. Lowering of coach -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines.
- XI. Plumbing- Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , LOP, LOC, water filling, additional water filling arrangement and testing etc. of LWCBAC coaches as per latest drawing.(Drawing LH63192)
- XII. Fitment of Lavatory module along with accessories (Lavatory module will be supplied in knock down condition or fully assembled condition. In both cases contractor will install the module in coach), beside this all work related to Lavatory like fitment of Loro pipe fitment ,air value, furnishing plate, support bracket, , Exhaust pipe mounting and exhaust motor mounting with flexible duct pipe etc. Will be in scope of firm .(Drawing LH63192).
- XIII. If any coach component/item is executed by a third party under supply and apply mode, which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.

(B) APPLICABLE REFERENCE DRAWINGS:

S. N.	REFERENCE DRAWING	DESCRIPTION
1.	LH90018	LAY OUT
2.	LH90021	GENERAL INSTALLATION
3.	1 10113.0.24.100.001	INTERCAR GANGWAY MOUNTING
4.	LH10006	LAY OUT OF PARTITION FRAME
5.	MI004202	ENT. HAND RAIL COMPLETE
6.	LW41106 Alt b	STEPS COMPLETE MOUNTING.
7.	LH41168	COACH FLOOR COMPLETE.
8.	LH42191	INTERIOR PANELLING ARRANGEMENT
9	LH44625	AC SYSTEM ARRANGEMENT
10.	LH54003	LAYOUT OF WINDOWS ARRANGEMENT
11.	LH56006	LAYOUT OF DOORS ARRANGEMENT
12.	LH61003	SEATS & BERTHS ARRGT
13.	LH63192	SANITARY FACILITIES COMPLETE
14.	LH64110	LAY OUT OF CURTAIN ARRANGEMENT
15.	LH64011	FIRE EXTINGUISHER ARRANGEMENT AND MOUNTING
16.	LH64012	LAYOUT OF ALUMINIUM EXTRUSION
17.	LH64209	OVERHEAD SELF ARRANGEMENT
18.	CC26237 alt-b	BUILDER PLATE.
19.	LE24103	HANDLE
20.	CC26248	TAIL LAMP BKT

Note:-

- I. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition/MCF requirement.
- II. In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.
- III. The Scope of work is subjected to minor changes time to time as per drawing/modification as per requirements.

(C) Plumbing Activities:-**(1) List of Furnishing activities covered under scope of work:**

The scope of work covers following activities as per the respective drawings, working procedure.

Activities/Process and precautions (Reference drawing LH63192a and b):-

- i) Measuring, marking, cutting ,and fitting , operations on plumbing components as per railway applicable drawings.
- ii) Under Frame plumbing.
- iii) Under Frame clamping.
- iv) SFME (side filler module equalizing).
- v) Pump connection.
- vi) Water filling.
- vii) Auxiliary water tank assembly & fitment, Lavatory inside plumbing & Lavatory outside plumbing.
- viii) Lavatory inside clamping & Lavatory outside clamping.
- ix) Health faucet pipe and bracket fitting.
- x) Water circulation system testing.
- xi) Other Miscellaneous plumbing work.
- xii) Water Tank (2 X 685), (1 X 685),(1 x 450) & (4 x 390) ltr. Loading as per requirement.

Note- The work shall be considered complete only if it is finally tested and declared OK by the quality and inspection agency of MCF.

(2) Process precautions:

- i) Latest applicable versions of the drawings are to be followed as per design master list.
 - ii) Suitable drilling/tapping should be done with the help of drilling machine for fixing/mounting of items/assemblies as per respective drawings.
 - iii) All hardware is to be fitted as per respective drawing.
 - iv) Hammering of screws is strictly prohibited.
 - v) Broken head screw, loose screw is not at all acceptable.
 - vi) Don't leave extra screws scattered in the coach.
 - vii) Excess scrap and scattered material should be removed from the coach after completion of stage work.
 - viii) Always use standard m/c & hand tools during working.
 - ix) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires.
 - x) There should not be any metal contact with water tank.
 - xi) Water tank should be loaded on coach carefully to avoid any defect due to mishandling.
 - xii) All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.
 - xiii) Pipe ends shall have taper pipe threads to IS: 554-85, ISO 7/1 R1/2.
 - xiv) Tightened the screws at the proper torque mentioned in respective drawings.
 - xv) Metallic part to be painted with red oxide zinc chromate primer to IS: 2074-79 with 12-15 microns DFT before fitment.
 - xvi) Clamping to be done at the pitch of 500 mm.
 - xvii) No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
 - xviii) Suitable drilling/ tapping should be done with the help of drilling machine for fixing/ mounting of items/ assemblies as per respective drawings.
- (3) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires as an extension board.
- (4) Procedure for fixing of roof water tank 30 liters NPP end, PP end in LHB coaches:**
- i) Fix the assembly of vacuum valve, hex. Double nipple, plug & equal tee female thread with the water tank as per respective drawing.
 - ii) Fix the assembly of automatic float air vent valve, hex. Reduction & male female elbow with the other end of water tank as per respective drawing. Set & align the water tank (30 Liters) NPP/PP End in lavatories & fix with shell member with the help of taut bend & adequate hardware as per respective drawing.
 - iii) Apply the sealing paste on the threads as per respective drawing to prevent leakage of water.
 - iv) Load the water tank in the coach carefully.

- v) Set & align the water tank 30 liters NPP End/PP End in lavatories and fix with shell member with the help of taut bend and adequate hardware as per respective drawing.
- a. **Procedure for fixing of piping arrangement for over head aux. water tanks:-**
 - i) Set and fix the plug with aux. water tanks as per respective drawing.
 - ii) Connect the ball valve with pipes and join the pipes to each other with the help of equal tee as per respective drawing.
 - iii) Set and fix the composite pipes with aux. water tanks with the help of female elbow & hex nipple as per respective drawing.
 - iv) Set and fix the composite pipes with lav. wall with the help of supporting bracket, clip and adequate hardware as per respective drawing.
- b. **Procedure for fixing of pipe laying for water under the coach in LHB coaches:-**
 - i) Set & fix the brackets/bracket complete on under-frame with the help of adequate hardware as per respective drawing.
 - ii) Putting together and adjusting of adequate pipes, mounting on under frame with add-on parts & fastening with tube clip & pipe brackets with the help of adequate hardware as per respective drawing.
 - iii) Set and fix the protective sheet complete and connection hose flexible on under frame with the help of adequate hardware as per respective drawing.
 - iv) Set the adequate pipes installation of lavatory cells and fix the help of adequate hardware as per respective drawing.
 - v) Check the pipes for tightness after fitment.
 - vi) Fix the Hex nipple, Elbow, Bush and coach watering inlet with strainer at one end of water tanks and other end with the help of fixing clip as per respective drawing.
 - vii) Weld the Clamp of filling flap & Angle complete with under frame as per respective drawing.
- c. **Common procedure for fixing of pipe laying for water at ORIENT-2, ORIENT-1 & EURO-1 lavatory in coaches:-**
 - i) Set & fix the composite pipes with water tank with the help of hex nipple, equal elbow & adequate hardware as per respective drawing.
 - ii) Connect the pipes with the help of composite internal seal tee, ball valve and adequate hardware as per respective drawing.
 - iii) Fix the pipes with wall with the help of brackets & adequate hardware as per respective drawing.
 - iv) Fix the bib cock with wall with the help of elbow equal & adequate hardware as per respective drawing.
 - v) Fix the pipe in health faucet with the help of bracket, clamp & adequate hardware and fix the gravity coke with pipe for lotah filler as per respective drawing.
 - vi) Fix the drain pipe with integrated connecting socket with the help of adequate hardware as per respective drawing.

(D) Scope or work of retro fitment of additional water filling arrangement in LHB Coaches-
ACTIVITY TO BE CARRIED OUT BY FIRM

Additional side filling arrangement for water tank (2X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63279.

Additional side filling arrangement for water tank (1X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63281 Alt'a'.

PROCESS PRECAUTION

Retro fitment of Additional water filling arrangement in LHB type coaches has to be done to increase the water filling rate in LHB coaches for which following additional item (required for which firm has to take care at the time of Installation-

- Elbow male female 32 bore
- Elbow 40 borex135 degree
- Hex nipple 40 bore
- Hex bush 40x25 bore
- Hex bush 32x25 bore
- Hex bush 50 x25 bore
- Hex nipple 32 bore
- Tee equal 32 bore
- Reducing nipple 32x15 bore
- Reducing bush 50x40 bore
- Elbow equal 40 bore
- Elbow male/female 50 bore
- Horizontal check valve
- Uclamp 25 bore
- SS Pipe Dia 33.4x3.38x620 mm.
- SS Pipe Dia 48.26X3.68X180 mm.
- Modified coach watering inlet (Additional 4 Nos.)

PROCEDURE FOR FIXING OF ADDITIONAL WATER FILLING ARRANGEMENT IN COACHES.

1 .Additional side filling arrangements for water tanks (2x685) should be implemented at the 32 bore overflow point, where overflow from one end of the lavatories occurs. This will involve the installation of a horizontal 15 bore check valve to check water flow in the overflow pipe during tank filling. On the opposite end, a side filling connection should be established at the existing 32 bore point, which is currently plugged.

2. For all filling arrangements outlined above, 25 bore stainless pipes must be utilized, along with appropriate hex bushings (32x25 bore, 40x25 bore, and 50x25 bore) as per the provided drawings.

3. To secure the pipes, 25 bore clamps are to be employed. Flats and brackets need to be welded onto the underframe at suitable locations, in accordance with the provided drawings.

4. There should not be any metal contact with water tank. All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.

Note-

7. Apart from above work, contractor may be given any other minor allied/subsidiary modification/alteration activity as and when required depending upon site condition.
8. In case of any modification/Change of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.'

(E) Scope of work for coach Lowering:-

Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done.

Coach lowering is highly safety related work for coach, Hence Man power will be present mandatory on jacks and synchronizing panel ,with supervisor during coach lowering .The placement of jack and panel from one coach to another coach will be under scope of firm.

Contractor will be always ready to increase the coach lowering gang at short notice, when required to railway.

Scope of Work is for Lowering of Coaches is given below -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items-

- i. Link pin
- ii. Swing Link pin
- iii. Yaw Damper
- iv. Spring Plate
- v. Swing Nut

- vi. Centering Disc
- vii. U sim
- viii. Ring sim-4 mm
- ix. Ring sim -2 mm
- x. Hex Head nut
- xi. Application of grease
- xii. Application of emery paper
- xiii. Application of Corrosion protector
- xiv. Before handing over checking the height of C.B.C.

Note:

1. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
2. If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.
3. Welding work will be carried out as per specifications/drawings, by firm with **its own** suitable T&P /M&P and consumables if required .
4. If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from the firm's bill payment .

(F) Schedule-F

Complete interior Mechanical Furnishings & Fittings Activities in LWCBAC (LHB AC hot buffet with air suspension) Coaches:-

Conditions for Scope of work: The scope of work covers following activities as per the respective drawings, working procedure, terms & conditions as mentioned below.

- i. Contractor shall complete the work of “Complete interior Mechanical Furnishings & Fittings Activities in LWCBAC (LHB AC hot buffet with air suspension) Coaches”.
- ii. Work will be carried out in MCF, Rae Bareli premises at Lalganj, (Uttar Pradesh), as per relevant drawings, working procedures, working instructions etc as mentioned in document.
- iii. The drawings and working instructions mentioned are indicative, In case of any up-gradation, work shall be done as per latest drawings and working instructions.
- iv. The Contractor shall ensure cleaning of coach before handing over to Railways.
- v. Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance like partition, sidewall paneling and ceiling paneling. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done. However the Contractor has to closely liaison with the electrical wing to get all sorts of electrical clearances required for his area of work.

1. List of Furnishing activities covered under scope of work:

- I. Fixing & Fitment of D-Coupling rubber with shim/ fixing strip , Foot Step, Entrance Hand Rail, , Door Stopper, Tail Lamp Bracket, Floor Board fixing and floor end profile, various mouldings, PVC laying in compartments, PVC laying in doorway and gang way area, Thermo Welding of PVC and Bottom Plate (Chequered Sheet) etc as per latest applicable drawings.
- II. Fixing & Fitment Partition & partition Pillars between in coaches as per latest applicable drawings ..
- III. Fitment of windows and Emergency Windows, Louvered /Hopper windows in lavatory as per latest applicable drawings.
- IV. Fitment of interior paneling arrangement as per latest applicable drawings.
- V. Furnishing of Manager and Crew room as per latest applicable drawings
- VI. Fixing & Fitment of Side Wall Panels and end wall panels its related work as per latest applicable drawings.
- VII. Fixing of Roof Ceiling including Gangway/ Doorway/Vestibule area Ceiling along with all

Members as per latest applicable drawings.

- VIII. Fitment of various types of Doors, Corner Panels and Door FRP panel etc. in LWCBC coaches as per latest applicable drawings.
- IX. Ventury grill fitment work as per latest applicable drawings, if provision in coach shell.
- X. Fitment of RFID , Builder plate and Furnishing Plate as per latest applicable drawings.
- XI. Fitment of Waste Bin Arrangement & Mounting and food storage arrangement as per latest applicable drawings.
- XII. Fitment of all type of Seats & Berths arrangement with all accessories in coaches as per latest applicable drawings.
- XIX. Lowering of coach -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines.
- XIII. Plumbing- Installation of Plumbing accessories and their working i.e. loading of various tank, water piping , LOP, LOC, water filling, additional water filling arrangement and testing etc. of LWCBC coaches as per latest drawing.(Drawing LH63001)
- XIV. Fitment of Lavatory module along with accessories (Lavatory module will be supplied in knock down condition or fully assembled condition. In both cases contractor will install the module in coach), beside this all work related to Lavatory like fitment of Loro pipe fitment ,air value, furnishing plate, support bracket, , Exhaust pipe mounting and exhaust motor mounting with flexible duct pipe etc. Will be in scope of firm .(Drawing LH63001).
- XV. If any coach component/item is executed by a third party under supply and apply mode, which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.
- XVI. Fitment of RFID as per latest applicable drawings.

(C) APPLICABLE REFERENCE DRAWINGS:

S. N.	REFERENCE DRAWING	DESCRIPTION
1.	LH90001	LAY OUT
2.	LH90012	GENERAL INSTALLATION
3.	1 10113.0.24.100.001	INTERCAR GANGWAY MOUNTING
4.	LH10001	LAY OUT OF PARTITION FRAME
5.	MI004202	ENT. HAND RAIL COMPLETE
6.	LW41106 Alt b	STEPS COMPLETE MOUNTING.
7.	LH41100	COACH FLOOR COMPLETE.
8.	LH44001	INTERIOR PANELLING ARRANGEMENT
9	LH44101	AC SYSTEM ARRANGEMENT
10.	LH54100	WINDOWS ARRANGEMENT
11.	LH56100	DOORS ARRANGEMENT
12.	LH61128	SEATS & BERTHS IN CREW COMPLETE AND MANAGER ROOM
13.	LH63001	SANITARY FACILITIES COMPLETE
14.	LH64101	LAY OUT OF CURTAIN ARRANGEMENT
15.	1 10113.0.75.100.001	FIRE EXTINGUISHER ARRANGEMENT AND MOUNTING
16.	LH64114	FIXING ARRANGEMENT OF ALUMINIUM EXTRUSION
17.	LE24103	HANDLE
18.	CC26248	TAIL LAMP BKT

19.	LH63102	WASTE BIN ARRANGEMENT AND MOUNTING
20.	LH64105	MANAGER ROOM ARRANGEMENT
21	LH61135	LOCKER FOR CREW COMPLETE AND MANAGER ROOM
22	LH64129	FOOD STORAGE ARRANGEMENT

Note:-

- I. Apart from above work, contractor may be given any other minor allied/subsidiary modification/alteration activity as and when required depending upon site condition/MCF requirement.
- II. In case of any modification of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.
- III. The Scope of work is subjected to minor changes time to time as per drawing/modification as per requirements.

(C) Plumbing Activities:-**(1) List of Furnishing activities covered under scope of work:**

The scope of work covers following activities as per the respective drawings, working procedure.

Activities/Process and precautions (Reference drawing LH63001):-

- i) Measuring, marking, cutting ,and fitting , operations on plumbing components as per railway applicable drawings.
- ii) Under Frame plumbing.
- iii) Under Frame clamping.
- iv) SFME (side filler module equalizing).
- v) Pump connection.
- vi) Water filling.
- vii) Auxiliary water tank assembly & fitment, Lavatory inside plumbing & Lavatory outside plumbing.
- viii) Lavatory inside clamping & Lavatory outside clamping.
- ix) Health faucet pipe and bracket fitting.
- x) Water circulation system testing.
- xi) Other Miscellaneous plumbing work.
- xii) Water Tank (2 X 685), (1 X 685),(1 x 450) & (4 x 390) ltr. Loading as per requirement.

Note- The work shall be considered complete only if it is finally tested and declared OK by the quality and inspection agency of MCF.

(5) Process precautions:

- i) Latest applicable versions of the drawings are to be followed as per design master list.
- ii) Suitable drilling/tapping should be done with the help of drilling machine for fixing/mounting of items/assemblies as per respective drawings.
- iii) All hardware is to be fitted as per respective drawing.
- iv) Hammering of screws is strictly prohibited.
- v) Broken head screw, loose screw is not at all acceptable.
- vi) Don't leave extra screws scattered in the coach.
- vii) Excess scrap and scattered material should be removed from the coach after completion of stage work.
- viii) Always use standard m/c & hand tools during working.
- ix) Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires.
- x) There should not be any metal contact with water tank.
- xi) Water tank should be loaded on coach carefully to avoid any defect due to mishandling.
- xii) All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape (Teflon tape), M-seal, Araldite & red oxide zinc chromate paste.
- xiii) Pipe ends shall have taper pipe threads to IS: 554-85, ISO 7/1 R1/2.
- xiv) Tightened the screws at the proper torque mentioned in respective drawings.
- xv) Metallic part to be painted with red oxide zinc chromate primer to IS: 2074-79 with 12-15 microns DFT before fitment.
- xvi) Clamping to be done at the pitch of 500 mm.

- xvii)** No empty drums of paint should be used, as PVC sheet in the lavatory will be damaged. Proper wooden stools should be used for fitment of interior accessories.
- xviii)** Suitable drilling/ tapping should be done with the help of drilling machine for fixing/ mounting of items/ assemblies as per respective drawings.
- (6)** Proper electrical extension board should be used to operate the electrical equipments. Do not use the loose electric wires as an extension board.
- (7) Procedure for fixing of roof water tank 30 liters NPP end, PP end in LHB coaches:**
 - i)** Fix the assembly of vacuum valve, hex. Double nipple, plug & equal tee female thread with the water tank as per respective drawing.
 - ii)** Fix the assembly of automatic float air vent valve, hex. Reduction & male female elbow with the other end of water tank as per respective drawing. Set & align the water tank (30 Liters) NPP/PP End in lavatories & fix with shell member with the help of taut bend & adequate hardware as per respective drawing.
 - iii)** Apply the sealing paste on the threads as per respective drawing to prevent leakage of water.
 - iv)** Load the water tank in the coach carefully.
 - v)** Set & align the water tank 30 liters NPP End/PP End in lavatories and fix with shell member with the help of taut bend and adequate hardware as per respective drawing.
- a. Procedure for fixing of piping arrangement for over head aux. water tanks:-**
 - i)** Set and fix the plug with aux. water tanks as per respective drawing.
 - ii)** Connect the ball valve with pipes and join the pipes to each other with the help of equal tee as per respective drawing.
 - iii)** Set and fix the composite pipes with aux. water tanks with the help of female elbow & hex nipple as per respective drawing.
 - iv)** Set and fix the composite pipes with lav. wall with the help of supporting bracket, clip and adequate hardware as per respective drawing.
- b. Procedure for fixing of pipe laying for water under the coach in LHB coaches:-**
 - i)** Set & fix the brackets/bracket complete on under-frame with the help of adequate hardware as per respective drawing.
 - ii)** Putting together and adjusting of adequate pipes, mounting on under frame with add-on parts & fastening with tube clip & pipe brackets with the help of adequate hardware as per respective drawing.
 - iii)** Set and fix the protective sheet complete and connection hose flexible on under frame with the help of adequate hardware as per respective drawing.
 - iv)** Set the adequate pipes installation of lavatory cells and fix the help of adequate hardware as per respective drawing.
 - v)** Check the pipes for tightness after fitment.
 - vi)** Fix the Hex nipple, Elbow, Bush and coach watering inlet with strainer at one end of water tanks and other end with the help of fixing clip as per respective drawing.
 - vii)** Weld the Clamp of filling flap & Angle complete with under frame as per respective drawing.
- c. Common procedure for fixing of pipe laying for water at ORIENT-2, ORIENT-1 & EURO-1 lavatory in coaches:-**
 - i)** Set & fix the composite pipes with water tank with the help of hex nipple, equal elbow & adequate hardware as per respective drawing.
 - ii)** Connect the pipes with the help of composite internal seal tee, ball valve and adequate hardware as per respective drawing.
 - iii)** Fix the pipes with wall with the help of brackets & adequate hardware as per respective drawing.
 - iv)** Fix the bib cock with wall with the help of elbow equal & adequate hardware as per respective drawing
 - v)** Fix the pipe in health faucet with the help of bracket, clamp & adequate hardware and fix the gravity coke with pipe for lotah filler as per respective drawing.
 - vi)** Fix the drain pipe with integrated connecting socket with the help of adequate hardware as per respective drawing.

(D) Scope or work of retro fitment of additional water filling arrangement in LHB Coaches-
ACTIVITY TO BE CARRIED OUT BY FIRM

Additional side filling arrangement for water tank (2X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63279.

Additional side filling arrangement for water tank (1X685) Ltrs for LHB Coaches to be fitted as per Drg. No.LE63281 Alt'a'.

PROCESS PRECAUTION

Retro fitment of Additional water filling arrangement in LHB type coaches has to be done to increase the water filling rate in LHB coaches for which following additional item (required for which firm has to take care at the time of Installation-

- Elbow male female 32 bore
- Elbow 40 borex135 degree
- Hex nipple 40 bore
- Hex bush 40x25 bore
- Hex bush 32x25 bore
- Hex bush 50 x25 bore
- Hex nipple 32 bore
- Tee equal 32 bore
- Reducing nipple 32x15 bore
- Reducing bush 50x40 bore
- Elbow equal 40 bore
- Elbow male/female 50 bore
- Horizontal check valve
- Uclamp 25 bore
- SS Pipe Dia 33.4x3.38x620 mm.
- SS Pipe Dia 48.26X3.68X180 mm.
- Modified coach watering inlet (Additional 4 Nos.)

PROCEDURE FOR FIXING OF ADDITIONAL WATER FILLING ARRANGEMENT IN COACHES.

1 .Additional side filling arrangements for water tanks (2x685) should be implemented at the 32 bore overflow point, where overflow from one end of the lavatories occurs. This will involve the installation of a horizontal 15 bore check valve to check water flow in the overflow pipe during tank filling. On the opposite end, a side filling connection should be established at the existing 32 bore point, which is currently plugged.

2. For all filling arrangements outlined above, 25 bore stainless pipes must be utilized, along with appropriate hex bushings (32x25 bore, 40x25 bore, and 50x25 bore) as per the provided drawings.

3. To secure the pipes, 25 bore clamps are to be employed. Flats and brackets need to be welded onto the underframe at suitable locations, in accordance with the provided drawings.

4. There should not be any metal contact with watertank. All pipe screw joints must be properly sealed against water leakage with the help of pipe thread tape(Teflon tape),M-seal,Araldite &red oxide zinc chromate paste.

Note-

9. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
10. In case of any modification/Change of above referred drawings, the latest drawing shall be applicable and work shall be done accordingly, without any cost escalation.'

(E) Scope of work for coach Lowering:-

Co-ordination with Electrical wing for the electrical clearance required before the start of the various activities requiring electrical clearance. However if the Contractor faces difficulty in getting it done, he/she can intimate the coordinating supervisor well in advance of his/her plans so that the necessary arrangements and the coordination could be done.

Coach lowering is highly safety related work for coach, Hence Man power will be present mandatory on jacks and synchronizing panel ,with supervisor during coach lowering .The placement of jack and panel from one coach to another coach will be under scope of firm.

Contractor will be always ready to increase the coach lowering gang at short notice, when required to railway.

Scope of Work is for Lowering of Coaches is given below -Fitment of furnished coach with bogie with the help of lifting and lowering device and YAW Damper fitment as per MCF guidelines of the following items-

- i. Link pin
- ii. Swing Link pin
- iii. Yaw Damper
- iv. Spring Plate
- v. Swing Nut
- vi. Centering Disc
- vii. U sim
- viii. Ring sim-4 mm
- ix. Ring sim -2 mm
- x. Hex Head nut
- xi. Application of grease
- xii. Application of emery paper
- xiii. Application of Corrosion protector
- xiv. Before handing over checking the height of C.B.C.

Note:

1. Apart from above work, contractor may be given any other minor allied/subsidiary modification/ alteration activity as and when required depending upon site condition.
2. If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from your bill.
3. Welding work will be carried out as per specifications/drawings, by firm with **its own** suitable T&P /M&P and consumables if required .

**

Note-2.- If any coach component/item is executed by a third party under supply and apply mode , which application is in yours scope of work, the cost of application of that coach component/item will be deducted from the firm's bill payment .

Dy. Chief Mechanical Engineer/Fur./Co.
MCF/Raebareli, Lalganj

Signature of Contractor

Date: _____

AGREEMENT

1. CONTRACT AGREEMENT NO..... DATED. ARTICLES OF AGREEMENT made this.....day of..... 2026.....between the President of India acting through the Railway Administration here after called the "Railway" of the one part and.....herein after called the "Contractor" of the other part.
2. WHERE AS the Contractor has agreed with the Railway for the performance of the works.....set forth in the schedule hereto annexed upon the Standard General Conditions of Contract corrected up to Printed/Advance Correction Slip No.....dated.....and the specifications of the..... Railway contained in the Works Hand Book, Part III, corrected up to Printed/Advance/Correction Slip No.....dated.....and Sanitary Works Hand Book corrected up to Printed/Advance Correction Slip No..... dated..... and the schedule of Rates of the.....Railway, Part I, corrected up to Printed/Advance Correction Slip No. dated.....and the special conditions and special specifications, if any, and in conformity with the drawings here-into annexed AND WHEREAS the performance of the said works is an act in which the public are interested.
3. NOW THIS INDENTURE WITNESSETH that in consideration of the payments to be made by the Railways, the Contractors will duly perform the said works in the said schedule 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 accordance with the said specifications and said drawings and said conditions of contract on or before the.....day of.....2026.....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 has 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 Schedule hereto annexed.

Contractor.....

Designation.....

Rly.

(For President of India)

Address.....

Date.....

Signature of witnesses with address to Date.....

END OF TENDER DOCUMENT