



MODERN COACH FACTORY, RAEBARELI
EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

**Expression of Interest (EOI) for the
Design & Development, Supply, and Fitment of Upgraded Interiors in LHB Coaches**

1. On behalf of President of India, Chief Design Engineer / Modern Coach Factory, Raebareli invites Expression of Interest (EOI) from experienced Firms/Joint Ventures/consortium for Design & Development, Supply, and Fitment of Upgraded Interiors in two rakes of LHB Coaches comprising of 2 nos. First AC Coaches, 6 nos. 2-tier AC Coaches, and 12 nos. 3-tier AC Coaches per rake. The rake composition is tentative and may change.
2. The Expression of Interest may be submitted in a sealed envelope or delivered via email, using the prescribed application format, along with a tentative project report that provides complete details of the technical offer.
3. **ELIGIBILITY CRITERIA:** Respondents/ Interested firms who meet the criteria given below may apply using the prescribed application format

A. *The respondent must have Experience in the field of manufacturing of interior furnishing for High Speed Passenger Trains (200 kmph and above speed)/ Metro rolling stock/ Passenger Aero planes.*

OR

B. *The respondent must have Experience in the field of design & development of interior furnishing for High Speed Passenger Trains (200 kmph and above speed)/ Metro rolling stock/ Passenger Aero planes.*

OR

- C. (i)** *The respondent should also have prior experience of at-least two train interior design projects, with a good understanding of design research and culture-centric approach.*
- (ii)** *The respondent should also have a team of at least 50 designers and engineers with minimum experience of 5 years by each designer/engineer, with in-house mock-up/proto facility, & modelling facilities to create a truly international quality mock-up for design approval.*

Definition of Respondents/Interested firms: Indian Firm/Company /Joint Venture /Consortium. In joint venture/consortium, at-least one Indian firm shall be mandatory.

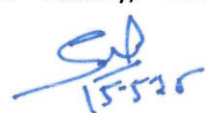
For Joint Venture/Consortium, eligibility criteria are to be complied jointly by all members of Joint Venture/Consortium.

Any Indian subsidiary firm of a foreign firm can use credentials of its principal for the requirements of eligibility criteria.

4. OUTCOME OF EOI:

EOI is intended to finalize scope of work, technical specifications and to prepare tender document for the work of Design & Development, Supply and Fitment of Upgraded Interiors of LHB Coaches in two rakes of LHB Coaches comprising of 2 nos. First AC Coaches, 6 nos. 2-tier AC Coaches, and 12 nos. 3-tier AC Coaches per rake. The rake composition is tentative and may change.

5. The EOI document & other details can be downloaded from the website: <https://mcf.indianrailways.gov.in>
6. **Date and time of EOI document submission date: up to 14.06.2025, 15:00 hrs.**
7. **Address of submission of EOI:** Office of Chief Design Engineer, Mechanical Design Office, Administrative building, Modern Coach Factory, Raebareli-229120, Email address; dycmedesignmcf2@gmail.com
8. **Contact Address:**


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)





MODERN COACH FACTORY, RAEBARELI
EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

Dy.CME/Design-II, Administrative Building, Modern Coach Factory, Raebareli, 229120 (Uttar Pradesh)

Email address: dycmedesignmcf2@gmail.com, Fax no. 0535-2704218, Mob. No. 7318060463.

Enclosure: 1. Proforma for response to EOI as Annexure-A.

2. Scope of Work as Annexure-B

9. Disclaimer:

- i) This is not an invitation to tender.
- ii) Any tender, if issued, may be invited through the IREPS website in accordance with the applicable rules.
- iii) Nothing in this advertisement shall be construed as a commitment on the part of MCF.
- iv) MCF does not guarantee any further proceedings beyond the EOI; this invitation for EOI is neither an agreement nor an offer for the award of work.

उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
Dy. Chief Mechanical Engineer/Design
आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
Modern Coach Factory, Raebareli (U.P.)

MODERN COACH FACTORY, RAEBARELI
EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

Annexure-A

PROFORMA FOR RESPONSE TO EOI

Respondents Ref No. :

Date:

Chief Design Engineer,
Mechanical Design Office,
Administrative Building, Modern Coach Factory,
Raebareli, 229120, Uttar Pradesh, India


Dear Sir,

Subject: RESPONSE TO – EOI FOR PARTICIPATION

1. We, the undersigned, offer the following information in response to the Expression of Interest sought by you vide your Notification No._____, dated _____.
2. We are duly authorized to represent and act on behalf of _____
(herein after the “respondent”)
3. We have examined and have no reservations to the EOI Document.
4. We are attaching with this letter, the copies of original documents defining: -
 - 4.1 The Respondent’s legal status;
 - 4.2 Its principal place of business;
 - 4.3 Its place of incorporation (if respondents are corporations); or its place of registration (if respondents are cooperative institutions, partnerships or individually owned firms);
 - 4.4 Copies of certificates/documents asked in the EOI document to establish claim for technical and financial capacity/suitability of the offer (**ELIGIBILITY CRITERIA**).
5. MCF/RBL and/or its authorized representatives may contact the following nodal persons for further information on any aspects of the Response:

S. No.	Contact Name	Address	Telephone	email
1				
2				

6. This expression is submitted with the full understanding that:
 - 6.1 Information furnished in response to EOI shall be used confidentially by MCF/ RBL.
 - 6.2 MCF/RBL reserves the right to reject or accept any or all applications, cancel the EOI and subsequent process without any obligation to inform the respondent about the grounds of the same.
7. We certify that our turnover and net-worth in the last three years are as under:


उप मुख्य यान्त्रिक डिजाइनियर (अभिकल्प)
Dy. Chief Mechanical Engineer/Design
आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
Modern Coach Factory, Raebareli (U.P.)




MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

Financial Year	Turnover	Net worth
2022-23		
2023-24		
2024-25		

8. In response to the EOI we hereby submit the following additional details annexed to this application.
- 8.1 **Clause wise compliance/Deviations to MCF/ RBL's EOI document along with scope of work given at Annexure-B.**
- 8.2 **Experience & expertise for the item proposed in EOI; Details of similar projects executed related to EOI document (ELIGIBILITY CRITERIA) & other documents related to eligibility criteria. Responsibility of submission of documents establishing compliance of requirements in eligibility criteria shall be of respondent. Respondent to make sure submission of all necessitated documents for the same.**
- 8.3 **Details of customer(s) for Sr. No. 8.2.**
- 8.4 Details of Intellectual Property Rights (IPR) held, patent filed/held and MOU/agreement signed.
- 8.5 Details of manpower with their qualification.
- 8.6 Details of proposal for item proposed in EOI including alternative proposal, if any.
- 8.7 Details of ISO certification.
9. The following undertakings are hereby given:
- 9.1. In regard to matters relating to the security and integrity of the country, no charge sheet has been filed by an agency of the Government / conviction by a Court of Law for an offence committed by the -----(Name of the entity) or by any sister concern of the -----(Name of the entity), we/I understand that any such chargesheet would result in disqualification.
10. The undersigned declare that the statements made and the information provided in the duly completed application are complete, true, and correct in every detail.
We also understand that in the event of any information furnished by us being found later on to be incorrect or any material information having been suppressed, MCF RBL may delete our name from the list of qualified Respondents. We further understand that MCF RBL will give first preference to the applicants considered relevant for the purpose.
11. Our response is valid till (date in figures and words):

Yours sincerely,
(Signature)
NAME _____
In the Capacity of _____
Duly authorized to sign the Response
for and on behalf of _____
Date : _____


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)



MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025


Annexure-B

SCOPE OF WORK

Name of Work: Design & Development, Supply and Fitment of Upgraded Interiors of LHB Coaches in LHB Coaches.

Scope of work includes design & development, supply and fitment of upgraded interiors of LHB Coaches in two rakes of LHB Coaches comprising of 2 nos. First AC Coaches, 6 nos. 2-tier AC Coaches, and 12 nos. 3-tier AC Coaches per rake at MCF Rae Bareli. The rake composition is tentative and may change. The scope of work is tentative in nature and this EOI is intended to finalize the scope of work, technical specifications and to prepare tender document for the said work.

- I. Scope of work may broadly cover:
 - i) MCF will provide existing LHB drawings of First AC Coaches, 2-tier AC Coaches, and 3-tier AC Coaches for reference.
 - ii) The bidder shall carry out a design review and upgrade the existing design/specifications of the interiors for LHB coaches of the three variants: First AC, 2-Tier AC, and 3-Tier AC Coaches.
 - iii) The bidder shall submit three proposed designs for each coach variant to undertake all activities leading up to and including the issuance of 3-D models. Out of these three proposed designs, MCF will finalize one design option for each variant.
 - iv) The bidder shall develop mock-ups of one cabin of full scale model and a mock-up of one lavatory, including the doorway and gangway interface. For the purpose of mock-up, actual coach may also be used, with approval of CDE/MCF.
 - v) Any shortcomings identified during the inspection of the mock-up will be communicated to the bidder, who will then modify the design/drawings and mock-up accordingly for final approval by MCF. The bidder shall incorporate any further modifications/alterations required in the proposed design/models/drawings as per MCF's specifications.
 - vi) The proposed design should not require changes to the shell design (except for support brackets). Seating capacity, the number of toilets, and other essential features (such as emergency windows, linen space, reading lights, mobile charging points, etc.) should remain broadly consistent with MCF's existing design. Maximum moving dimensions should also align with the existing specifications. The bidder shall provide changes required in shell for back pieces with detailed drawings.
 - vii) The firm shall create 3D parametric models of the coaches (preferably using the Unigraphics NX platform), incorporating appropriate modules such as solid modeling, sheet metal, surfacing modeling, assembly modeling, etc., and generate 2D drawings for all assemblies, sub-assemblies, and components of the upgraded interior furnishings for the three LHB coach variants: First AC, 2-Tier AC, and 3-Tier AC.
 - viii) The submitted design should include a complete list of items (Bill of Materials, including Quantity per Assembly/Coach), child drawings, and all material specifications.
 - ix) The submitted design should clearly incorporate the assembly and disassembly process for each item, with pictorial depictions for clarity.


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)






MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

- x) The bidder shall submit 3D models of the complete assembly, along with the corresponding 2D drawings (in Unigraphics NX, .dwg, .pdf, or .tiff formats), to MCF for approval. The submission should include a proper covering letter in both hard and soft copy (preferably on a pen drive or DVD).
- xi) The bidder shall address all deficiencies regarding the submitted drawings and models as communicated by MCF and re-submit the updated 3D models and respective 2D drawings until final approval is granted.
- xii) A Finite Element Analysis (FEA) report for seats, berths, pillars, ladders, light luggage racks, and any other load-bearing components, along with the submission of the analysis report.
- xiii) While developing the design, the successful bidder shall consider interfacing issues of the furnishings with the car body shells, bogies, air brakes, etc., for the specified coach variants. All items whose design is developed by the supplier shall be validated as per applicable AAR/EN/JIS.
- xiv) The bidder shall propose the material sources and specifications, maintenance requirements, life cycle costs, estimated costs, and any additional verifiable properties for the design.
- xv) **Manufacturing, supply and fitment of upgraded interiors in two rakes of LHB Coaches comprising of 2 nos. First AC Coaches, 6 nos. 2-tier AC Coaches, and 12 nos. 3-tier AC Coaches per rake at MCF Rae Bareli:** The furnishing kits assembly at MCF shall be carried out by the bidder, with supervision provided by the MCF. Any modifications required to enable assembly shall also be performed by the bidder's manpower.
- xvi) **Prototype:** The bidder shall install the furnishing kits on the prototype coach shells at MCF. One coach of each type shall be furnished and completed.
- xvii) **Prototype Review:** MCF and the bidder's teams shall jointly conduct a detailed review. Observations will be made to improve tolerances and quality for the final coach. The observations and required modifications from the prototype review shall be compiled. Any design changes required due to issues that arise during the manufacture of prototype coaches shall be undertaken by the bidder. The design changes identified in the preceding activities shall be implemented, and the supply of the remaining furnishing kits will proceed according to the updated designs.
- xviii) **Review and Sign-off of Final Detailed Design Documents:** The final set of documents, drawings, and models for the coach furnishing shall be submitted to the MCF for review and sign-off. Migration of the models, drawings, and data to NX Teamcenter, and ensuring access to the digitized data from any system as per MCF's requirements.
- xix) **Go-Ahead for Series Production:** The bidder will receive authorization to proceed with the supply and installation of the remaining furnishing kits upon successful completion of the previous activities. Once approval for series production is granted, the bidder shall commence series production, supply, and installation of furnishing kits according to the agreed schedule.
- xx) **Maintenance:** After the supply and fitment of upgraded interiors in two rakes of LHB Coaches comprising of 2 nos. First AC Coaches, 6 nos. 2-tier AC Coaches, and 12 nos. 3-tier AC Coaches per rake at MCF Rae Bareli, the performance of these coaches will be monitored for at least 3 years on Indian Railways to validate the changes. Should any further design upgrades be required based on field performance, these changes will be implemented at no additional cost to the purchaser.
- xxi) Upgraded interior furnishing design may include features mentioned below (alternate upgraded materials can also be offered by the bidder):


 उप मुख्य यंत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)





MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

A. Vacuum Infusion/VARTM FRP panels: Side wall panels(SWP), Ceiling Panels (including diffuser panels), Lavatory Modules

Sidewall panel and Ceiling Panel (Including diffuser panels):

1. The panels shall be modular in nature that enables ease of assembly during manufacturing as well as disassembly during maintenance.
2. Mounting arrangements should be robust to take load of these panels during use. Detailed design should also include method of mounting/dismounting of these panels.
3. Suitable back-pieces and cut-outs should be provided for fitment of various fittings (like lights, plug points, air vents, snack table, bottle holder etc) as per design.
4. The durability of panels should be better in comparison to that of hand lay FRP panels.
5. Panels shall be complying with EN-45545 R1 HL3 requirements of Fire Properties.
6. Panels & ceiling arrangement should accommodate minor gaps arising at interface points with other parts like with partition frames etc. or with other panels/ceilings.
7. Panels shall have anti-graffiti feature.
8. Design of panels should include fitment of various electrical fittings like lights, switches, plugs etc.
9. Firm can suggest alternate material and processes for these items than the mentioned one. Firm to specify the material specification with all properties, sources, benefits over current FRP specification being used by MCF and its costing.
10. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

Lavatory Module:

1. Interior of lavatory module design should include designing of wash basin with shelf, Lavatory Pan (Indian & Western), Water taps with location, mirror with holding arrangement, modular dust bin design with location, tissue roll, Soap holder, lighting and ventilation details etc. All these items should be ergonomically placed for ease in use.
2. Lavatory floor should ensure out-flow of water efficiently and should dry in minimal time and should restrict slip, even in wet condition. Drain pipe location should clearly be indicated and same should not be above under-frame mounted items.
3. Attachment/ additional wall fixing in lavatory module should be such as that it does not rattle during train operation. These should properly be matched with other items. Sufficient space should be there inside these to mount various fittings like EPPFS (Electro Pneumatic Pressurized Flushing System) panels etc. It should not infringe with opening of entrance door.
4. Interior and exterior dustbins of lavatory should be easily detachable for cleaning .
5. The item shall have anti-graffiti feature.
6. All sub assembly of lavatory should be with anti-theft feature whenever required.

उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
Dy. Chief Mechanical Engineer/Design
आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
Modern Coach Factory, Raebareli (U.P.)





MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

7. Firm can suggest alternate material and processes for these items than the mentioned one. Firm to specify the material specification with all properties, sources, benefits over current FRP specification being used by MCF and costing.
8. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

B. Seats & Berths:

1. Arrangement/components of seat and berth should be modular, light weight, rugged, durable and aesthetically pleasing. The weight reduction vis-à-vis current design (if any) should be clearly brought out.
2. All sub assembly of seat & berth should be with anti-theft feature.
3. Back side (especially of middle, upper and side upper berths) of seat & berths should be aesthetically pleasing, rugged & durable without sharp corners.
4. Cushion holding arrangement with seat frame should be such that cushion can be assembled and dis-assembled easily from the seat frame bucket type design.
5. Seat inner frame should be compact and light weight and should be able to meet the loading requirements as per the specifications.
6. Design should be such that, it should not hold dust/oil/food stains and should be easily cleanable for oil, grease etc. The items shall have anti-graffiti feature.
7. In case of use of non-metallic materials, these should comply to EN-45545R21 HL3 requirements of Fire Properties.
8. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

C. Safety Rails:

1. It shall be designed and assembled on upper/middle berth of coaches in such a way that it can suffice requirement of safety rail as well as grab handle for assisting passenger in climbing the upper/middle berths, if required.
2. It should be compact & user friendly especially for children and old age people.
3. It should be aesthetically compatible with seat & berth & other interior items.
4. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

D. SS Pillars, Ladders with grab handle

1. Pillar assembly finish and color should be aesthetically pleasing and should match with partitions, panels and other furnishing items.
2. Pillar assembly should be designed such that integration/assembly with ladder arrangement is modular. The design should rugged and should be able to withstand the required load and coach vibration and free from sharp edges.
3. The design of ladder shall be developed considering the requirement for all age groups passengers i.e., children, adults and senior citizens for climbing middle and

उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
Dy. Chief Mechanical Engineer/Design
आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
Modern Coach Factory, Raebareli (U.P.)





MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

upper births. The design shall be light weight, user friendly and free from sharp edges and should not be slippery.

4. Sufficient anchoring points should be provided on pillar/ladder/panels/seats so that climbing on berth is easy for all passengers.
5. In case of use of non-metallic materials, these should comply to EN-45545 HL3 requirements of Fire Properties.
6. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

E. Stainless Steel/Composite material/Plastic new design interior fittings (Mobile holder, Coat hook, Light Luggage Rack, Snack Table, bottle holder)

1. As far as possible, all interior fittings shall be designed in such a way that it shall be flushed in panels/partitions when not in use.
2. These should be aesthetically pleasing, user friendly & free from any sharp corners.
3. Luggage rack should be lighter, compact and easy to dismantle and assemble in coaches.
4. In case of use of non-metallic materials, these should comply to EN-45545 HL3 requirements of Fire Properties.
5. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.


F. Improved stickers

1. Stickers shall be developed as per ICF/MD/SPEC-317 with ABS material.
2. Sticker shall be in-line with standard of world railways/air transport etc.
3. Installations aspects in coaches on different types of surfaces should be ensured in design of stickers.
4. Visibility and compactness of sticker should be ensured for user friendliness.
5. Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

G. Door way and Gang Way Ceiling

Fixing arrangement of Door way and Gang Way Ceiling should be with suitable locking/fixing arrangement with antitheft feature (could be opened with special tool for maintenance purpose).

- 1) The panels shall be light weight & modular in nature that enables ease of assembly during manufacturing as well as disassembly during maintenance.
- 2) Mounting arrangements should be robust to take load of these panels during use and withstand with vibration of coach during run. Detailed design should also include method of mounting/dismounting of these panels.
- 3) Suitable back-pieces and cut-outs should be provided for fitment of various fittings (like lights, plug points, air vents, snack table, bottle holder etc) as per design.


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिजाइन कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)





MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

- 4) Panels shall be complying with EN-45545 R1 HL3 requirements of Fire Properties.
- 5) Ceiling arrangement should be adjustable to accommodate minor gaps/level arising at interface points with other parts like with partition frames etc. or with other lavatory module arrangements. Panels shall have anti-graffiti feature
- 6) Features list mentions above are not exhaustive. Any other feature improving modularity, compactness, user friendliness, aesthetics, durability, light weight etc. may be included by bidder or as per MCF requirement.

H. SMART features


The design of assembly/subassembly/item above, developed should incorporate the provision for accommodating following Smart features:

- 1) Digital destination board
- 2) Papis
- 3) Lavatory Occupancy Sensor
- 4) OBCMS and associated equipment's
- 5) CCTV and associated equipment's
- 6) Water Level Indicator

MCF is free to add any extra item for provision in design during currency of contract.

Note:

1. Key benefits/feature tabulated above are not exhaustive, bidders are free to propose any additional feature/ material for upgrading interior furnishing of coaches for enhancing durability of items, compactness, aesthetic values, maintainability, modularity and passenger comfort & experience etc.
2. Firm shall ensure the material being used for all interior paneling, ceilings and passenger amenities fittings shall comply the requirements of EN-45545 (HL-3).
3. Firm shall provide the technical specification duly incorporating the values for various parameters required in view of attaining the above mentioned features which can enable MCF for procuring the materials. It shall also include testing requirements for the same.
4. MCF may provide reference documents of existing material & design as available with this office if asked by firm during execution period.
5. The bidder shall deploy 02 numbers of their staff at Mech. Design Office, MCF/RBL throughout the period of the contract. They will co-ordinate with the nominated representative of different sections of Mech. Design Office at MCF to carry out the work.


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उत्तर प्रदेश)
 Modern Coach Factory, Raebareli (U.P.)



MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

- II. List of some reference drawings are as under however contractor may ask any other drawings available at MCF & applicable in designing:

S.No.	Item/Assembly	Reference Drawings		
		FAC	AC 2Tier	AC 3 Tier
1.	Sidewall Paneling & Ceiling	LA42004 Alt-e	LW44788 Alt-Nil	LE44001 Alt-d
2.	Pillar Assembly	LA10122 Alt-b LA10156 Alt-c LA10157	LW10337 Alt-b LW10340 Alt-b LW10365 Alt-Nil LW10338 Alt-b LW10192 Alt-b LE10131 Alt-h LW10341 Alt-b LW10342 Alt-b LE10295 Alt-b LE10242 Alt-b LW10361 Alt-Nil LW10368 LW10339 Alt-b	LE10110 Alt-j LE10109 Alt-k MI007531 Alt-Nil LE10295 Alt-b MI007242 Alt-a LE10162 Alt-f MI007529 Alt-Nil MI007240 Alt-a
3.	Seats and berths	LA61002 Alt-g	LW61008 Alt-c	MI007106 Alt-b
4.	Ladder	LA61203 Alt-e	LW61375 LW61376	LE61272 Alt-a
5.	Lavatory Module		1 10113.0.30.000.003 1 10113.0.30.000.005	
6.	Safety Rail	LA61160 Alt-f LA61150 Alt-f	LW61378 Alt-Nil LW61230 Alt-e	LE61246 Alt-f LW61230 Alt-e
7.	Coat Hook		CC64254 Alt-e	
8.	Luggage Rack		LA62102 Alt-g	
9.	Snack table with bottle holder		LW64218 Alt-g	
10.	Gangway		1 10113.0.24.100.001 Alt- R2	
11.	Layout of lettering inside	LA64017 Alt-c	LW64026 Alt-b	LE64016 Alt-b

उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
Dy. Chief Mechanical Engineer/Design
आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ.प्र.)
Modern Coach Factory, Raebareli (U.P.)






MODERN COACH FACTORY, RAEBARELI

EOI document no. RBL-MD54311 Rev-Nil, date: 15.05.2025

III. Delivery Schedule& Payment Schedule:

SNo	Activity	Timeline D - Date of issue of LOA	Payment Schedule
1	i) MCF will provide existing LHB drawings for reference ii) Design review and upgrade existing design/specifications for LHB coaches (First AC, 2-Tier AC, 3-Tier AC). iii) Submission of three proposed designs for each coach variant by bidder	D+8 weeks	
2	iv) Development and supply of mock-ups of one cabin (Full Scale Model) and one lavatory, including doorway and gangway interface of each variant by the bidder	D+16 weeks	
3	v) Modification of designs/drawings and mock-ups as per MCF's feedback. vi) Submission of 3D models with corresponding 2D drawings for approval (in preferred formats) by the bidder. vii) Submission of Finite Element Analysis (FEA) report for load-bearing components by the bidder. viii) Submission of complete Bill of Materials, child drawings, and material specifications by the bidder. ix) Submission of material sources and specifications, maintenance requirements, life cycle costs, and estimated costs by the bidder.	D+24 weeks	
4	x) Prototype manufacture: Installation of the furnishing kits on the prototype coach shells at MCF xi) Prototype review with MCF team for quality improvements and updation of design changes. xii) Final review and sign-off of all design documents, including migration to NX Teamcenter	D+32 weeks	Payment for first coach on pro-rata basis of PO value.
5	xiii) Go-ahead for series production upon successful completion of the prototype. Series manufacture and supply of furnishing kits and installation	9 months	Pro-rata wise per number of coaches commissioned.
6	xiv) Performance monitoring of upgraded interiors for 3 years on Indian Railways	36 months from the date of dispatch of the coach form MCF/RBL	Release of PBG.


 उप मुख्य यांत्रिक इंजीनियर (अभिकल्प)
 Dy. Chief Mechanical Engineer/Design
 आधुनिक रेल डिब्बा कारखाना, रायबरेली (उ०प्र०)
 Modern Coach Factory, Raebareli (U.P.)

