

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
1	Part I	Section 2 Bid Data Sheet	Clause 2.3 and Page 20 of 362	The Contractor shall submit to Employer the safety certificate for each platform/station of Main line and as well Depots in the approved format after completion of commissioning tests, certifying that the Works are safe for Public/Revenue operation along with the assessment report / certificate of ISA (Independent Safety Assessor).	What does “the Contractor” refer to? It is suggested to change “the Contractor” to the “Civil Work Contractor”.	Tender Condition Shall Prevail
2	Part I		ITB 54 - Signing of Contract	Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Tenderer shall furnish the Performance Security .....	Request to modify the clause as follows: "Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer and <b>signing of Contract</b> , the successful Tenderer shall furnish the Performance Security ....."	Tender Condition Shall Prevail
3	Part I		ITB 53.2 - Signing of Contract	Signing of Contract: In addition to the stipulations of ITT, the Employer and the Contractor shall execute a Contract Agreement, with such modifications as may be necessary to record the Contract. The costs of stamp duties and similar charges imposed by law shall be borne by the Contractor. The Tenderer should note that in the event of acceptance of the Tender, the Tenderer will be required to execute the Contract in the form specified in Particular Conditions of Contract with such modifications as may be considered necessary at the time of finalization of the Contract within a period as given is Section 7 & Section 8.	Request to modify the clause as follows: The Tenderer should note that in the event of acceptance of the Tender, the Tenderer and the Employer will be required to execute the Contract in the form specified in Particular Conditions of Contract with such modifications as may be considered necessary at the time of finalization of the Contract within a period as given is Section 7 & Section 8.	Tender Condition Shall Prevail
4	Part I		Tender Data Sheet	The Performance Security shall be furnished to the Employer within 28 (twenty- eight) days of receipt of the notification of award.	Request to modify the clause as follows: The Performance Security shall be furnished to the Employer within 28 (twentyeight) days of receipt of the notification of award and signing of Contract by the Employer.	Tender Condition Shall Prevail
5	Part I	Section 3	Annexure 1.3 EQC: 3.1 Average Annual Turnover	Average Annual Turnover: The average annual turnover of last FIVE financial years shall not be less than <b>INR 22,000 Millions.</b> A price adjustment can be applied to Annual Turnover notes sr no. 3).	We would request MMRDA to kindly update the escalation table (below notes sr no. 3) considering last Financial Year as 2023- 24	Refer Addendum No. 3
6	Part I	Section 3	Annexure 1.3 EQC: 3.2 Profitability	Profit after Tax should be Positive for “Any Three Years” out of last five consecutive financial years. The profit shall not be negative for last two consecutive financial years.	Specific requirement for Profitability is limiting participation for eligible bidders. It is noteworthy to mention that these specific requirements have been unseen and unheard in any other Rolling Stock tenders procured by DMRC/CMRL/any other metro authorities PAN India and is also not a standard requirement.  This typical requirement is potentially limiting the participation of eligible indigenous bidders, thereby befitting the policies of “Atmanirbhar Bharat” & “Viksit Bharat” of Government of India. We would earnestly request MMRDA to consider withdrawal of this specific clause foremost. Alternately, in case of limitation with MMRDA, the clause may be considered for revising as below:  Profit after Tax should be Positive for “Any <del>Three</del> Two Years” out of last five consecutive financial years. The profit shall not be negative for last two <del>consecutive</del> financial years. The withdrawal/amendment of the Profitability requirements shall ensure competitive bidding & higher participation by eligible bidders:	Refer Addendum No. 3
7	Part I	Section 3: Evaluation and Qualification Criteria		4.1 General Experience -  Note: iii) *Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro Railway, Suburban EMUs, MEMU, LRT anywhere in the world	Since Sub urban EMU, MEMU, LRT is allowed under similar work defination. We also request you to allow "Railway" project references under general experience . Accordingly, request MMRDA to modify the clause as below. iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro Railway, Railways, Sub-urban EMUs, MEMU, LRT, anywhere in the world	Refer Addendum No. 3

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8	Part I	Section 3	Annexure 1.3 EQC 4.1 General Experience	<p>Experience under theConstruction projects in the role of Individual contractor/ lead member of JV/ as JV Member for at least last 10 years from the date of submission of bid</p> <ul style="list-style-type: none"> <li>• At least ONE Similar work satisfactorily completed of minimum value INR 14,770 MillionsOR</li> <li>• At least TWO Similar works satisfactorily completed of minimum value INR 9, 233 Millionseach OR</li> <li>• At least THREE Similar works satisfactorily completed of minimum value INR 7,390 Millions each</li> </ul> <p>Notes for General Experience:</p> <p>(i) An escalation can be .....</p> <p>(ii) Multiple work Packages/ contracts .....</p> <p>(iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro, Railway, Sub- urban EMUs, MEMU anywhere in the world.</p>	<p>We would earnestly request MMRDA to consider amending the clause as below for competitive bidding &amp; higher participation by eligible bidders thereby fulfilling the policies of “Atmanirbhar Bharat” &amp; “Viksit Bharat” of Government of India.</p> <p>Eligible Projects Experience in relation to “Eligible Projects” in India or countries as per NDB procurement guidelines as an individual contractor/ Lead member of joint venture member/ JV member (including its Subsidiary (ies) &amp; Associate (s)) during the last 10 years from the date of submission of bid.</p> <ul style="list-style-type: none"> <li>•At least ONE Similar work satisfactorily completed or part thereof for of minimum value INR 14,770 MillionsOR</li> <li>•At least TWO Similar works satisfactorily completed or part thereof for of minimum value INR 9,233 Millions each OR</li> <li>•At least THREE Similar works satisfactorily completed or part thereof for of minimum value INR 7,390 Millions each</li> </ul> <p>Notes for General Experience:</p> <p>(i) An escalation shall be .....</p> <p>(ii) Multiple work Packages/ contracts .....</p> <p>(iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro, Railway, Sub-urban EMUs, MEMU, LRT anywhere in the world.</p>	Refer Addendum No. 3
9	Part I	Section 3	Annexure 1.3 EQC 4.1 General Experience	<p>Experience under the Construction projects in the role of Individual contractor/ lead member of JV/ as JV Member for at least last 10 years from the date of submission of bid. —</p> <ul style="list-style-type: none"> <li>•At least ONE Similar work satisfactorily completed of minimum value INR 14,770 Millions OR</li> <li>•At least TWO Similar works satisfactorily completed of minimum value INR 9,233 Millions each QR</li> <li>•At least THREE Similar works satisfactorily completed of minimum value INR 7,390 Millions each</li> </ul> <p>Notes for General Experience:</p> <p>(iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro Railway, Suburban EMUs, MEMU, LRT anywhere in the world</p>	<p>Experience under the Construction projects in the role of Individual contractor/ lead member of JV/ as JV Member for at least last 10 years from the date of submission of bid. —</p> <ul style="list-style-type: none"> <li>•At least ONE Similar work satisfactorily completed of minimum value INR 14,770 Millions OR</li> <li>•At least TWO Similar works satisfactorily completed of minimum value INR 9,233 Millions each QR</li> <li>•At least THREE Similar works satisfactorily completed of minimum value INR 7,390 Millions each</li> </ul> <p>Notes for General Experience:</p> <p>(iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro Railway, Suburban EMUs, MEMU, LRT anywhere in the world</p> <p><b>(iv) substantially completed work should at least be 90% completed (financial Progress) and the completed value of work should be minimum of value as specified above for One/Two/Three similar work.</b></p>	Refer Addendum -3
10	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.1Design Engineering and integration	<p>Notes:</p> <p>If the Bidder/ OEM (Original Equipment Manufacturer) doesn't have design experience, then Design consultant can be appointed with requisite experience of at least two (2) Metro Railway Projects and collateral warranty for Design Consultant shall be submitted.</p>	Can the performance of designing two subway projects, construction or single system design, and consulting services be considered as performance? Can the collaborative warranty be provided after the design unit is identified after winning the bid?	Refer Addendum No. 3

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11	Part I	Section 3	Annexure 1.3 EQC: 5.1 Design Engineering and integration	Submission Requirements Design Consultant/s: Form at Sr no 30 of 4A Bidding Forms (Form of Undertaking to Provide Collateral Warranties) Form 5.1 for Collateral Warranty to be provided after issue of LOA	As per tender requirement set out in Form at Sr no 30 of 4A Bidding Forms (Form of Undertaking to Provide Collateral Warranties), in the event of acceptance of the tender by MMRDA, Design Consultants is required to provide a Collateral Warranty in the wording set out in the Form 5.1 (Collateral Warranty Design Consultant). This requirement of Form 5.1 (COLLATERAL WARRANTY DESIGN CONSULTANT) is limiting participation for eligible bidders since prospective World Class Design Consultants are reluctant to associate for this contract. It is noteworthy to mention that this specific requirement has been unseen and unheard in any other Rolling Stock tenders procured by DMRC/CMRL/any other metro authorities PAN India and is also not a standard requirement. Since, the primary requirement for this contract is for Rolling Stock which covers the major share of the project and alike all other Metro projects PAN India, scope of Design for Rolling Stock generally lies with the Rolling Stock contractor which can be executed in-house or associated with qualified Design Consultant/s to meet the technical requirements laid down in the tender, since both the processes are inter-linked. Needless to say, such a specific requirement laid down in the wording set forth in 5.1 (COLLATERAL WARRANTY DESIGN CONSULTANT) is not required for all practical reasons. The responsibility for all practical purpose would lie with the lead bidder/rolling stock contractor for successful execution and completion of the contract. The Form at Form at Sr no 30 of 4A Bidding Forms (Form of Undertaking to Provide Collateral Warranties) along with supporting documents are sufficient enough to prove the credentials of the qualified Design Consultant/s for Rolling Stock which can be evaluated by MMRDA during bid evaluation for considering the capability/ capacity of the Design Consultant/s to execute the subject contract. This typical requirement is potentially limiting the participation of eligible indigenous bidders, thereby befitting the policies of “Atmanirbhar Bharat” & “Viksit Bharat” of Government of India and would lead to lower participation and uncompetitive pricing. We would earnestly request MMRDA for withdrawal of Form 5.1 (COLLATERAL WARRANTY DESIGN CONSULTANT) for competitive bidding & higher participation by eligible bidders.	Refer Addendum No. 3
12	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.2 MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	Submission Requirements Form 5.2A MoU to be provided from OEM 1) Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOA 2) Form 4.3 for Proven Experience	Is the issuance of LOA announcing the winning bid? Is the Collateral Warranty provided after winning the bid, and can it be provided after determining the supplier?	Refer Addendum No. 3
13	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.1 Design Engineering and integration	Notes: If the Bidder/ OEM (Original Equipment Manufacturer) doesn't have design experience, then Design consultant can be appointed with requisite experience of at least two (2) Metro Railway Projects and collateral warranty for Design Consultant shall be submitted.	Can the performance of designing two subway projects, construction or single system design, and consulting services be considered as performance? Can the collaborative warranty be provided after the design unit is identified after winning the bid?	Refer Addendum No. 3
14	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.2 MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	(a) * Proven Experience means: Design, Supply, Installation, Testing and Commissioning experience for the System/ Sub-system/equipment in similar type of works in at least two Projects of Metro Railway / High-speed Rail/MRT/EMU/MEMU/LRT anywhere in the world and shall be in Satisfactory operation as on date of submission of bid. The necessary documents duly signed by the concern employer shall be part of Tender submission. Without Documentary evidence of experience, the bid may be rejected.	What is the standard of MEMU? Are monorail, tram, smart rail, digital rail, etc. considered as light rail? Is the performance acceptable? How to define documentary evidence of experience? Are the contract documents, user certificates, etc. considered as Documentary evidence of experience? Is there a unified format, and can Form 4.3 be used as proof documents?	Refer Addendum No. 3
15	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.2 MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	Submission Requirements Form 5.2A MoU to be provided from OEM 1) Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOA 2) Form 4.3 for Proven Experience	Is the issue of LOA announcing the winning bid? Is the Collateral Warranty provided after winning the bid, and can it be provided after determining the supplier?	Refer Addendum No. 3

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16	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.2MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	Annexure – 1.10 Form 5.2 COLLATERAL WARRANTY FOR CRITICAL EQUIPMENT FROM ORIGINAL EQUIPMENT MANUFACTURER / SPECIALIST SUB-CONTRACTOR as per Section 3 Evaluation and Qualification Criteria (To be Submitted on a 500 Rs. STAMP PAPER AND DULY NOTARISED)	To be Submitted on a 500 Rs. STAMP PAPER AND. How should DULY NOTARISED be understood here as paying a stamp duty of 500 rupees, which need to be notarized? To whom should it be handed over and notarized by whom?	Refer Addendum No. 3
17	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 5.2MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	(a) * Proven Experience means: Design, Supply, Installation, Testing and Commissioning experience for the System/ Sub-system/equipment in similar type of works in at least two Projects of Metro Railway / High-speed Rail/MRT/EMU/MEMU/LRT anywhere in the world and shall be in Satisfactory operation as on date of submission of bid. The necessary documents duly signed by the concern employer shall be part of Tender submission. Without Documentary evidence of experience, the bid may be rejected.	What is the standard of MEMU, and are monorail, tram, smart rail, digital rail, etc. considered as light rail? Is the performance acceptable? How to define documentary evidence of experience, are contract documents, user certificates, etc. included, and is there a unified format?	Refer Addendum No. 3
18	Part I	Section 3	Annexure 1.3 EQC: 5.2 MoU to provide Collateral Warranty with OEM of Critical equipment with proven experience*	Submission Requirements Form 5.2A MoU to be provided from OEMs 1) Form 5.2 for Collateral WarrantyOEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOA 2) Form 4.3 for Proven Experience	As per tender requirement set out in the Submission Requirements of EQC, Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOAs required to be provided by the OEMs for Critical equipment.  This requirement of Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOAs limiting participation for eligible bidders since prospective, qualified and World Class OEMs for Critical equipment, viz. Propulsion & TCMS, CBTC Signaling System and PSD are reluctant to associate for this contract.  It is noteworthy to mention that these specific requirements have been unseen and unheard in any other Rolling Stock tenders procured by DMRC/CMRL/any other metro authorities PAN India and is also not a standard requirement.  Since, the primary requirement for this contract is for Rolling Stock which covers the major share of the project and alike all other Metro projects PAN India, OEMs for critical equipment viz. Propulsion & TCMS, Signaling System and PSD are associated and integrated amongst themselves for smooth commissioning and functioning of the trains including operations and the interoperability lies with the Rolling Stock contractor/Lead bidder to meet the technical requirements laid down in the tender. Needless to say, such a specific requirement for OEMs for critical equipment set forth in Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOAs not required for all practical reasons. The responsibility for all practical purpose would lie with the lead bidder/rolling stock contractor for successful execution and completion of the contract with smooth functioning of the trains. The Form 5.2A MoU to be provided from OEMs along with Form 4.3 for Proven Experienceis sufficient enough to prove the credentials of the qualified OEMs for Critical equipment for Rolling Stock/Signaling System/PSD which can be evaluated by MMRDA during bid evaluation for considering the capability/ capacity of the Design Consultant/s to execute the subject contract.  This typical requirement is potentially limiting the participation of eligible indigenous bidders, thereby befitting the policies “Atmanirbhar Bharat” & “Viksit Bharat” of Government of India and would lead to lower participation and uncompetitive pricing.  We would earnestly request MMRDA for withdrawal of Form 5.2 for Collateral Warranty OEM / Specialist Sub Contractor (Annexure – 1.10 of Addendum 1) after issue of LOA for competitive bidding & higher participation by eligible bidders.	Refer Addendum No. 3

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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19	Part I	Section 3	Annexure 1.3 EQC: 4.2A: Specific Experience in Key activities - Manufacturing of EMU/ MEMU/ Metro cars	Submission Requirements  Form – 4.2 (Annexure 1.19 of Addendum) & RPC 1 MoU with the Specialist Sub-Contractor (Annexure – 1.9 of Addendum 1)	Requirement of MoU with the Specialist Sub-Contractor (Annexure – 1.9 of Addendum 1) is limiting participation for eligible bidders. It is noteworthy to mention that this specific requirement has been unseen and unheard in any other Rolling Stock tenders procured by DMRC/CMRL/any other metro authorities PAN India and is also not a standard requirement. Since, the primary requirement for this contract is for Rolling Stock which covers the major share of the project and alike all other Metro projects PAN India, System Integration is carried out by and between Rolling Stock and S&T contractors. Needless to say, such a specific requirement for MoU with Rolling Stock/System Integrator is not required for all practical reasons. The responsibility for all practical purpose would lie with the lead bidder for successful execution and completion of the contract. Form 4.2 (Annexure 1.15 of Addendum 1) & RPC 1 shall suffice the credentials of the specialist sub-contractor for Rolling Stock/System Integration which can be evaluated by MMRDA during bid evaluation for considering the capability/capacity of the contractor to execute the subject contract.  This typical requirement is potentially limiting the participation of eligible indigenous bidders, thereby befitting the policies of “Atmanirbhar Bharat” & “Viksit Bharat” of Government of India and would lead to lower participation and uncompetitive pricing.  We would earnestly request MMRDA for withdrawal of Annexure – 1.9 MoU with the Specialist Sub-Contractor for competitive bidding & higher participation by eligible bidders	Refer Addendum No. 3
20	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3,: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator	Bidder shall have successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works. Integration should be amongst RS, S&T sub-systems in last TEN (10) years from the date of submission of Bid At least ONE work satisfactorily completed of minimum value INR 14,770 Millions or more OR At least TWO works satisfactorily completed of minimum value INR 9,233 Millions each OR At least At least THREE works satisfactorily completed of minimum value INR 7,390 Millions each Submission Requirements Form – 4.2 RPC 1 Form 5.3 Memorandum of Understanding for Specialised Sub-Contractor (Rolling Stock/ System Integrator) (Annexure – 1.9 of Addendum 1)	Here, bidders are required to meet the requirements for the quantity and amount of performance in vehicle, signal, and communication integration. Professional subcontractors do not have performance in integrating vehicles. What are the requirements for the quantity and amount of performance in signal and communication of equipment system integration subcontractors? Do subcontractors need to provide attachments 4.2&RPC 1 and 5.3?	Refer Addendum No. 3
21	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator	Annexure 1.15 FORM 4.1 & FORM 4.2 - General & Relevant Experience Forms [The following table shall be filled in for the Tenderer and for each Party constituting the Tenderer including the Specialist Sub-Contractor accompanied by client’s certificate, and duly notarized copy of work order/extract of contract agreement confirming the project details ; Form RPC 1 - Reference Project Certificate Relevant Experience Name, sign and seal of the certifying employer of the client of designation THE CHIEF ENGINEER or equivalent or engineering head of the department. In case if Bidder is unable to obtain employer’s signature on RPC 1, then he must submit (along with related RPC 1) experience certificate issued by the project employer on employer’s letterhead. Such certificate issued by the project employer shall contain all the information mentioned in the form RPC 1 and shall be signed by the project authorized signatory not below the rank of THE CHIEF Engineer of any Govt. Undertaking/Local Govt./Municipalities.	Is there a unified format requirement for user proof, and can RPC1 be used as user proof? Is it possible to sign and stamp directly on RPC1 if there is no place for the end user to sign or stamp on RPC 1? The existing performance proof cannot fully cover the content of RPC1.	Refer Addendum No. 3

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22	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator*	The Bidder shall associate with ONLY ONE “Specialist Sub-contractor” for Sr. 4.2(A) and ONLY ONE “Specialist Sub-contractor” for Sr. 4.2(B) for meeting the “Specific Experience Requirements”. The Specialist Sub-contractor for Rolling Stock / Specialist Sub-contractor System Integration shall associate with ONLY ONE Bidder for “DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD” The same specialist Sub-Contractor for Rolling Stock / Specialist Sub-contractor System Integration cannot become either JV partner or specialist Sub-Contractor with any other “Bidder” for the said works.	Communication and signal subcontractors cannot lock in a single supplier at the bidding stage	Refer Addendum No. 3
23	Part I	Section 3: Evaluation and Qualification Criteria	4.2 B  Page no. 16 of 31	Specific Experience in Key activities System Integrator: Bidder shall have successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works. Integration should be amongst RS, S&T subsystems in last TEN (10) years from the date of submission of Bid At least ONE work satisfactorily completed of minimum value INR 14,770 Millions or more OR At least TWO works satisfactorily completed of minimum value INR 9,233 Millions each OR At least THREE works satisfactorily completed of minimum value INR 7,390 Millions each	There is already separate qualification requirement provided in Tender for Rolling Stock (RS) contractor and proven experience for Signalling OEM. In this regard, kindly confirm that the additional qualification requirement added will be applicable for Integrator only, i.e. Bidder who intend to meet the RS qualification criteria with help of Sub-Contractor credentials.  Adding this qualification requirement in option to RS qualification (EQC 4.2A) will allow both RS contractor and integrator to participate in this tender and submit the competitive price.	Refer Addendum No. 3
24	Part I	Section 3: Evaluation and Qualification Criteria	4.2 B  Page no. 16 of 31	Specific Experience in Key activities System Integrator: Bidder shall have successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works. Integration should be amongst RS, S&T subsystems in last TEN (10) years from the date of submission of Bid At least ONE work satisfactorily completed of minimum value INR 14,770 Millions or more OR At least TWO works satisfactorily completed of minimum value INR 9,233 Millions each OR At least THREE works satisfactorily completed of minimum value INR 7,390 Millions each	We would like to highlight that in India, most of the Rolling stock or signalling and telecommunication works tender are issued as separate contract. Thus the qualification requirement of "successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works." in one contract would highly restrict the participation of Rolling Stock or Signalling suppliers located in India. So, we humbly request to make this requirement as option to existing Rolling stock qualification already provided in tender OR Allow Rolling Stock supplier to use credentials of integration experience of Rolling stock with signalling and telecommunication works done in any projects, without mandating all supply, installation testing and commissioning of Rolling stock, signalling and telecommunication works in same contract.	Refer Addendum No. 3
25	Part I	Section 3: Evaluation and Qualification Criteria	4.2 B  Page no. 16 of 31	Specific Experience in Key activities System Integrator: Bidder shall have successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works. Integration should be amongst RS, S&T subsystems in last TEN (10) years from the date of submission of Bid At least ONE work satisfactorily completed of minimum value INR 14,770 Millions or more OR At least TWO works satisfactorily completed of minimum value INR 9,233 Millions each OR At least THREE works satisfactorily completed of minimum value INR 7,390 Millions each	Considering the value of ONE work / TWO works / Three works is kept same in this requirement as of requirement provided in sub-clause 4.1 General Experience, we understand that the below note provided in sub-clause 4.1 General Experience is also applicable for this requirement i.e. : "i) An escalation can be applied from the date of completion certificate to arrive at the updated value (refer table below notes Sr.no.3). ii) Multiple work Packages/ contracts awarded by the same Employer within the same municipal limits in a single year will be treated as a single work. iii) Similar Work- For a project to qualify as an Eligible Project under General Construction Experience, it shall be Metro Railway, Sub-urban EMUs, MEMU, LRT, anywhere in the world."  Kindly confirm	Refer Addendum No. 3

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
26	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3,: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator	Bidder shall have successfully delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, signalling and telecommunication works. Integration should be amongst RS, S&T sub-systems in last TEN (10) years from the date of submission of Bid At least ONE work satisfactorily completed of minimum value INR 14,770 Millions or more OR At least TWO works satisfactorily completed of minimum value INR 9,233 Millions each OR At least At least THREE works satisfactorily completed of minimum value INR 7,390 Millions each Submission Requirements Form – 4.2 RPC 1 Form 5.3 Memorandum of Understanding for Specialised Sub-Contractor (Rolling Stock/ System Integrator) (Annexure – 1.9 of Addendum 1)	Here, bidders are required to meet the requirements for the quantity and amount of performance in vehicle, signal, and communication integration. Professional subcontractors do not have performance in integrating vehicles. What are the requirements for the quantity and amount of performance in signal and communication of equipment system integration subcontractors? Do subcontractors need to provide attachments 1.19&RPC 1 and 1.9?	Refer Addendum No. 3
27	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator	Annexure 1.15 FORM 4.1 & FORM 4.2 - General & Relevant Experience Forms [The following table shall be filled in for the Tenderer and for each Party constituting the Tenderer including the Specialist Sub-Contractor accompanied by client's certificate, and duly notarized copy of work order/extract of contract agreement confirming the project details ; Form RPC 1 - Reference Project Certificate Relevant Experience Name, sign and seal of the certifying employer of the client of designation THE CHIEF ENGINEER or equivalent or engineering head of the department. In case if Bidder is unable to obtain employer's signature on RPC 1, then he must submit (along with related RPC 1) experience certificate issued by the project employer on employer's letterhead. Such certificate issued by the project employer shall contain all the information mentioned in the form RPC 1 and shall be signed by the project authorized signatory not below the rank of THE CHIEF Engineer of any Govt. Undertaking/Local Govt./Municipalities.	Is there a unified format requirement for user proof, and can RPC1 be used as user proof? Is it possible to sign and stamp directly on RPC1 if there is no place for the end user to sign or stamp on RPC 1? The existing performance proof cannot fully cover the content of RPC1	Refer Addendum No. 3
28	Addendum 1 of Part I	Section 3 – Evaluation and Qualification Criteria	Annexure 1.3, Complete Section–3: Evaluation and Qualification Criteria (EQC) 4.2B Specific Experience in Key activities System Integrator*	The Bidder shall associate with ONLY ONE “Specialist Sub-contractor” for Sr. 4.2(A) and ONLY ONE “Specialist Sub-contractor” for Sr. 4.2(B) for meeting the “Specific Experience Requirements”. The Specialist Sub-contractor for Rolling Stock / Specialist Sub-contractor System Integration shall associate with ONLY ONE Bidder for “DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 -DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD” The same specialist Sub-Contractor for Rolling Stock / Specialist Sub-contractor System Integration cannot become either JV partner or specialist Sub-Contractor with any other “Bidder” for the said works.	Communication and signal subcontractors cannot lock in a single supplier and Section 1 Instruction during the bidding stage 17.2 For major items of plant and services, which the Bidder intends to purchase or subcontract, the Bidder should give details of the name and nationality of the proposed subcontractors, including manufacturers, for each of those items. In addition, the Bidder should include in its Bid information establishing compliance with the requirements specified by the Employer for these items. Bidders are free to list more than one subcontractor against each item of the plant and services. and in accordance with requirements. Comments of Section 3 (Evaluation and Qualification Criteria) Multiple subcontractors with conflicts can be listed	Refer Addendum No. 3

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
29	Part I	Section 3	Annexure 1.3 EQC: 4.2B: Specific Experience in Key activities System Integrator	Submission Requirements Form – 4.2 RPC 1 Form 5.3 Memorandum of Understanding for Specialised Sub-Contractor (Rolling Stock/System Integrator) (Annexure – 1.9 of Addendum 1)	1.The reference of Form5.3could not be located in the document: Annexure 1.9 of Addendum 1. We would request MMRDA to kindly clarify the reference for Form 5.3.  2. Requirement of Form 5.3 Memorandum of Understanding for Specialised Sub-Contractor (Rolling Stock/ System Integrator) (Annexure – 1.9 of Addendum 1)is limiting participation for eligible bidders. It is noteworthy to mention that this specific requirement has been unseen and unheard in any other Rolling Stock tenders procured by DMRC/CMRL/any other metro authorities PAN India and is also not a standard requirement. Since, the primary requirement for this contract is for Rolling Stock which covers the major share of the project and alike all other Metro projects PAN India, System Integration is carried out by and between Rolling Stock and S&T contractors. Needless to say, such a specific requirement for MoU with Rolling Stock/System Integrator is not required for all practical reasons. The responsibility for all practical purpose would lie with the lead bidder for successful execution and completion of the contract. Form 4.2 & RPC 1 shall suffice the credentials of the specialist sub-contractor for Rolling Stock/System Integration which can be evaluated by MMRDA during bid evaluation for considering the capability/capacity of the contractor to execute the subject contract. This typical requirement is potentially limiting the participation of eligible indigenous bidders, thereby befitting the policies of “Atmanirbhar Bharat” & “Viksit Bharat” of Government of India and would lead to lower participation and uncompetitive pricing.We would earnestly request MMRDA for withdrawal of Form 5.3 Memorandum of Understanding for Specialised Sub-Contractor (Rolling Stock/ System Integrator) (Annexure – 1.9 of Addendum 1)for competitive bidding & higher participation by eligible bidders.	Refer Addendum No. 3
30	Part I	Section : 3	Evaluation & Qualification Criteria	Evaluation & Qualification Criteria	A. Even though the tenders are primarily for procurement of Metro systems including rolling stock, signaling & train control, telecommunication and platform screen doors with Rolling stock being the predominant component value wise, the addendum now permits rolling stock supplier to be a specialist sub-contractor which is not earlier the case. This modification permits general construction companies to be eligible to bid for the tenders even though they do not have any value addition in the systems under procurement. We request MMRDA to revert back to earlier clauses permitting only the rolling stock suppliers to be the Main contractors for the tender. B. As per the addenda, the tenders stipulate the qualification criteria for System Integrator, who had earlier delivered similar works including supply, installation testing and commissioning and integration of Rolling stock, Signaling and telecommunication works. Either the bidder must meet the requirement of system integrator on its own or should qualify the same through specialist sub-contractor. In this context, we submit that bundled package procurement of metro systems similar to this tender is rare in India and there are limited companies who qualify this requirement. As such prescribing this requirement as qualification clause is restrictive in nature and is against Companies such as BEML who intend to supply all the systems for the tender. We request MMRDA to delete the qualification requirement of System Integrator.	Refer Addendum No. 3
31		ADDENDUM I Part I	Annexure 1.3 Form 5.2	Submission Requiremenrs:  Form 5.3 for MoU’s with the Specialist Subcontractor (Annexure – 1.9 of Addendum 1)  &  Form 5.2 for Collateral Warranty to OEM/ Specialist Sub Contractor (Annexure – 1.10 of Addendum 1)	We kindly request MMRDA to confirm whether form 5.2 needs to be provided after issue of Letter of Acceptance (LOA) or along with the bid.  For MMRDA Tenders CA232 and CA234, it is noted that Form 5.2 is required to be submitted after the issuance of the Letter of Acceptance (LOA).	Refer Addendum No. 3



CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
32	Part I	Section 3: Evaluation and Qualification Criteria	Cl No. 7, Annexure 1.9	7) This MOU shall be terminated if .....(Bidder) is not awarded with the work and .....(Specialized Sub-contractor) shall be free to associate with any other contractor.	Our understanding is that once the contract is awarded , Main bidder /contractor can not change the speacilist sub contractor based on which contract is awarded. In such case Clause 7 allowing other specialized Sub contractor to tie up with main bidder post award of contract does not seem to be relevant. Request you to delete this clause	Refer Addendum No. 3
33	Part I		Sec -3 (Qualification Criteria); PCG Format		1. We understand PCG will be applicable only when credentials of parent company are used and not of associate companies. Please confirm.  2. If PCG in case of Associate Companies is also needed then it is requested to remove the requirement of taking prior consent of Employer in case of change of control, as mentioned below: <i>"It will not dispose the shareholding presently held in the Contractor and it will always ensure that it retains the control over the management of the Contractor; however, if such change in control happens during the term of the Contract then the Contractor will intimate MMRDA in writing within 30 days of such change in control except with the express written consent of the MMRDA, which consent may be issued at the MMRDA's sole discretion and provided that the new company/entity, that is proposing to acquire the shareholding held by the Guarantor in the Contractor, satisfies the MMRDA of its technical and financial capacity to discharge its obligations under this Guarantee and issue a replacement 'Parent Company Guarantee' on the same terms as this Guarantee, in a form acceptable to the MMRDA."</i>	Refer Addendum No. 3
34	Part I		Sec -3, EQC	Eqc Note 6: The same specialist Sub-Contractor for Rolling Stock / Specialist Sub-contractor System Integration cannot become either JV partner or specialist Sub-Contractor with any other "Bidder" for the said works	Please clarify if Specialist Sub-Contractor for RS with one bidder can be considered as OEM for Propulsion System & TCMS Sig / CBTC Signaling System: GoA2 / Platform Screen doors with other bidder . Kindly confirm	Refer Addendum No. 3
35	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid.	Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: This guarantee will expire at the earliest of (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid i.e. dd/mm/yyyy.	Tender Condition Shall Prevail
36	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.	Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758. AND TO THE EXTENT NOT INCONSISTENT THEREWITH, SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF INDIA This guarantee is non-assignable and non-transferable  Notwithstanding anything contained herein above: i) Our liability under this bank guarantee shall not exceed ..... ii)This bank guarantee shall be valid up to ..... iii)We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only if you serve upon us a written claim or demand (and which should be received by us), on or before ....., before the close of banking hours where after it ceases to be in effect in all respects whether or not the original bank guarantee is returned to us.	Tender Condition Shall Prevail
37	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	At the request of the Bidder, we Asian Infrastructure Investment Bank hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of INR 26,400,000 (say Indian rupees twenty-six million and four thousand hundred only) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:	Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: At the request of the Bidder, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of INR 26,400,000/- (Indian rupees twenty-six million and four hundred thousand only) within seven (7) business days upon receipt by us of your demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
38	Part I	Annexure-1.15	24. Form – 4.2 – Relevant Experience	The following table shall be filled in for the Tenderer and for each Party constituting the Tenderer including the Specialist Sub-Contractor accompanied by client’s certificate, and duly notarized copy of work order/extract of contract agreement confirming the project details	How to understand 'duly notarized' here, and is it necessary for suppliers to notarize their performance documents?Is it notarization and diplomatic authentication ?	Tender Condition Shall Prevail
39	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 412	under Invitation for Bids No	what is Invitation for Bids No? Is it CA 241 or MMRDA/5/MMRP/CA-241?	Tender Condition Shall Prevail
40	Part I	Section 4A: Bidding forms	12. Form – 2 – Historical Contract Non-Performance and Page 121 of 412	No. and title: [insert Group number and title of works]	Does Group number mean tender No? Does title of works mean name of work?	Tender Condition Shall Prevail
41	Part I	Section 4A	1. FORM 5.1: 2. FORM 5.2:	1. FORM 5.1: Collateral Warranty Design Consultant. 2. FORM 5.2: Collateral Warranty for Critical Equipment from Original Equipment Manufacturer.	<p>It is noteworthy to mention that these requirements of Collateral Warranty from the Design Consultant and OEM for Critical Equipment has been unseen and unheard in any other Rolling Stock tenders PAN India or worldwide by any of the Metro Authorities and is also not a standard requirement.</p> <p>Such a requirement is potentially limiting the participation of bidders, thereby restricting competition, since many/all of the potential Design Consultants/OEM has shared their restrictions to submit the Collateral Warranty forms post issue of LOA, since they have never come across any such requirement in the past and also considering their limited scope of work and has become very challenging.</p> <p>The primary responsibility for the integration, functionality and performance of the rolling stock including critical equipment which rests with the Lead Bidder. As the entity responsible for the final integration of the system, the Lead Bidder typically provides the necessary warranties and undertakes the full accountability for the design and performance of the system. It is unlikely that Design Consultants or OEMs would be willing to provide a Collateral Warranty for a scope that primarily falls under the responsibility of the Lead Bidder. Considering the above, we kindly request MMRDA to reconsider and withdraw the requirements for the Collateral Warranty FORM 5.1 from the Design Consultant and FORM 5.2 from OEM for Critical Equipment for submission post issue of LOA from the tender documents.</p>	Tender Condition Shall Prevail
42	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 412	under Invitation for Bids No	what is Invitation for Bids No? Is it CA 241 or MMRDA/5/MMRP/CA-241?	Tender Condition Shall Prevail
43	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder’s bid.	Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: This guarantee will expire at the earliest of (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder’s bid i.e. dd/mm/yyyy.	Tender Condition Shall Prevail
44	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.	<p>Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758. AND TO THE EXTENT NOT INCONSISTENT THEREWITH, SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF INDIA This guarantee is non-assignable and non-transferable</p> <p>Notwithstanding anything contained herein above: i) Our liability under this bank guarantee shall not exceed ..... ii)This bank guarantee shall be valid up to ..... iii)We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only if you serve upon us a written claim or demand (and which should be received by us), on or before ....., before the close of banking hours where after it ceases to be in effect in all respects whether or not the original bank guarantee is returned to us.</p>	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
45	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	At the request of the Bidder, we Asian Infrastructure Investment Bank hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of INR 26,400,000 (say Indian rupees twenty-six million and four thousand hundred only) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:	Regarding the Bank Guarantee for bid security, it is suggested to change this clause to: At the request of the Bidder, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of INR 26,400,000/- (Indian rupees twenty-six million and four hundred thousand only) within seven (7) business days upon receipt by us of your demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:	Tender Condition Shall Prevail
46	Part I	Section 4A: Bidding forms	Form 1.3 C): Bank Guarantee Form for Bid Security and Page 116 of 462	FORM OF BANK GUARANTEE FOR BID SECURITY	Regarding the Form of Bank Guarantee for Bid Security, the bank ask for PAN number of MMRDA. Could you provide the PAN number?	Tender Condition Shall Prevail
47	Part I	Annexure-1.15	24. Form – 4.2 – Relevant Experience	The following table shall be filled in for the Tenderer and for each Party constituting the Tenderer including the Specialist Sub-Contractor accompanied by client's certificate, and duly notarized copy of work order/extract of contract agreement confirming the project details	How to understand 'duly notarized' here? Do suppliers still need to notarize their performance documents? How to notarize them?	Tender Condition Shall Prevail
48	Part I	Annexure 1.19 Form 4.1 and Form 4.2	Form – 4.2 – Relevant Experience	The following table shall be filled in for the Tenderer and for each Party constituting the Tenderer including the Specialist Sub-Contractor accompanied by client's certificate, and duly notarized copy of work order/extract of contract agreement confirming the project details.	1. As requested, the table 4.2 is accompanied by client's certificate. Is there specific certificate requirement/format? 2. For duly notarized copy of contract, is there specific requirement/format, is it to be notarized by Chinese Embassy? 3. For the copy of work order/extract of contract agreement confirming the project details, is it sufficient to provide both pages of project details and signature page?	Tender Condition Shall Prevail
49	Part I	Section 4C: Part-1 Pricing Document	Clause 1.1.7 Pg No 9	1.1.7. The Bidder should note that this is a Composite Works Contract as per GST Act. Accordingly, The Bidder shall submit the proof of registrations under various fiscal and labour laws, Profession Tax, Goods and Services Tax, Import Export Code, Employee State Insurance, Provident Fund, Maharashtra Labour Welfare Fund, Local Body Tax or shall submit an undertaking that he will get registered with the competent authority/ies for complying with various laws that are applicable in case of award of the project to the Contractor	In Addendum-1 issued by MMRDA, this contract is categorized as “Composite Works Contract as per GST Act”. However, there is no such term (i.e. "Composite Works Contract ") defined under the GST Act. also this term is not defined in Tender Documents. So we request MMRDA to delete this clause and allow Contractor to classify the respective scope as per GST act as below : Rolling Stock HSN - 8603 @ 18% Telecom & Signaling SAC - 9954 @ 18% Maintenance SAC - 9983 @ 18% Other – Spares As per actual GST HSN (ranges from 5 to 28%)  Accordingly, request to modify the clause as follows: <del>“The Bidder should note that this is a Composite Works Contract as per GST Act.</del> The Bidder shall classify the respective supplies made under this Contract in accordance with the GST Laws. The supplies of Rolling Stock, Communication based Signaling & Train Control Systems, and Maintenance Services, as agreed upon in this Contract, shall be treated as distinct and separate transactions. Accordingly, the Bidder must ensure that pricing, invoicing, and the levy of applicable taxes under GST are considered accordingly and to comply with GST Laws.”	Tender Condition Shall Prevail
50	Part I	C Change in Taxes/Duty: Pg 302	Section 4C: Pricing Document	(a) “Change in Taxes/Duties/Levies” means the occurrence or coming into force of the following, at any time after the date of submission of tender. (i) any new tax which is imposed on this composite works Contract (ii) Change in the rate of Custom Duty & GST on this composite works Contract applicable as per GST Act	Request to modify the clause as follows: Change in Taxes/Duty: a) Change in Taxes/Duties/Levies” means the occurrence or coming into force of the following, at any time after the date of submission of tender. (i) any new tax which is imposed on this <del>Composite Works Contracts Metro Project.</del> (ii) Change in the rate of Custom Duty & GST on this <del>Composite Works Contracts Metro Project</del> as per GST Act	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
51	Part I	Clause A 1.1.3 (d)  Clause B Page No 10	Section 4C: Part-1 Pricing Document	Reimbursement for all such items supplied against this Contract, for which Duty Exemption/Deemed Export Benefits, rebates, etc., are not admissible in accordance with the prevalent Foreign Trade Policy of Government of India, MMRDA shall reimburse the paid amounts of total Custom Duties items described in cost centre S1 to S9 (Except DLMP) after availing the concessional duties such as Project Import Benefits under Project Import Regulations 1986 as amended time to time and as classified under chapter 98.01 of Customs Tariff Act or otherwise as extended in accordance with the law of the land and based on submission of documentary evidence of having paid such amounts by the Contractor.  <b>Payment of Custom Duty:</b> The custom duty, if applicable, and directly paid to Custom authority by the Contractor, sub-contractor and approved vendors, for the items mentioned in Section 4C: Pricing Document clause 1.1.2 shall be reimbursed by MMRDA, as mentioned above. All the work of project import registration and custom /port handling charges, etc. all to be done by Contractor at his own cost. MMRDA will only facilitate recommendation/ sponsoring letter from Ministry of Urban Development/Government of India /Maharashtra Govt. for Project import Section 4C: Pricing Document 12 Bidding Document for CA-241 Design Build and Maintain Single-Stage: Two-Envelope registration for which the Contractor shall submit request letter and details at least one month in advance.	From the referred clause, Bidder understand: 1) In case of customs duties reimbursement claimed by contractor for imports by Contractor <b>and/or sub-contract</b> or, GST applicable on customs duties shall also be reimbursements. 2) We understand that the GST as applicable on reimbursement of Custom Duty will be excluded from contract price and same will be reimbursed against the Tax Invoice raised by contractor 3) We understand that MMRDA will provide necessary certificate(s) in the name of contractor and/or sub-contractor for their respective imports required for the project. Kindly Confirm..	Tender Condition Shall Prevail
52	Part I	Clause A 1.1.3 (b) Page No- 7	Section 4C: Part-1 Pricing Document	The Contractor shall solely be responsible for claiming and availing all the benefits, rebate, exemptions, concessions from duty, taxes, cess, fees, surcharge, other levies, if any, under including but not limited to the Customs law, Goods and Services tax law, Central Excise law, Foreign Trade Policy, and any other applicable law for the time being in force. However, for availing the above said benefits, necessary certificate(s) in accordance with the provisions of Customs Act/Foreign Trade Policy of the Government of India, and any other act for the time being in force, will be issued by MMRDA at the specific request of the Contractor. <b>If the contractor fails to avail such benefits</b> MMRDA shall not assist the Contractor and facilitate for refund of the paid Custom Duties/Basic custom duty (as applicable) and Full GST from the statutory Authorities and no such said amounts shall be reimbursable by MMRDA.	We understand that MMRDA will provide necessary certificate(s) in the name of contractor and/or sub-contractor for their respective imports required for the project under Project import registration.  Please confirm our understanding.	Tender Condition Shall Prevail
53	Add 1 of Part 1	Price Schedule A: Cost Centres and Limits (Total Design Build Cost) Page 21,	Annexure 1.14, Section 4C of Pricing Documents	Refer Table in Annexure 1.14 of Addendum 1 at page No21 " <b>Price Schedule A COST CENTERS AND LIMITS (Total Design Build Cost)" Providing Various Maximum and Minimum Percentages under each cost Centres S1 to S9.</b>	The cost centres provided in the pricing document do not align with the actual cost apportionment. Specifically, in the installation schedule for S7 and S8, the allocation is on the higher side, while for S3, it is proportionally lower. Therefore, we request a 2% allocation on each for S7 and S8, with the corresponding increase applied to the S3 cost centre.	Tender Condition Shall Prevail
54	Addendum 1 of Part 1	Price Schedule A: Cost Centres and Limits (Total Design Build Cost) Page 19,	Annexure 1.14, Section 4C of Pricing Documents	Refer Table in Annexure 1.14 of Addendum 1 at page No21 " <b>Price Schedule A COST CENTERS AND LIMITS (Total Design Build Cost)" Providing Various Maximum and Minimum Percentages under each cost Centres S1 to S9.</b>	Cost Centres S7 (ATO) and S8 (UTO) apportionment specified as 9% and 3% does not represent actual efforts and cost structure. It is unnecessary penalized contractor on Cash. Request you to kindly review and amend apportionment as 3% and 1% for Cost Centres S7 (ATO) and S8 (UTO) respectively. Accordingly apportionment of Cost Centres S3 to be increased.	Tender Condition Shall Prevail
55	Part I	CORRIGENDUM 2		Date of Submission & Closing of Tender online 09.08.2024 at 15:00 hrs.	This is a big project,so it is suggested to change this clause to “Date of Submission & Closing of Tender online 19.10.2024 at 15:00 hrs.”	Refer Latest Corrigendum 5
56	Part I	CORRIGENDUM 3	/	Date & Time of Submission and Closing of Tender online 23.08.2024 at 17:00 hrs.	This is a big project,so it is suggested to change this clause to “Date & Time of Submission and Closing of Tender online 19.10.2024 at 17:00 hrs.”	Refer Latest Corrigendum 5

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
57	Part I	CORRIGENDUM 3	/	Date & Time of Submission and Closing of Tender online 23.08.2024 at 17:00 hrs.	It is requested by the Tenderer that the "Date & Time for submission and closing of Tender Online" be changed till " <b>19.10.2024</b> at 17:00 hrs". Reasons for such a request are as follows: 1. The Corrigenda were released by MMRDA by 7th of August only. And considering the big bundle of items in the said Corrigenda, the Tenderer needs more time to make changes necessary in his proposals. 2. The Tenderer has been communicating with his venders and partner in India, and therefore more time is needed so that such venders and partner are able to reflect the changes in the Corrigenda into their proposals to the Tenderer. 3. The Tenderer is still awaiting the CAD format of the line maps for Line 4 and Line 5, which is necessary for energy consumption calculations. It is appreciated that such CAD line maps can be furnished by MMRDA. 4. The Tenderer will issue its BANK GUARANTEE FOR BID SECURITY from outside India, which will be finally issued by a Indian notifying bank, and therefore more time is also needed by the Tenderer.	Refer Latest Corrigendum 5
58	Part I	CORRIGENDUM-04		Date & Time of Submission and Closing of Tender online 30.09.2024 at 17:00 hrs.	It is requested by the Tenderer that the "Date & Time for submission and closing of Tender Online" be changed till " <b>15.11.2024</b> at 17:00 hrs". Reasons for such a request are as follows: 1. The Tenderer has been communicating with his venders and partner in India, therefore more time is needed so that such venders and partner are able to reflect the changes in the Corrigenda into their proposals to the Tenderer. 2. The Tenderer will issue its BANK GUARANTEE FOR BID SECURITY from outside India, which will be finally issued by a Indian notifying bank, and therefore more time is also needed by the Tenderer.3.Requests for clarifications have been raised by the Tenderer for the sake of better understanding the tendering requirements and preparing its bidding docs as well. However, till date, replies by MMRDA have not yet been received by the Tenderer.	Refer Latest Corrigendum 5
59	Part I	CORRIGENDUM-04	/	Date & Time of Submission and Closing of Tender online 30.09.2024 at 17:00 hrs.	It is requested by the Tenderer that the "Date & Time for submission and closing of Tender Online" be changed till " <b>30.11.2024</b> at 17:00 hrs". Reasons for such a request are as follows: 1. The Tenderer has been communicating with his venders and partner in India, therefore more time is needed so that such venders and partner are able to reflect the changes in the Corrigenda into their proposals to the Tenderer. 2. The Tenderer will issue its BANK GUARANTEE FOR BID SECURITY from outside India, which will be finally issued by a Indian notifying bank, and therefore more time is also needed by the Tenderer.3.Requests for clarifications have been raised by the Tenderer for the sake of better understanding the tendering requirements and preparing its bidding docs as well. However, till date, replies by MMRDA have not yet been received by the Tenderer.	Refer Latest Corrigendum 5
60	Part I	Corrigendum_08		Date & Time for submission and closing of Tender Online 30.09.2024 up to 1500 hrs.	It is requested by the Tenderer that the "Date & Time for submission and closing of Tender Online" be changed till " <b>30.11.2024</b> at 17:00 hrs". Reasons for such a request are as follows: 1. The Tenderer has been communicating with his venders and partner in India, therefore more time is needed so that such venders and partner are able to reflect the changes in the Corrigenda into their proposals to the Tenderer. 2. The Tenderer will issue its BANK GUARANTEE FOR BID SECURITY from outside India, which will be finally issued by a Indian notifying bank, and therefore more time is also needed by the Tenderer.3.Requests for clarifications have been raised by the Tenderer for the sake of better understanding the tendering requirements and preparing its bidding docs as well. However, till date, replies by MMRDA have not yet been received by the Tenderer.	Refer Latest Corrigendum 5
61			General		we would like to bring to your attention that we have not received the details for Phase 2 of the project. Additionally, the DPR referenced in the Pre-Bid response has not been shared as part of the addendum. We noted that the Mumbai Line 5 DPR is not available for download via the provided MMRDA Project link.We kindly request that you provide the alignment drawing for Phase 2, including station details, as this information is crucial for preparing our detailed offer for the entire line, including Phase 2.	Tender Condition Shall Prevail
62	Part II	II	6A - Employer's Requirements General Specification Chapter 13	Asset Management System - AMS shall cover all Metro Systems comprising of Civil infrastructure including Viaduct, Stations, Depot & RSS, E&M including BMS, Lift & Escalators, Rolling Stock and Simulator, Power System & Traction, Signalling & Train Control, Telecommunication, Platform Screen Doors, Automatic Fare Collection, Depot M&P & Track	<b>Addendum1 Pt II, S. No. 6A.12 &amp; Annexure 2.6 &amp; 2.7</b>	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
63	Part II	Part II: Section -6A Employer's Requirements General Specification	Clause6.12.2 and Page 59 of 206	All the final design drawings shall be submitted in 2D & 3D fommat and shall be openableand editable in Solid works latest version; wherever applicable. The Contractor shalprovide two licensed copy of latest Solid works software along with its 3-D visualizatiorCAD tools and Hardware as per timelines instructed by Engineer. The specification oHardware/Laptops shall be latest, compatible to Solid works software and submitted toEngineer for review and approval. The Contractor shall also provide all the accessorie.along with laptops, ie, Antivirus, MS-Office, Cordless mouse, Backpacks etc. Thelicense of the software shall be in the name of Employer and for lifetime usage. TheContractor shall update the version of software whenever required without any extracost to Employer. The no. of Laptop to be provided by contractor should be specific andproportionately divided with respective Team. The same to be provided within 60 daysof LOA. The provision to be kept for 4 Laptop (One for each RS, S&T, PSD, DepoM&P).	Based on previous project implementation, Unable to provide 3D and openableand editable in Solid works latest version .It is recommended to change the clause to All the final design drawings shall be submitted in 2D fommat and . The Contractor shall also provide all the accessorie.along with laptops, ie, Antivirus, MS-Office, Cordless mouse, Backpacks etc. Thelicense of the software shall be in the name of Employer and for lifetime usage. TheContractor shall update the version of software whenever required without any extracost to Employer. The no. of Laptop to be provided by contractor should be specific andproportionately divided with respective Team. The same to be provided within 60 daysof LOA. The provision to be kept for 4 Laptop (One for each RS, S&T, PSD, DepoM&P).	Tender Condition Prevail.
64	Part II	Part II: Section -6A Employer's Requirements General Specification	Clause6.13.2 and Page 59 of 206	The Contractor shall submit these as-built drawings in 2D & 3D format which shall beopenable and editable in Solid works latest version. The Contractor shall also submitas-built drawings in AutoCAD and pdf format.	Only PDF drawings can be provided..It is recommended to change the clause to the Contractor shall submit these as-built drawings in 2D format . The Contractor shall also submitas-built drawings pdf format.	Tender Condition Prevail.
65	Part II	Section 6B1	Addendum I Part II  Annexure -2.6 Section 6B1 Specific Energy Consumption of Addendum – 1	3.24.1Bidders shall note that ‘SPECIFIC ENERGY CONSUMPTION (SEC)’ to be verified under conditions detailed hereafter in this clause, shall not exceed 50 Wh/GTKM, referred to as SECs. Bidder shall refer to Section 6-D for alignment drawings and declare SECD value for Evaluation in accordance with ITB/BDS 40.1.  3.24.2 This Specific Energy Consumption shall be total of two components viz. SEC for a 6- car train (with VAC switched off) i.e., ‘SECP’ value (inclusive of DAUX as detailed in Clause A 1.8 below) and SEC of VAC for a 6-car train i. e. ‘SECH’ value. These two values shall be declared by the Bidder (shall be termed as SECP-declared and SECH-declared) during Bid stage as per Section-4C and the same shall be validated as detailed in this clause. The total declared SEC value i.e., SECD for a 6-car train as declared by the Bidder i.e., SECP-declared + SECH- declared shall not exceed the SECS i. e. 50 Wh/GTKM as mentioned above.  A1.5 The train operation in All-Out mode shall be as per ERTS clause 3.22.5(b).  A1.6 For Combined test bed: All-Out ATP mode as mentioned in A1.1(i) shall be considered	TRSL, would like to request your consideration for the modification of Clause 3.24 (Specific Energy Consumption) in the MMRDA ERTS (Employer's Requirements Technical Specifications).  Clause 3.24.1 currently states that the 'Specific Energy Consumption (SEC)' to be verified under the conditions detailed in this clause shall not exceed 50 Wh/GTKM, referred to as SECs. The bidder is required to provide the Guaranteed SEC value for evaluation.  Clause 3.24.2 further specifies that the total declared SEC value, i.e., SEC declared for a 6-car train as declared by the contractor (SECP-declared + SECH-declared) shall not exceed the SECS of 50 Wh/GTKM.  Additionally, Clauses A1.5 and A1.6 mention that the train operation in All-Out mode and All-Out ATP mode shall be considered for the combined test bed.  We request that MMRDA consider the following modification: Modification requested for clause (A1.5 and A1.6) The train operation under normal mode should be as per the Guaranteed "Declared Schedule Speed (DSSP)" in kmph for a roundtrip for Line 4, 4A as 32.5 kmph. Justification: Meeting the 50 Wh/GTKM target while considering the All-Out condition seems extremely difficult and nearly impossible based on our preliminary calculations. Changing the requirement from All-Out to DSSP of 32.5 kmph would be more realistic and achievable. Implications: If the bidders are required to declare the scheduled speed, the price evaluation cannot be done effectively, as bidders can provide different schedule speeds and offer lower energy consumption. Therefore, we request that MMRDA provide the scheduled speed for all three lines, and the bidders can also propose what is needed from their side as well. We believe that this modification will lead to a more realistic and achievable energy consumption target, ensuring the successful implementation of the project. We appreciate your consideration of this request and look forward to your response.	Tender Condition Prevail.
66	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.24.1and Page 114 of 305	Contractor shall supply exhaustive documentation on complete pneumatic system, its sub systems and components, Brake electronics (hardware and software), project software details, explanation and functionality at component and system level, coloured schemes of pneumatic system, brake system, valves with coloured cut sections under different operational states. It shall also include trouble shooting and diagnostic details explaining clearly (with coloured illustrations) the logics, transition states, algorithms, signal flow and software parameters etc.	Based on experience brake suppliers will not provide the algorithm, signal flow, and software parameters of the braking underlying software. So it is suggested to be deletet.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
67	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 14.20.1and Page 217 of 305	All rubber hoses, connecting pipes etc. used in pneumatic circuit shall not be required to be replaced before 5 years or major overhaul which ever later. The rubber/ rubber- metal components used in suspensions shall not be replaced before 12 years or during major overhaul of the equipment, whichever is later. All rubber hoses shall be steel reinforced for better life and reliability.	The rubber such as air spring. needs to be replace before 10 years, and Based on our project maintenance experience, the Intermediate Overhaul interval uually is 5 years, Periodic Overhaul interval uually is 10 years. so it is suggested to be changed as "The rubber/ rubber- metal components used in suspensions shall not be replaced before 10 years or during major overhaul of the equipment, whichever is later. All rubber hoses shall be steel reinforced for better life and reliability."	Tender Condition Prevail.
68	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 13.1.1 (xvii) and Page 195 of 305	PA/PIS & PSSS equipment/cubicles shall be of at least IP53 or better class.	Not all the Papis & PSSS system's equipment can reach IP53.For example , Loudspeaker, Nosie Detector, Passenger Emergency Alarm Handle only can reach IP20 because of these equipment have holes. It's suggested to delete the clause.	Tender Condition Prevail.
69	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 15.22.2(iii) a) and Page 233 of 305	These tests shall be conducted inside a Climate Chamber for judging the cooling and dehumidification performances of the VAC system for Summer, Monsoon, high ambient, low ambient, high humidity and any other ambient conditions as per EN 14750 or any other equivalent standard and Engineer's requirements. Heating and humidifying equipment shall be provided in the car for test purposes. Testing shall be done for different passenger loads for: · Pre-cooling (with full passenger occupancy heat load) - Set temperature should be achieved in 30 minutes. · Regulation (doors closed) - Cooling capacity of VACs shall be sufficiently high to demonstrate 3 complete regulation cycles during the regulation test. · Doors open-close - It should be done for 10 cycles as per EN 14750, and/or for door open- close cycles for complete to-and-fro route run, as decided by the Engineer.	According to the experience of previous projects, 30min of pre-cooling cannot be satisfied. In pre-cooling mode, the carriage is empty. It is therefore proposed to delete the sentence "with full passenger occupancy heat load".	Refer Addendum 3 Part II Sr. No.6B1.47
70	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 15.22.2(iii) a) and Page 233 of 305	These tests shall be conducted inside a Climate Chamber for judging the cooling and dehumidification performances of the VAC system for Summer, Monsoon, high ambient, low ambient, high humidity and any other ambient conditions as per EN 14750 or any other equivalent standard and Engineer's requirements. Heating and humidifying equipment shall be provided in the car for test purposes. Testing shall be done for different passenger loads for: · Pre-cooling (with full passenger occupancy heat load) - Set temperature should be achieved in 30 minutes. · Regulation (doors closed) - Cooling capacity of VACs shall be sufficiently high to demonstrate 3 complete regulation cycles during the regulation test. · Doors open-close - It should be done for 10 cycles as per EN 14750, and/or for door open- close cycles for complete to-and-fro route run, as decided by the Engineer.	According to the experience of previous projects, 30min of pre-cooling cannot be satisfied. In pre-cooling mode, the saloon is empty. It is therefore proposed to delete the sentence "with full passenger occupancy heat load".	Refer Addendum 3 Part II Sr. No.6B1.47
71	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 15.5.2 and Page 221 of 305	Maximum Dynamic wheel unloading $\Delta Q/Q \leq 0.5$	The EN14363 standard only stipulates that the static wheel load reduction is $\leq 0.6$ , and there is no requirement for the dynamic wheel weight reduction. The bidding document requires the dynamic wheel load reduction is $\leq 0.5$ . We propose to follow the proven industry standard EN14363.	Tender Condition Prevail.
72	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.3 Table 2.6 Interior Noise Level 24 of 305	Refer <b>Table 2.6: Interior Noise Levels (LpAeq, 20sec)</b> giving the noise details at Elevated and underground section at different Speeds	It is recommended to delete the tunnel conditions. The noise inside the vehicle in the tunnel under running conditions is 7~9dBA larger than that in the open line, which cannot meet the requirements in the tunnel.	Tender Condition Prevail.
73	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.19.3 and Page 26 of 305	The contractor shall minimize the total fire load of potentially flammable materials on a vehicle as far as is practicable, but in any case, it shall not exceed the following: Above floor level : 22,000 MJ Below floor level : 26,000 MJ Contractor shall furnish the relevant data,fire load calculations, certifications etc. of the items considered in fire load calculations separately for Above & Below the floor level. The calculations and validation shall conform to the standard adopted by the contractor for fire strategy	According the experience of previous projects, we request to change the values as below: Above floor level : 28,000 MJ/per car Below floor level : 28,000 MJ/per car	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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74	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.21.3 and Page 43 of 305	(iv) In case the actual weight of the train in tare condition exceeds the specified value as above, the Contractor shall be liable to pay the extra energy cost as a penalty, which shall be calculated on the basis of specified pecific Energy Consumption (SECS) and Achieved Specific Energy Consumption (SECA), whichever is higher on pro rata basis. The amount payable as penalty by the Contractor on account of increase in tare weight of the train shall be INR 15.0 Lakhs/ ton per train with achieved SEC value of 50 Wh/GTKM (i.e. SECS) or less. However, if achieved SEC is higher than 50 Wh/GTKM then the amount payable as penalty will be increased from INR 15.0 Lakhs/ ton per train on pro rata basis.	Based on existing experience in Indian projects, it is recommended to change this value to 60 Wh/GTKM.	Tender Condition Prevail.
75	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.10.8 and Page 73 of 305	All the couplers (Auto, semi-permanent) shall have the shear-off functionality. Wearing parts/plates of couplers shall give a service life of minimum fifteen years.	The automatic couplers have the shear-off functionality, and the semi-permanent couplers have the shear-off functionality based on impact simulation of coupler which could meet the requirements of the contract for crashworthiness. The detailed description of the coupler scheme will be proposed during the design stage. The wearing parts/plates of couplers including some rubber parts and non-metallic components(Rubber gaskets, etc). Due to the limitations of these rubber component themselves, wearing parts/plates of couplers could give a service life of minimum six years. It is suggested to change the clause to "Automatic couplers shall have the shear-off functionality. Wearing parts/plates of couplers shall give a service life of minimum six years."	Tender Condition Prevail.
76	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.4.3 and Page 68 of 305	The exterior appearance of the car body with stainless steel shall be smooth (not corrugated) unpainted metal without the use of filler or other similar material, such that the maximum variation from the required car profile, over any one-meter length, shall not exceed 1.5 mm. Any fluting, if offered, shall be shown to have advantages, and shall be subject to review by the Engineer. The roof, excluding the cant rail, may be either corrugated or smooth.	The characteristics of stainless steel material determine that its welding structure deformation is large, and the flatness requirements of 1.5mm/m after welding cannot meet the requirements, it is recommended to change to "The exterior appearance of the car body with stainless steel shall be smooth (not corrugated) unpainted metal without the use of filler or other similar material, such that the maximum variation from the required car profile, over any one-meter length, shall not exceed 3 mm. ".	Tender Condition Prevail.
77	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.4.3 and Page 68 of 305	The exterior appearance of the car body with stainless steel shall be smooth (not corrugated) unpainted metal without the use of filler or other similar material, such that the maximum variation from the required car profile, over any one-meter length, shall not exceed 1.5 mm. Any fluting, if offered, shall be shown to have advantages, and shall be subject to review by the Engineer. The roof, excluding the cant rail, may be either corrugated or smooth.	Due to the properties of stainless steel material ,the welding structure deformation is large, and the flatness requirements of 1.5mm/m after welding is very hard to achieve, We propose to change as below. "The exterior appearance of the car body with stainless steel shall be smooth (not corrugated) unpainted metal without the use of filler or other similar material, such that the maximum variation from the required car profile, over any one-meter length, shall not exceed 3 mm This is based on general accepted and proven practice which is successfully in service of other metro project in India and abroad.	Tender Condition Prevail.
78	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.2.6 and Page 91 of 305	The bogie rotational resistance (X factor) test under inflated and deflated air spring conditions would be carried out at the manufacturer's works under AW0 and AW3 conditions for all types of cars, the value of which should not exceed 0.08 at rotational speed of 0.8 degrees/second. This test shall be conducted in cars of prototype train and report shall be submitted to Engineer before dispatch of prototype train. This test shall be conducted after fitting of all the equipment, cables etc. in cars. During this test, Contractor will check all the interference between bogie & car body and rectify the interference (if found) in all the cars before dispatch.	According to Article 6.1.4.2 of the EN 14363 standard, the vehicle shall be tested in a no-load state. According to 6.1.5.3.3.2, the average yaw speed shall reach a yaw Angle amplitude of at least ± 75% above 1°/s, and the value shall not exceed 0.1. It is proposed instead that:"... under AW0 and AW3 conditions for all types of cars, the value of which should not exceed 0.1 at rotational speed of 1 degrees/second. " We propose to follow the proven industry standard EN 14363 .	Tender Condition Prevail. Bidder to refer Line 5 Package 1 Tender Documents.
79	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.13.1and Page 106 of 305	Brake valves shall be designed and validated for heavy duty cycles required for intensive brake blending. No change of valves or components except rubber items shall be required for at least 15 years beyond DLP.	Suggest to change to "No change of valves or components except rubber items shall be required for at least 8 years beyond DLP."	Tender Condition Prevail.
80	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.13.22and Page 108 of 305	Holding Brake application and feedback SIL 2 WSP (Watchdog/Safety timer) SIL 4	Based on EP-BGE / Flex Control Basic brake control system, following SIL are achievable on train level, from hardware and base software perspective: Holding brake is considered as one special type of service brake. No SIL certification requirements. Wheel Slide Protection can meet SIL3. Above is based on general accepted and proven practice which is successfully in service of other metro projects in India and abroad.  So it is suggested to be changed as: Holding Brake application and feedback SIL 0 WSP (Watchdog/Safety timer) SIL 3	Tender Condition Prevail.



CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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81	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.15.4 and Page 110 of 305	If manual release arrangement for parking brake is provided at platform level, then special tools shall be provided by the Contractor for accessing it from platform level, when train stops at any position with respect to platform screen doors (PSD). Two (2) numbers of such tools shall be provided in each train. Separate Isolating cocks (PIC- Parking Isolation Cock), adjacent to the Isolating cocks (BIC) shall be provided in each car. For DM cars, these shall be in Driving Console. No traction block shall occur on account of parking brakes, after the same has been isolated.	"For DM cars, the isolation cock can be placed next to the car door or in the electrical cabinet"	Tender Condition Prevail.
82	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.4.3 and Page 103 of 305	A proven regenerative type of air dryer using desiccant and of a suitable capacity shall be provided between the air compressor and the main reservoir. The air dryer shall be preceded by an automatic drain valve, which collects and discharges the bulk of the moisture in the compressed air, before it enters the air dryer. The air dryer shall have IP65 protection.	The air dryer can achieve IP 55 protection, and thus suggest to delete the clause.	Tender Condition Prevail.
83	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.2.1 (xiv) and Page 117 of 305	All gaskets provided in the doors shall be so designed that there is no possibility of their getting loose during service. Life of the gaskets/seals shall be minimum 8 years.	The lifetime of rubber parts can achieve only for 6 years. It is suggested to change as" Life of the gaskets/seals shall be minimum 8 years."	Tender Condition Prevail.
84	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.2.14 and Page 130 of 305	In case of entanglement of any one pantograph of 6 cars train with OHE, other pantograph(s) of the same train shall be protected by Auto Dropping function in the train. The system shall react immediately to lock down the other pantograph(s) to avoid any physical damage to the other pantograph(s). This safety feature shall be demonstrated for all possible conditions in 6-car train in static and dynamic conditions up to 90 kmph through simulation of activation of ADD valve.	Only the entanglement of pantograph with OHE is caused by the damage of carbon slide which will broken the pneumatic path, the ADD will be acitivated. It is suggested to change to" In case of entanglement of any one pantograph of 6 cars train with OHE, other pantograph(s) of the same train shall be protected by Auto Dropping function in the train when the Auto Dropping function is activated. The system shall react immediately to lock down the other pantograph(s) to avoid any physical damage to the other pantograph(s). This safety feature shall be demonstrated for all possible conditions in 6-car train in static and dynamic conditions up to 90 kmph through simulation of activation of ADD valve."	Tender Condition Prevail.
85	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.7.9 and Page 133 of 305	IP level of blower motor, pump motor and complete transformer including terminal box shall be IP65. Contractor shall declare the Vendors for Transformer's sub-assemblies and shall submit an undertaking & commitment from Vendors to deal directly with Engineer in case of future procurement.	The transformer ventilation area should be considered as IP20, and the rest of the described protection level is IP65.	Tender Condition Prevail.
86	Part II	Part II: Section 6B-1: Employer's Requirements Rolling Stock Technical Specifications	Clause 9.4.2 and Page 145 of 305	ii. Supply emergency load for at least 90 minutes (with doors open and close every two minutes) in case of failure of battery charger or its supply with the battery charged to a level as expected during service but not better than 80% of its full capacity.	60 minutes fully meets emergency needs, It is suggested to change this clause to "Supply emergency load for at least 60 minutes (with doors open and close every two minutes) in case of failure of battery charger or its supply with the battery charged to a level as expected during service but not better than 80% of its full capacity."	Tender Condition Prevail.
87	Part II	Section 6B-1: Employer's Requirements Rolling Stock Technical Specifications	10.2.2	10.2.2 Ethernet Train Backbone (ETB) Ethernet-based Train Backbone with redundant Train Backbone Nodes (TBNs) (at least two in each consist network) shall be provided to achieve interoperability between consists when coupled in the train as per IEC 61375-2-5. The data transmission medium in Ethernet-based Train Backbone shall be doubled to support redundancy.	From our previous experience, we would like to inform that the ETB is beneficial when frequent Coupling/Uncoupling is required with different Rolling Stocks (Trains) as a single Train. However, ETB is not required to convert 6 car to 8 car. As this conversion is feasible at Depot with the provided ECN Network.  <b>Accordingly, Bidder requests to DELETE the requirement of ETB.</b>	Tender Condition Prevail. Further Refer Addendum-1 6B1.20
88	Part II	Section 6-B1	10.2.2 Page 135	<b>Ethernet Train Backbone (ETB)</b> Ethernet-based Train Backbone with redundant Train Backbone Nodes (TBNs) (at least two in each consist network) shall beprovided to achieve interoperability between consists when coupled in the train as per IEC 61375-2-5. The data transmission medium in Ethernet-based Train Backbone shall be doubled to support redundancy.	The requirement for an Ethernet Train Backbone has been mentioned in the Part II document which is technically not required as it is generally used to connect different rolling stock. Therefore, we request that this requirement be removed from the scope of Line 5.	Tender Condition Prevail. Further Refer Addendum-1 6B1.20

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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89	Part II	Section 6-B1	11.2.7	<p>In the event of the failure of both VACs on a car, an emergency ventilation system shall operate automatically to admit fresh air directly into the car to maintain the required oxygen level in accordance with ASHRAE 62. During neutral section negotiation emergency ventilation mode shall not be invoked in general. Other Conditions for invoking emergency ventilation mode shall be as RAMS analysis. The induction of outside fresh air shall not be less than 12m3 /h/person as per EN14750-1 category B vehicle, under fully loaded train conditions. The emergency ventilation fans in the saloon shall be fed from the 110V DC supply in the event of non-availability of 415V AC supply from single inverter provided in each car. or inverter inside each VAC with proven performance.</p> <p>In case of fire detected inside car, the emergency ventilation system shall be able to pump in at least 18m3 /h/person of fresh air in the passenger saloon area (to be calculated for fully occupied car). This will be achieved by closing the return air damper. Necessary size exhaust air discharge openings shall also be available. Emergency ventilation for 1 hours, or the time needed to fully evacuate AW3 passengers from the train from one side front egress door, whichever is higher of the two, should be provided.</p>	<p>Based on query raised, the relevant clause has been kindly ammende vida Addendum 1 Part II, S. No. 6B1.24</p> <p>However, the last sentence of the Para which allows HVAC emergency ventillation for 1 hour is also deleted (which was not requested for deletion in the bidder's query). Having this deletion, the 90 minute Battery backup requirements become applicable on HVAC emergency ventillation, impacting the Battery capacity sizing. This drives much higher Battery capacity requirement and a New Development from Battery suppliers. Accordingly, request to re-instate the 1 hours backup requirement for HVAC emergency ventilation.</p> <p><b>Hence, bidder proposes to amend the clause as follows:</b></p> <p>In the event of the failure of both VACs on a car, an emergency ventilation system shall operate automatically to admit fresh air directly into the car to maintain the required oxygen level in accordance with ASHRAE 62. During neutral section negotiation emergency ventilation mode shall not be invoked in general. Other Conditions for invoking emergency ventilation mode shall be as RAMS analysis. The induction of outside fresh air shall not be less than 12m3 /h/person as per EN14750-1 category B vehicle, under fully loaded train conditions. The emergency ventilation fans in the saloon shall be fed from the 110V DC supply in the event of non-availability of 415V AC supply from single inverter provided in each car. or inverter inside each VAC with proven performance. <del>In case of fire detected inside car, the emergency ventilation system shall be able to pump in at least 18m3 /h/person of fresh air in the passenger saloon area (to be calculated for fully occupied car). This will be achieved by closing the return air damper. Necessary size exhaust air discharge openings shall also be available.</del> <b>Emergency ventilation for 1 hours, or the time needed to fully evacuate AW3 passengers from the train from one side front egress door, whichever is higher of the two, should be provided.</b></p>	Refer Addendum 3 Part II Sr. No.6B1.45
90	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 11.7.1 and Page 173 of 305	The condenser and evaporator coils shall be of copper having copper fins. Condenser fins spacing shall be no closer than 3 mm and evaporator fins shall be 2.5 mm or more apart, in order to prevent dirt/dust build up. Thickness of fins shall be minimum 0.2 mm. The coil assembly shall be mounted in a stainless steel / copper alloy frame. Cleaning of condenser and evaporator coils should not be required earlier than 6 months after putting the train into revenue service. The proposed frequency of cleaning of coils in Mumbai climate shall be furnished.	<p>At present, new projects, condenser and evaporator fins are made of copper-aluminum fins, which can meet the application environment. Adopts copper tube aluminum fin, both energy saving and lightweight.</p> <p>Kindly request to change</p> <p>The condenser and evaporator coils shall be of copper having copper fins. or copper-aluminum fins</p>	Refer Addendum 3 Part II Sr. No.6B1.46
91	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 12.5.5 and Page 184 of 305	The minimum cross-sectional area of control cables for connections between equipment shall preferably be 1.5 mm2. Any deviation from this requirement, in exceptional cases, will be subject to review by Engineer in design stage.	<p>For the convenience of cabling, while ensuring current carrying capacity, it is recommended to use 1.0mm2 cables inside the electrical cabinet.</p> <p>So it is suggested to change to The minimum cross-sectional area of control cables for connections between equipment shall preferably be 1.0 mm2.</p>	Tender Condition Prevail.
92	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause15.21.1(b) Table 15.3 and Page 231 of 305	<p>All the above cooling tests shall be conducted for 3 hours in steady state conditions, except for extreme ambient test at 58 °C, which will be conducted for 1 hour in steady state and low load test to be conducted for 4 hours in steady state. More tests can be added by Employer/Engineer.</p> <p><b>Reference is made to Table 15.3: VAC unit test Conditions with columns of Test Condition, Ambient Condition and Car (Inside) .</b></p>	<p>Under high temperature conditions, only check whether the air conditioner can work fully cold, and do not check the temperature and relative humidity of the carriage.</p> <p>It is suggested to modify as follows :</p> <p>High ambient 45°C Full cooling</p> <p>Extreme ambient 50°C No trip of VAC unit</p>	Tender Condition Prevail.
93	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause15.21.1(b) Table 15.3 and Page 231 of 305	<p>All the above cooling tests shall be conducted for 3 hours in steady state conditions, except for extreme ambient test at 58 °C, which will be conducted for 1 hour in steady state and low load test to be conducted for 4 hours in steady state. More tests can be added by Employer/Engineer.</p> <p><b>Reference is made to Table 15.3: VAC unit test Conditions with columns of Test Condition, Ambient Condition and Car (Inside) .</b></p>	<p>The employer has clarified</p> <p>High ambient 45°C 25°C 60% R.H.</p> <p>Extreme ambient 50°C No trip of VAC unit</p> <p>Under high temperature conditions, only check whether the air conditioner can work fully cold, and do not check the temperature and relative humidity of the saloon.</p> <p>It is suggested to modify as follows :</p> <p>High ambient 45°C Full cooling</p> <p>Extreme ambient 50°C No trip of VAC unit</p>	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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94	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 15.5.2 and Page 221 of 305	Maximum Dynamic wheel unloading $\Delta Q/Q \leq 0.5$	The EN14363 standard only stipulates that the static wheel load reduction is $\leq 0.6$ , and there is no requirement for the dynamic wheel weight reduction. The bidding document requires the dynamic wheel load reduction is $\leq 0.5$ , and the test method is not specified. Meanwhile, the test is related to the conditions of the line, and the owner is requested to specify the test method and provide the line qualification certificate before the test.	Tender Condition Prevail.
95	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.12.11 and Page 18 of 305	During the final design stage, the Contractor shall submit periodicity, downtime and manpower requirements for the maintenance inspections and service checks considered necessary for maintaining the trains under normal operational conditions as per table 2.4. The service check sessions shall include all routine maintenance activities including inspections, cleaning, washing, pest and rodent control etc. and shall not impact availability of trains for more than 1.5% averaged over annual basis.	According to the actual experience of the project, only the index requirements for vehicle availability are proposed will be ok, while the index requirements for SC alone are meaningless, and SC(service check) is relatively large, so It is suggested to delete the " and shall not impact availability of trains for more than 1.5% averaged over annual basis."	Tender Condition Prevail.
96	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.12.11 and Page 18 of 305	During the final design stage, the Contractor shall submit periodicity, downtime and manpower requirements for the maintenance inspections and service checks considered necessary for maintaining the trains under normal operational conditions as per table 2.4. The service check sessions shall include all routine maintenance activities including inspections, cleaning, washing, pest and rodent control etc. and shall not impact availability of trains for more than 1.5% averaged over annual basis.	As per proven experience, we will meet the requirements for vehicle availability. As the SC(service check) scope is large, the availability requirements including SC are meaningless. According to the actual experience of the project, only the index requirements for vehicle availability are proposed will be ok, while the index requirements for SC alone are meaningless, and SC(service check) is relatively large, so It is suggested to delete the " and shall not impact availability of trains for more than 1.5% averaged over annual basis."	Tender Condition Prevail.
97	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.13.1 and Page 19 of 305	The Contractor shall carry out tests to demonstrate that all maintainability predictions provided vide Clauses 2.12.10, 2.12.11 and 2.12.12 are met.All such tests shall be completed within twelve months after the commissioning of first train.	Clause 2.12.12 has specified the maintainability requirements for 4 and 8 years, however this cannot be achieved in the first 12 months, and thus is suggested to delete 2.12.12. The requirement can be achieved, however, huge manpower are needed for demonstration in the later stage, please confirm	Tender Condition Prevail.
98	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.1 Noise and Vibration (viii) and Page 20 of 273	The pad stiffness used in ballast less track is generally 29 MN/m and the same shall be used for design. Contractor shall interface with track contractor and design accordingly. The noise tests during running condition shall be done in the section after six months of train operation.	The tests after six months of train operation are related to the track. Thus it's suggested to delete the clause.	Tender Condition Prevail.
99	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.1 Noise and Vibration (ix) and Page 20 of 273	All specified noise and vibration measurements in static and dynamic conditions shall be revalidated 6 months before the end of DLP on a representative train selected by the Engineer. In case of non-compliance, the Contractor shall take necessary action to investigate, correct the defect and revalidate again to the satisfaction of the Employer. In case, the Contractor fails to revalidate, the non-compliance shall be dealt in accordance with Section 6 D1: Guidelines for Noise and Vibrations for Metro Rail Transit Systems issued by the Ministry of Railways, Govt. of India.	The test needs to be conducted again 6 months after the end of the trainoperation DLP, because it is related to the track. So it is suggested to delete this clause	Tender Condition Prevail.
100	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.1 Noise and Vibration (viii) and Page 23 of 305	The pad stiffness used in ballast less track is generally 29 MN/m and the same shall be used for design. Contractor shall interface with track contractor and design accordingly. The noise tests during running condition shall be done in the section after six months of train operation.	The Vehicle Type Test Reports is sufficient to demonstrate the performance of the trains, and ISO 3381 has specified the pad stiffness of the track.No need to repeat the test, Thus it's suggested to delete the clause. We propose the test to be done during type test, which is the same as other metro projects, successfully in service in India and abroad.	Tender Condition Prevail.
101	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.1 Noise and Vibration (ix) and Page 23 of 305	All specified noise and vibration measurements in static and dynamic conditions shall be revalidated 6 months before the end of DLP on a representative train selected by the Engineer. In case of non-compliance, the Contractor shall take necessary action to investigate, correct the defect and revalidate again to the satisfaction of the Employer. In case, the Contractor fails to revalidate, the non-compliance shall be dealt in accordance with Section 6 D1: Guidelines for Noise and Vibrations for Metro Rail Transit Systems issued by the Ministry of Railways, Govt. of India.	As type test will be performed under new wheel and new track conditions, However, at the time of end of DLP ,the noise performance will be affected by track status So we can not guarantee test result to meet the requirement at this stage due to uncertainty of track status. We propose to execute the test during type test to check the performance of train. This is based on general accepted and proven practice which is successfully in service of other metro project in India and abroad. Thus it's suggested to delete the clause.	Tender Condition Prevail.
102	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.2 (ii) and Page 24 of 305	Expected vibration levels for equipment, system and measurement locations specified herein.	Vibration level for equipment, system and measurement locations can not be expected and there is no relevant standard to specified the vibration levels for equipment and system. It is suggested to delete this clause.	Refer Addendum 3 Part II Sr. No.6B1.41

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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103	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.18.3 Table 2.6 Interior Noise Level 24 of 305	Refer <b>Table 2.6: Interior Noise Levels (LpAeq, 20sec)</b> giving the noise details at Elevated and underground section at different Speeds	It is recommended to delete the tunnel conditions. The noise inside the vehicle in the tunnel under running conditions is 7~9dBA larger than that in the open line, which cannot meet the requirements in the tunnel.	Tender Condition Prevail.
104	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.19.3 and Page 26 of 305	The contractor shall minimize the total fire load of potentially flammable materials on a vehicle as far as is practicable, but in any case, it shall not exceed the following: Above floor level : 22,000 MJ Below floor level : 26,000 MJ Contractor shall furnish the relevant data, fire load calculations, certifications etc. of the items considered in fire load calculations separately for Above & Below the floor level. The calculations and validation shall conform to the standard adopted by the contractor for fire strategy	According the experience of previous projects, these values are hard to achieved. We propose to change the values as below: Above floor level: 28,000 MJ/per car Below floor level: 28,000 MJ/per car. This is based on general accepted and proven practice which is successfully in service of other metro project in India and abroad.	Tender Condition Prevail.
105	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 2.9.8	The Contractor shall provide the Document Management System (DMS) software along with required licences to be used in DLMP and CM period	There is no such tools, we use the excel Manage the data.	Tender Condition Prevail.
106	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.14.1 and Page 37 of 305	Table No 3.2: Track Structure Parameters	Dose the track includes an S-curve ? If so, please provide the Minimum Radius of S Curvature .For example, 120 m(Minimum Radius)-10m(straight line)-120 m(Minimum Radius) The design proposal is affected, and the bidding documents are not clear. Confirmation is required.	Tender Condition Prevail.
107	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.14.1 and Page 37 of 305	Table No 3.2: Track Structure Parameters	Dose the track includes an S-curve ? If so, please provide the Minimum Radius of S Curvature .For example, 120 m(Minimum Radius)-10m(straight line)-120 m(Minimum Radius)	Tender Condition Prevail.
108	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.21.3 and Page 43 of 305	(iv) In case the actual weight of the train in tare condition exceeds the specified value as above, the Contractor shall be liable to pay the extra energy cost as a penalty, which shall be calculated on the basis of specified pecific Energy Consumption (SECS) and Achieved Specific Energy Consumption (SECA), whichever is higher on pro rata basis. The amount payable as penalty by the Contractor on account of increase in tare weight of the train shall be INR 15.0 Lakhs/ ton per train with achieved SEC value of 50 Wh/GTKM (i.e. SECS) or less. However, if achieved SEC is higher than 50 Wh/GTKM then the amount payable as penalty will be increased from INR 15.0 Lakhs/ ton per train on pro rata basis.	Based on existing experience in Indian projects, it is recommended to change this value to 60 Wh/GTKM.	Tender Condition Prevail.
109	Part II	Section 6B-1	3.22.2	The Contractor shall indicate the total runtime and the Guaranteed "Declared Schedule Speed (DSSP)" in kmph for a round trip from KAPURBAWADI to KALYAN APMC and back to KAPURBAWADI under following conditions: (i) Train loaded : AW3 (ii) Mode of operation: <b>ALL OUT MODE (ATP)</b> . . . (ix) The Schedule Speed as per the Detailed Project Report (DPR) of line 5 is <b>35 km/h</b> . Tenderer shall indicate the Declared Schedule Speed (DSSP) in the Tender. The Contractor shall validate the Declared schedule speed during field trials of Prototype train. . . .	Claue 3.22.5 (d) state that "Normal mode will be used when trains are running in time and time table can be maintained. All-out mode will be used to make up time when trains are running late. " Similarly clause 3.22.5 (c) states that The Control system shall be such that the train will achieve the Declared Schedule Speed (DSSP) at all loading conditions subject to keeping the loading of traction system within the boundary limits of the design. As per clause 3.22.2 (ii), condition for DSSP measurement is given as All-out mode, AW3 loading with dwell time, turnaround time for round trip. As per 3.22.2 (ii), DSSP declared will be highest speed and in no case we can achieve better than this speed. So when train will run in normal mode, speed will be less than the DSSP. DSSP shall be declared for normal mode with 8% coasting which is practical run of train and Allout mode shall be used to cover the time in delay as per clause 3.22.5 (d). In RRTS specification DSSP was to be declared in Normal mode with 10% coasting in AW2 loading. Refer 3.22.3 of RRTS technical specification.  <b>Hence, request to amend clause 3.22.2 (ii) regarding Mode of operation for DSSP as "NORMAL MODE with 8% caosting".</b>	Tender Condition Prevail.
110	Part II	Section 6B-1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.22.6	The Tenderer shall submit the data of the considered acceleration rates, average service brake rate, total Run Time, total Dwell and reversal time, Total time and Schedule speeds under different loading conditions and modes of operation enumerated in the Table below:	Please provide a CAD version of the General Alignment Drawing Track - Line 5 to facilitate the traction line simulation calculation, PDF drawings are not easy to identify specific parameters.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
111	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.22.9	The Contractor shall handover one complete set of software(s) package and associated hardware employed by him for the above studies including assessment of energy conservation modes (ERTS clause 3.22.1) along with the requisite documentation, during design stage to the Engineer. The software shall simulate Run Time performance of the train under varied loads, route profiles, headway, inter- station distances, train resistance, Train formation and TE/BE characteristics, evaluation of energy conservation modes etc. The software shall not be restrictive to the above and shall be for general application with provision for the Engineer to select parameters. Nominated Engineer staff shall be fully trained and made fully conversant by the contractor for this purpose. The handed over set shall be fully functional during the contract period and post warranty period & shall require no inputs or facilities whatsoever from the Employer. The supply of above software and its training shall be a prerequisite for completion of Final Design Review.	Traction simulation calculation software is the supplier's internal software and they will not provide the software.	Tender Condition Prevail.
112	Part II	Section 6B-1	3.24.1	Bidders shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' to be verified under conditions detailed hereafter in this clause shall not exceed <b>50 Wh/GTKM</b> , referred to as SECs. Bidder shall refer to Section 6 D2 for alignment drawings for Phase1 and declare SECD value for Evaluation in accordance with EQC.	The condition mentioned here for SEC measurement is AW3 loading with allout run which is not a practical run. In this case train is accelerating with maximum acceleration till maximum speed, maintaining speed and decelerating with maximum deceleration when required to stop. Here there is no scope of any enery optimisation. SEC measurement is normally done for practical service condition to estimate energy consumption. In normal service, Train will run in Normal mode with 8% coasting as per clause 3.22.5 (d).  This has been followed in RRTS specification where GEC (Gross energy cosumption) measurement is done in normal mode with 8 % coasting with AW2 loadng. Refer clause 3.24 of RRTS technical specification. Even in Chennai Metro Phase-2 Rolling stock tenders, SEC measurement has been asked in Normal mode only. Also SEC limit i.e. 50 Wh/GTKm is not possible to achieve in AW3 allout mode as SEC will depend upon following: 1.Route defined 2.Number of stations 3.Distance between station 4.Gradient and curvature of route For route defined for Line 5, station to station distance is very less and in this case most of the time train will run full acceleration which lead to high energy.  <b>Hence, request to amend clause 3.24.1 regarding Mode of train operation for SEC evaluation as "NORMAL MODE with 8% caosting".</b>	Tender Condition Prevail.
113	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.24.1 and Page 55 of 305	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' to be verified in LINE 5 - KAPURBAWADI to KALYAN APMC and back under conditions detailed hereafter in this clause shall not exceed 50 Wh/GTKM, referred to as SECs. Contractor shall refer to Section 6 D for alignment drawings.	Based on existing experience in Indian projects, it is recommended to change this value to 60 Wh/GTKM.	Tender Condition Prevail.
114	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 3.24.1 and Page 55 of 305	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' to be verified in LINE 5 - KAPURBAWADI to KALYAN APMC and back under conditions detailed hereafter in this clause shall not exceed 50 Wh/GTKM, referred to as SECs. Contractor shall refer to Section 6 D for alignment drawings.	Based on existing experience in Indian projects, it is recommended to change this value to 60 Wh/GTKM.	Tender Condition Prevail.
115	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.10.8 and Page 73 of 305	All the couplers (Auto, semi-permanent) shall have the shear-off functionality. Wearing parts/plates of couplers shall give a service life of minimum fifteen years.	The automatic couplers have the shear-off functionality, and the semi-permanent couplers have the shear-off functionality based on impact simulation of coupler which could meet the requirements of the contract for crashworthiness. The detailed description of the coupler scheme will be proposed during the design stage. The wearing parts/plates of couplers including some rubber parts and non-metallic components(Rubber gaskets, etc). Due to the limitations of these rubber component themselves, wearing parts/plates of couplers could give a service life of minimum six years. It is suggested to change the clause to "Automatic couplers shall have the shear-off functionality. Wearing parts/plates of couplers shall give a service life of minimum six years."	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
116	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.14.1 and Page 78 of 305	(xiv) A dedicated space shall be provided, near the first door of the car, to accommodate a wheelchair, complete with its occupant, a supporting handrail shall be provided as per extant norms. Detailed proposals, including the need for a doorway flap or ramp shall be submitted and may be reflected in the appropriate mock-up. A provision shall also be made for bicycle stand in all cars . The details of its location shall be decided during mock up finalisation. The space at the bicycle stand area shall also be used for sitting arrangement with Flip seats when not used. The design of bicycle stand should be robust & without any sharp edges	Considering the density of passengers and the traffic in the station, it is not recommended to set up a bicycle area if it is mandatory, Detailed requirements for cycling areas are required	Tender Condition Prevail.
117	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.15.3 and Page 85 of 305	(vi)The rubber/elastomer elements of the gangway shall give a service life of minimum eight years. However, bellows shall have the service life of minimum fifteen years.	The rubber/elastomer elements of gangway including end sealing rubber strip, plate skirt and rubber gaskets, etc.Due to the decay of rubber properties over time, its performance is affected.The rubber/elastomer elements of the gangway could give a service life of minimum six years. And bellows of gangway which meet the EN45545 HL3 (Contract requirements)just have the service life of minimum twelve years. Because its material which meets EN45545 HL3 is silicone rubber that can't meet the service life of minimum fifteen years. It is suggested to change the clause to"(vi) The rubber/elastomer elements of the gangway shall give a service life of minimum six years. However, bellows shall have the service life of minimum twelve years."	Tender Condition Prevail.
118	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 4.15.3 and Page 85 of 305	(vi)The rubber/elastomer elements of the gangway shall give a service life of minimum eight years. However, bellows shall have the service life of minimum fifteen years.	The rubber/elastomer elements of gangway including end sealing rubber strip, plate skirt and rubber gaskets, etc.Due to the decay of rubber properties over time, its performance is affected.The rubber/elastomer elements of the gangway could give a service life of minimum six years. And bellows of gangway which meet the EN45545 HL3 (Contract requirements)just have the service life of minimum twelve years. Because its material which meets EN45545 HL3 is silicone rubber that can't meet the service life of minimum fifteen years. It is suggested to change the clause to"(vi) The rubber/elastomer elements of the gangway shall give a service life of minimum six years. However, bellows shall have the service life of minimum twelve years."	Tender Condition Prevail.
119	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.10.6 and Page 96 of 305	The torque value considered for design of gears and coupling shall correspond to maximum tractive effort requirement for worst duty cycle. The torque value shall be taken with new wheel diameter. The temperature for type test shall be taken as 46°C i.e., ambient + 10°C proximity effect. The design value of gear box drive and coupling shall correspond to high tractive effort mode of operation and the design shall conform to the requirements of ERTS clause 3.22.7, 3.23, 8.1.9 and 8.9.9(iii).	The standard does not have such requirements, and it is difficult to find a suitable test environment,and based on projects experiences,It is suggest to delete the " The temperature for type test shall be taken as 46°C i.e., ambient + 10°C proximity effect."	Refer Addendum 3 Part II Sr. No.6B1.44
120	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.10.6 and Page 96 of 305	The torque value considered for design of gears and coupling shall correspond to maximum tractive effort requirement for worst duty cycle. The torque value shall be taken with new wheel diameter. The temperature for type test shall be taken as 46°C i.e., ambient + 10°C proximity effect. The design value of gear box drive and coupling shall correspond to high tractive effort mode of operation and the design shall conform to the requirements of ERTS clause 3.22.7, 3.23, 8.1.9 and 8.9.9(iii).	The standard does not have such requirements, and it is difficult to find a suitable test environment,and based on projects experiences,It is suggest to delete the " The temperature for type test shall be taken as 46°C i.e., ambient + 10°C proximity effect."	Refer Addendum 3 Part II Sr. No.6B1.44
121	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.2.3 and Page 90 of 305	The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 50% of nominal static wheel load during oscillation trials on actual track conditions.	According to EN 14363, The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 60% of nominal static wheel load. It is suggested to be changed to "The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 60% of nominal static wheel load during oscillation trials on actual track conditions."	Tender Condition Prevail.
122	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.2.3 and Page 90 of 305	The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 50% of nominal static wheel load during oscillation trials on actual track conditions.	According to EN 14363, The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 60% of nominal static wheel load. It is suggested to be changed to "The maximum off-loading of wheels 'ΔQ/Q' shall not exceed 60% of nominal static wheel load during oscillation trials on actual track conditions." We propose to follow the proven industry standard EN 14363 .	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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123	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.4.10 and Page 94 of 305	The design life of secondary suspension air bags (all inclusive) shall not be less than 12 years. The air bags and its components shall not crack/shear/balloon/ burst or deteriorate in its performance during its design life.	The service life of the air spring depends on the service life of the rubber parts, and the service life of the rubber parts is related to the use of the environment and rubber materials. At present, the service life of rubber parts can reach 10 years. It is proposed to change the design life requirement to 10 years	Tender Condition Prevail.
124	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.4.10 and Page 94 of 305	The design life of secondary suspension air bags (all inclusive) shall not be less than 12 years. The air bags and its components shall not crack/shear/balloon/ burst or deteriorate in its performance during its design life.	The service life of the air spring depends on the service life of the rubber parts, and the service life of the rubber parts is related to the use of the environment and rubber materials. At present, the service life of rubber parts can reach 10 years. It is proposed to change the design life requirement to 10 years	Tender Condition Prevail.
125	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.4.5 and Page 94 of 305	Hydraulic dampers of suitable capacity shall be provided symmetrically to control and limit the vertical and lateral oscillation of the car body. The damping factors are to satisfy the provisions given in table 15.1B. The damping factor in vertical mode, by wedge test, when tested using a wedge of 18mm thickness should be between 0.20 and 0.25. The damping factor in lateral mode when measured by "quick release side pull test" should be between 0.30 and 0.40. Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 2-3 cycles.	Damper is a part of the vehicle system and the damping factor is decided according to the overall design of vehicle suspension. It's suggested to change the clause to "Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 3-5 cycles."	Tender Condition Prevail.
126	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.4.5 and Page 94 of 305	Hydraulic dampers of suitable capacity shall be provided symmetrically to control and limit the vertical and lateral oscillation of the car body. The damping factors are to satisfy the provisions given in table 15.1B. The damping factor in vertical mode, by wedge test, when tested using a wedge of 18mm thickness should be between 0.20 and 0.25. The damping factor in lateral mode when measured by "quick release side pull test" should be between 0.30 and 0.40. Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 2-3 cycles.	Damper is a part of the vehicle system and the damping factor is decided according to the overall design of vehicle suspension. It's suggested to change the clause to "Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 3-5 cycles."	Tender Condition Prevail.
127	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 5.6.1 and Page 95 of 305	The mechanical strength of the bogie frame shall comply with the requirements of UIC 615-4, UIC 515-4 and EN 13749 for static test under exceptional loads and fatigue tests. The maximum stress developed under static load shall not exceed 85% of the yield strength of the material. The dynamic effects due to the inertia of the motors and transmission shall also be simulated along with traction and braking forces.	"The maximum stress generated under static load shall not exceed 85% of the yield strength of the material" this requirement has no standard basis, It is recommended that "the maximum stress generated under static load shall not exceed the yield strength of the material".	Tender Condition Prevail.
128	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.13.1and Page 106 of 305	Brake valves shall be designed and validated for heavy duty cycles required for intensive brake blending. No change of valves or components except rubber items shall be required for at least 15 years beyond DLP.	Life can not meet the requirements Suggest to change to "No change of valves or components except rubber items shall be required for at least 8 years beyond DLP."	Tender Condition Prevail.
129	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.13.22and Page 108 of 305	Holding Brake application and feedback SIL 2 WSP (Watchdog/Safety timer) SIL 4	Holding brake is considered as one special type of service brake.No SIL certification Wheel Slide Protection can be reach SIL3, So it is suggested to be changed as: Holding Brake application and feedback SIL 0 WSP (Watchdog/Safety timer) SIL 3	Tender Condition Prevail.
130	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.13.17and Page 108 of 305	All the pneumatic control equipment and valves for one car shall be mounted in the enclosed lockable boxes, made of stainless steel/Aluminium (anodized).	Some isolation valves under the car cannot be installed in the enclosed lockable boxes, and thus suggest to delete the clause.	Tender Condition Prevail.
131	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause6.16.10	In case of adhesion being below 6% and actual emergency brake rate is found lower than the guaranteed Emergency Brake Rate, it shall be the Contractor's responsibility to prove to the satisfaction of the Engineer that the initial adhesion is below 6%. For determining the adhesion, UIC 541 shall be followed. The system diagnostic shall record all relevant signals and shall be retrievable for analysis. The necessary software/hardware tools shall be given in depot.	Please confirm the specific use puopose and technical requirements of the software.Is it used for measuring the adhesion?	Tender Condition Prevail.
132	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.2.2 and Page 102 of 305	The average duty cycle of each compressor without electric braking shall not exceed 45% during operation.	Oil-free compressor was selected for this project. Based on the operation experience of the compressor, the reasonable working rate is 30%≤duty cycles90%.It could be more than 45%. It's meaningless So,it is suggested to be changed "The average duty cycle of each compressor without electric braking shall be 30%≤duty cycles90% during operation."	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
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133	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.2.2 and Page 102 of 305	One compressor shall have sufficient capacity to charge a completely empty six-car train including full air suspension inflation within 30 minutes.	Oil-free compressor was selected for this project. Based on the operation experience of the compressor, the air supply capacity of oil-free air compressor is smaller than that of non-oil-free air compressor. it will increase the cost, Thirty minutes is meaningless.please consider So,it is suggested to be changed "One compressor shall have sufficient capacity to charge a completely empty six-car train including full air suspension inflation within <b>45</b> minutes."	Tender Condition Prevail.
134	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.2.2 and Page 102 of 305	The average duty cycle of each compressor without electric braking shall not exceed 45% during operation.	Oil-free compressor was selected for this project. Based on the operation experience of the compressor, the reasonable working rate is 30%≤duty cycle≤90%. So,it is suggested to be changed "The average duty cycle of each compressor without electric braking shall be 30%≤duty cycles≤90% during operation."	Tender Condition Prevail.
135	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.2.2 and Page 102 of 305	One compressor shall have sufficient capacity to charge a completely empty six-car train including full air suspension inflation within 30 minutes.	Oil-free compressor was selected for this project. Based on the operation experience of the compressor, the air supply capacity of oil-free air compressor is smaller than that of non-oil-free air compressor. So,it is suggested to be changed "One compressor shall have sufficient capacity to charge a completely empty six-car train including full air suspension inflation within <b>45</b> minutes."	Tender Condition Prevail.
136	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 6.24.1and Page 114 of 305	Contractor shall supply exhaustive documentation on complete pneumatic system, its sub systems and components, Brake electronics (hardware and software), project software details, explanation and functionality at component and system level, coloured schemes of pneumatic system, brake system, valves with coloured cut sections under different operational states. It shall also include trouble shooting and diagnostic details explaining clearly (with coloured illustrations) the logics, transition states, algorithms, signal flow and software parameters etc.	Based on experience brake suppliers will provide the software for trouble shooting and diagnostic, and provide the Instructions for use. But not provide the algorithm, signal flow, and software parameters of the braking underlying software. So it is suggested to be deletet.	Tender Condition Prevail.
137	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.2.1 (xiv) and Page 117 of 305	All gaskets provided in the doors shall be so designed that there is no possibility of their getting loose during service. Life of the gaskets/seals shall be minimum 8 years.	The lifetime of rubber parts can achieve only for 6 years. Kindly request to change as below  Life of the gaskets/seals shall be minimum 6 years.	Tender Condition Prevail.
138	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.2.1(xx) and Page 118 of 305	(xx) Limit switches used shall be of high reliability and with IP 65 protection. Life of the limit switches shall be at least 15 years. The Contactor shall furnish details during Pre-Final Design Stage.	The shell of the limit switch is made of non-metallic material and can generally only last for 10 years. It is suggested to change “Life of the limit switches shall be at least 15 years.” to the “Life of the limit switches shall be at least 10 years.”.	Tender Condition Prevail.
139	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.2.1(xx) and Page 118 of 305	(xx) Limit switches used shall be of high reliability and with IP 65 protection. Life of the limit switches shall be at least 15 years. The Contactor shall furnish details during Pre-Final Design Stage.	The shell of the limit switch is made of non-metallic material and can generally only last for 10 years.Life can not meet the requirements It is suggested to change “Life of the limit switches shall be at least 15 years.” to the “Life of the limit switches shall be at least 10 years.”.	Tender Condition Prevail.
140	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.2.13 (b) and Page 123 of 305	(b) A second device (one for each side) shall be provided inside the driving console. This device shall be operable from inside the driving console. Operation of this device shall release the “locking” mechanism on adjacent passenger saloon door of the DM car. This device shall be unobtrusive, flushed with, or recessed into the side wall / interior panel.	The adjacent passenger saloon door can be released and unlocked through the corresponding internal unlocking device inside of saloon and external unlocking device. there is no need to set a device inside the driving console independently to unlock the passenger door. The distance between the door and the driver's console is too far away, and the steel wire rope will be very hard operated. So it is suggested to be deleted.	Tender Condition Prevail.
141	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 7.3.9 and Page 125 of 305	The Contractor shall note that during acute emergency, side evacuation may become inevitable. The Contractor, based on the experience, shall advise the quickest way for evacuation in emergencies and shall make suitable provisions in design after final agreement with the Engineer. For side evacuation, suitable arrangement for filling up of the gap to walkway may have to be provided in each car. Details shall be decided during design.	When side evacuation is required, the vehicle door shall be opened and the civil contractor shall provide evacuation platform. Please specify how many evacuation devices are required per car.	Tender Condition Prevail.



CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
142	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.4.1and Page 132 of 305	Gapless type lightning arrestors of proven design in accordance with specification IEC 60099-4 shall be provided on the roof. One LA shall be provided on incoming side after the pantograph and another LA shall be provided before the HT Transformer Bushing after the VCB, for protection against line voltage transients caused by lightning or system switching. The LA shall be rated for not less than 42kV with compatible rupture capacity. The failure of arrestor shall not be explosive in any case. No splintering etc. shall be permissible. This shall be included in the type test plan. The arrestor shall be exposed to line harmonics and line voltage/frequency fluctuations. Contractor is advised to take actual measurements before design. Frequency fluctuation of the order 47Hz to 54Hz may be considered as datum.	According to IEC 60099-4:2014 section 8.10.6 short-circuit test evaluation, the arrester will not have a strong explosion, allowing the sample to fail. And in the specified time period, the open flame will automatically extinguish.The arrester is an overvoltage protection device, absorbing energy and releasing energy. In the case of extreme protection, a short circuit explosion will occur to protect the high voltage equipment at the back end.But it doesn't produce sharp debris. So it is suggested to delete the " The failure of arrestor shall not be explosive in any case."	Tender Condition Prevail.
143	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.5.1 and Page 132 of 305	A 25 kV Explosion Proof Potential Transformer duly type tested, to be mounted, on the roof, meeting the requirements of IEC 61869-3 and EN 45545, for protection / measurement shall be supplied. Adequate protection shall be ensured to avoid secondary short circuit at PT output and effect of harmonics on the performance. The secondary terminal should be easily accessible during Periodic maintenance.	Please clarify what kind of explosion proof.According to the current situation of the product, it does not have the explosion-proof function, and the standard is not clearly stated, so please specify the specific explosion-proof type, or delete the requirement.	Tender Condition Prevail.
144	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.5.1 and Page 132 of 305	A 25 kV Explosion Proof Potential Transformer duly type tested, to be mounted, on the roof, meeting the requirements of IEC 61869-3 and EN 45545, for protection / measurement shall be supplied. Adequate protection shall be ensured to avoid secondary short circuit at PT output and effect of harmonics on the performance. The secondary terminal should be easily accessible during Periodic maintenance.	Please clarify what kind of explosion proof.According to the current situation of the product, it does not have the explosion-proof function, and the standard is not clearly stated, so please specify the specific explosion-proof type, or delete the requirement.	Tender Condition Prevail.
145	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.7.9 and Page 133 of 305	IP level of blower motor, pump motor and complete transformer including terminal box shall be IP65.Contractors shall declare the Vendors for Transformer's sub-assemblies and shall submit an undertaking & commitment from Vendors to deal directly with Engineer in case of future procurement.	The transformer ventilation area should be considered as IP20, and the rest of the described protection level is IP65.	Tender Condition Prevail.
146	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications	Clause 8.9.20 and Page 138 of 305	For maintenance purpose, there shall be additional by pass ground switch in CI box duly interlocked with safety locks. Contractor shall submit the detail document for Engineer's review during design stage.	Because the traction converter already contains an overvoltage chopper circuit and chopper resistance, and the main circuit contains a discharge resistor R6 and R7, the rapid discharge function can be realized during maintenance work. Therefore, no extra bypass ground switch is required in the CI box.	Tender Condition Prevail.
147	Part II	Section 6-B1: Employer's Requirements Rolling Stock Technical Specifications/Clause 9.2.13	Page 129 of 276	For maintenance purpose, there shall be additional by pass ground switch in SIV box duly interlocked with safety locks. Contractor shall submit the detail document for Engineer's review during design stage.	When maintaining the SIV, it is possible to consider implementing safety interlocking and pass grounding switch functions by controlling the contact logic of contactor switches K1, K2, and K3 in the auxiliary inverter. The charging contactor K2 and charging resistor R1 are used for charging when the auxiliary inverter starts. The capacitor is pre-charged through resistor R1. When its voltage reaches a certain voltage value, the short-circuit contactor K1 is closed to reduce the charging current of the capacitor, reducing the impact on the capacitor, and extending the service life of the capacitor. When carrying out maintenance work, the contacts of normally closed contactors K1 and K2 are closed, and the contacts of normally open contactor K3 are closed, which is equivalent to the interlocking contact being closed. The auxiliary inverter capacitor is short circuited through the fast discharge resistor R4 to achieve the fast discharge function of the capacitor.	Tender Condition Prevail.
148		Combined Horizontal & Vertical Alignment for Line No.4 & 4A		The speed limit information is not found in this document.	Speed limit information is required for the Run Curve Simulation and Energy Consumption Calculation.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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149		ADDENDUM I Part II	Annexure 2.6	<p><b>3.24.1</b> Bidders shall note that ‘SPECIFIC ENERGY CONSUMPTION (SEC)’ to be verified under conditions detailed hereafter in this clause, shall not exceed 50 Wh/GTKM, referred to as SECS. Bidder shall refer to Section 6 D2 for alignment drawings for Phase 1 and declare <del>Provide</del> <del>Guaranteed</del> SECD value for Evaluation in accordance with EQC.</p> <p><b>3.24.2</b> This Specific Energy Consumption shall be total of two components viz. SEC for a 6- car train (with VAC switched off) i.e., ‘SECP’ value (inclusive of DAUX as detailed in Clause A 1.8.1 below) and SEC of VAC for a 6-car train i.e. ‘SECH’ value. These two values shall be declared by the Bidder (shall be termed as SECP-declared and SECH-declared) during Bid stage as per Section 4C and the same shall be validated in the Combined Test bed as detailed in this clause. The total declared SEC value i.e., SECD for a 6-car train as declared by the Bidder i.e., SECP-declared + SECH-declared shall not exceed the SECS i.e. 50 Wh/GTKM as mentioned above</p> <p><b>A1.5</b> The train operation in All-Out mode shall be as per ERTS clause 3.22.5(b).</p> <p><b>A1.6</b> For Combined test bed: All-Out ATP mode as mentioned in A1.1(i) shall be considered</p>	<p>TRSL, would like to request your consideration for the modification of Clause 3.24 (Specific Energy Consumption) in the MMRDA ERTS (Employer's Requirements Technical Specifications).</p> <p>Clause 3.24.1 currently states that the 'Specific Energy Consumption (SEC)' to be verified under the conditions detailed in this clause shall not exceed 50 Wh/GTKM, referred to as SECS. The bidder is required to provide the Guaranteed SEC value for evaluation.</p> <p>Clause 3.24.2 further specifies that the total declared SEC value, i.e., SEC declared for a 6-car train as declared by the contractor (SECP-declared + SECH-declared) shall not exceed the SECS of 50 Wh/GTKM.</p> <p>Additionally, Clauses A1.5 and A1.6 mention that the train operation in All-Out mode and All-Out ATP mode shall be considered for the combined test bed.</p> <p>We request that MMRDA consider the following modification: Modification requested for clause (A1.5 and A1.6) The train operation under normal mode should be as per the Guaranteed "Declared Schedule Speed (DSSP)" in kmph for a roundtrip for Line 5 as <b>43 Kmph</b>.</p> <p><b>Justification:</b> Meeting the 50 Wh/GTKM target while considering the All-Out condition seems extremely difficult and nearly impossible based on our preliminary calculations. Changing the requirement from All-Out to DSSP of <b>43 kmph</b>would be more realistic and achievable.</p> <p><b>Implications:</b> If the bidders are required to declare the scheduled speed, the price evaluation cannot be done effectively, as bidders can provide different schedule speeds and offer lower energy consumption. Therefore, we request that MMRDA provide the scheduled speed for all three lines, and the bidders can also propose what is needed from their side as well.</p> <p>We believe that this modification will lead to a more realistic and achievable energy consumption target, ensuring the successful implementation of the project.</p> <p>We appreciate your consideration of this request and look forward to your response.</p>	Tender Condition Prevail.

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CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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154	Part II	Section 6: B2	Clause 4.12.1.1& 4.12.1.2 and Page 637 of 2529;	A design signalled headway of 90 seconds or better and an operational headway of 110 secs or better on signalled routes bi-directional between Kapurbawadi to Kalvan APMC , including automatic turn back operation at the terminal stations. The designheadway shall consider 6 car train consists.  This headway shall be measured on the line using the respective EMU performanceor 6-car trains with 30-second dwells at intermediate stations and a minimym 2minute layover at the terminal stations. The headway calculation will include PSDoperation time.	Generally, the dwell time needs to be taken into account when calculating the turn back interval, so the 90-second turn back interval requirement is not possible(Don't stop or reduce speed in the interval. Please clarify the theoretical calculation principle of the 90-second turn back interval requirement.  Our calculation method is explained by DHAMANKAR station as an example: calculate separately: the time when the route get into the station can be arranged again and the time when the route leave away the station can be arranged again, and take the longer time as the turn back interval time of the station; The turn back interval of DHAMANKAR station is the time when the route get into the station can be arranged again = the running time of the previous train entering the station + the dwell time of the previous train + the time of the previous train clears the impact switch section. <i>"Layout of Dhamankar station was given "</i>	Tender Condition Prevail.
155		Clause No: 4.12.1.2 Page no.34	19 Pg 89 of 209	This headway shall be measured on the line using the respective EMU performance for 6-car trains with 30-second dwells at intermediate stations and a minimum 2-minute layover at the terminal stations. The headway calculation will include PSD operation time	Bidder request to ammend the clause to have operational headway of 120 seconds which is usual requirement in all CBTC tenders.  Such requirement was followed in the recent Bangalore Metro Phase2A,2B and R6 tender and other Indian tenders.  After detailed analysis of the track layout and other parameters it is recommended to update the operational headway to 120 secs which is much realistic value.  Hence request you to change the clause as below: <b>"A minimum design Signalled headway of 90 seconds or better and an operational headway of 120 secs or better"</b>	Tender Condition Prevail.
156		6B2.15	6B2.15 - Addendum 1 Part II	The intra-ATSS communication between ATSS equipment such as servers, workstations, maintenance workstations, timetable compilation workstation, Train Service and Simulation Workstation and interfaces with Designated Contractors shall be physically separated from the DCS.  5.71.11.5The communication between one station CBI to other station CBI equipment and interfaces shall be physically separated from the DCS.	The CBTC solution doesn't ask for separate network for CBI to CBI communication. However the Radio network is used for Train to track communication and backbone network is used for CBI to CBI communication. <b>Hence request to delete this requirement (5.71.11.5)</b> to allow unified backbone network for communication of CBI to CBI communication, ATC communication and ATS communication. The same is the principle used in all CBTC projects in India like Kochi, Mumbai L2 &7, Mumbai L3, Lucknow, Pune, etc...	Tender Condition Prevail.
157		6B2.18	Addendum 1 Part II	The S&TC system shall conform to IEC 60529 Ed. 2.0 b to the following levels: Trackside equipment: IP code 65; Internal train borne equipment: IP code 52; and External train borne equipment: IP code 67.	IP 65 Point Machine is not available in the market. The next IP rating of <b>IP67 is not recommended</b> due to following reasons:  <b>1. Water logging:</b> IP 67 rating provides protection against water seepage for depths of up to 1m and for only 30 minutes. After this point, the water is going to seep inside the point machine box & not find any outlet. Hence, <b>IP 54 rated point machine with IP67 switches and IP67 motor unit</b> is more suitable as it has a water outlet at the bottom.  <b>2. Condensation of humidity inside the box:</b> O&M staff is bound to open the point machine cover during the operations, and this will allow humidity to enter inside the enclosure. Eventual condensation of humidity will form a pool of water inside the box which can interfere with the electrical parts of the machine. Once again, for situations like this, IP 55 rating will help in maintaining ventilation inside the box which will be more beneficial.  <b>It is recomended mainline point Machine need to be ammended as IP 54 rated with IP 67 motor unit.</b>  Hence request to add the below by replaing <del>Point Machine: IP code 65 or better</del> to <b>"Mainline Point Machine Enclosure: IP54. Mainline Point machine Motor : IP67, Depot Point Machine : IRS 24"</b>	Tender Condition Prevail.
158		Clause No. 13.5.7 and Page 45	101 Pg 196 of 209	Caluse 13.5.7 , Table 13.14 <b>Performance Damages due to Non-Performance of STP System: Sr No 10 about Penalty for Cybersecurity</b>	Bidder suggests to define "Breach of Cyber Security" condition into different categories such as Operation failure, Blank Images in PIDS, Improper messages in PIDS, etc. <b>Hence request to change the penalty / damage to 10,000 INR per incident.</b>	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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159	Part II	6B2.24	A11.1 General	The UPS system provided by the Contractor shall be minimum of 120 KVA for BCC, 90KVA for Depot and UPS provisions at stations shall be as per below table with on-line redundant configuration. Actual rating of UPS shall be decided after calculation of load at specific station. The UPS shall be of modular 1+1 design. There shall be common UPS for S&TC, Telecommunication, Automatic Fare Collection, PSD and MEP systems. The UPS equipment in the UPS room; and further distribution, protection arrangements, DC supply,battery etc. shall be the responsibility of the Contractor.	Does this clause require S&TC, Telecommunication, Automatic Fare Collection, PSD and MEP systems to share a UPS?	Tender Condition Prevail.
160	Part II	Section 6 -B3	Clause 6.0	A common radio platform shall provide radio communication for both the at- grade and elevated line. The use of radio frequency spectrum in India is regulated by the Wireless Planning and Co-ordination (WPC) Wing of the Ministry of Communications, Government of India. Metro Rail administrations have been so far allotted spectrum in 380 - 400 MHz band. Frequency allotment may be in 400 or 800 MHz and the Contractor's responsibility for allotment of frequencies is further explained in this Chapter.	Can the radio system be implemented by the manufacturer designated by the owne	Tender Condition Prevail.
161		6B3	27 Pg 112 of 209	At least 5 samples of each type of cables randomly supplied shall be inspected by an Independent Government Approved Laboratory in India at the Contractor's own cost.	What are different types of cables is not mentioned in RFP and bidder understanding of type of cables are given below. <b>Please confirm if our understanding is correct</b> 1. Indoor Power& Earthing cable 2. Underground/Tunnel outdoor power cables & Earthign cables 3. Elevated outdoor powecable and Earthing cable 4. Ethernet Cable 5 Optical fiber cable 6. Telephony Cable. 7 PIDS/PAS cable 8 ACIDS cable 9. CCTV cable	Tender Condition Prevail.
162		6B3	28 Pg 113 of 209	At least 5 samples of each type of cables randomly supplied shall be inspected by an Independent Government Approved Laboratory in India at the Contractor's own cost.	Bidder understands if the manufacturing of these cable types will be done in same lot then only single sample of each type will be selected during FAT and during FAT of second LOT cable one more sample will be selected of each type for testing. An example of cable type, category of each type and number of samples of each type etc given in the following table. Kindly confirm <b>(Table giving cable type its category and number of Samples during FAT )</b>	Tender Condition Prevail.
163		6B3	283 Pg 152 of 209	The contractor shall comply in general with the pertinent requirements of NFPA 130 (Fixed Guide way Transit system 2007 edition issued by the US National Fire Protection ssociation). All other cables shall be manufactured from flame retardant, low smoke and zero halogen/low Halogen materials complying with NFPA 130 requirements. All Cables used in external or open areas shall be the armored types and able to withstand ultraviolet (UV) rays. External or open areas shall be the areas within the reach of Sunlight or rain.	<b>For NFPA-130 standard, no testing facility is available in India</b> and in no other metro projects NFPA cables have been provided and to comply the same we will provide and propose similar standard for Flame propogation i.e IEC 60332-1 and IEC 60332-3-24 and for smoke density we will propose similar IEC /ASTM standard as per the proposed cable requirement. <b>Therefore kindly amend the clause accordingly.</b>	Tender Condition Prevail.
164		6B3	285 Pg 153 of 209	The cables for installation in elevated/at-grade section shall be manufactured as per Indian Railways RDSO/TEC specifications, wherever available in TEC/RDSO specifications for a particular cable type. Wherein the RDSO/TEC specifications are not available then the specifications as laid down herein shall be complied with.	In all recent India Tenders, Cable that meets <b>International Standards</b> are accepted. Hence Bidder is requested <b>to add international standards</b> also in the clause in addition to RDSO/TEC specificaitons.	Tender Condition Prevail.
165	Part II	Section-6B3	12.3.16 and Page 370 of 455	12.3.16 A min. of 52" LED display panel shall be provided in the Central Telecommunication Maintenance Room so as to display equipment status and Alarms from this system.	The specifications for the LED display panel do not specify the exact parameter requirements. If the owner has a reference LED display panel, please provide the parameter requirements. We hope to determine the parameters of the LED display panel, such as pixel pitch, resolution, etc.	Tender Condition Prevail.
166	Part II	Section-6B3	12.3.16 and Page 370 of 455	12.3.16 A min. of 52" LED display panel shall be provided in the Central Telecommunication Maintenance Room so as to display equipment status and Alarms from this system.	The specifications for the LED display panel do not specify the exact parameter requirements. If the owner has a reference LED display panel, please provide the parameter requirements. We hope to determine the parameters of the LED display panel, such as pixel pitch, resolution, etc.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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167	Part II	6B3	9.4.5.8	The Layer 3 switch in OCC/BCC should be modular chassis-based switch. The Contractor should provide FCAPS certified NMS Solution which can support & manage multiple vendor devices.	Today most of the large scale networks solutions are running on 1U /2U or virtual stackable options. Moreover all the OEMs are moving away from Chassis based concept to 1U form factors with more switching capacity. Distribution switches at OCC should be 1- RU fixed port box only. Request to exclude the modular chassis requirement for Layer 3 switch at OCC/BCC.	Tender Condition Prevail.
168	Part II	6B3	9.6.1	The Core switch at OCC & BCC shall be chassis based and shall have redundant critical modules like supervisor/control/management card & power supply card etc.	Today most of the large scale networks solutions are running on 1U /2U or virtually stackable options. Moreover all the OEMs are moving away from Chassi based concept to 1U form factors with terabites switching capacity. Hence we are requesting to amend the same as follows: Redundant Core Switches shall be provided in OCC and BCC. These Core switches at OCC & BCC shall be Non chassis based and shall have redundant critical modules like FAN card & Power supply card etc. `	Tender Condition Prevail.
169		Section 6-B4	29	5.11.1 (9) IP Class Rating Table given in Section 6B4 page No 68 , regarding IP rating of various subsystem of PSD like PSL, Door control unit, Motor , etc..  Motor : IP 65 Note: IP class to be upgraded for those platforms having no PEB and to get approval from Engineer before manufacturing compliance of OEM certification is also required to submi	Bidder requests to specify the IP requirement for the complete table.d In connection to Motor IP rating requirement, Bidder request to specify the requirement and clarification for below - 1. Which platforms are not having PEB? 2. What is the required IP class table for such platforms which are not having PEB?	Tender Condition Prevail.
170		Section 6-B4	34, 35, 36, 37	6.5 Equipment Reset	Bidder requests to delete this requirement of the failed equipment to reset and restart remotely. As it is a safety hazard.	Tender Condition Prevail.
171		Section 6-B4	39	13.2.1 The Contractor shall provide the training to the Employer's personnel in design, manufacturing process, testing, system architecture, and installation practices. This will form the part of off shore training. Contractor shall also provide training to the operations and maintenance staff in India.	Bidder request to specify the total no. of days the training to be conducted.	Tender Condition Prevail.
172		Section 6-B4	40	13.2.2 Onshore Training - Training to Operations (i) The Contractor shall conduct courses for the operations aspects of the PSD system attended by about operations staff. (ii) The Contractor shall conduct courses on the maintenance aspects of the PSD system. Each course will be attended by about maintenance staff. (iii) The Contractor shall provide overall 60 days of his training for each lot of PSD as part of Contract separately.	Bidder request to specify the total no. of days the training to be conducted.	Tender Condition Prevail.
173		Section 6B4	23	5.1.13 Maximum allowable (fully elastic) deflection at the closest part of PSD frame members shall not be more than 20 mm from the static position and no part of facade should infringe the KE or damage the PSD system under deflection. · PSD frame members on which the glass is fixed, under worst case combined loading conditions, shall be 10 mm from the static position for PSD, out of this 10 mm deflection, no more than 2 mm deflection shall be contributed by the deflections of the top and bottom supports of PSD. No part of PSD facade should infringe the KE or damage the PSD façade under deflection.	Bidder request to ammend the clause as below as in MML6 - "5.1.13 The PSD structure shall accommodate the effect of cyclic and repetitive loading pressures that shall be placed on it from the forces associated with train movement and passenger crowd loading, impact pressures and environmental conditions over the design life of the PSD installations. Under extreme loading pressure, no structural elements or glazed sections (moveable or fixed) shall suffer permanent deformation or damage and no PSD door panel shall become detached from its mountings. Maximum allowable (fully elastic) deflection at the closest part of PSD frame members shall not be more than 20 mm from the static position and no part of facade should infringe the KE or damage the PSD system under deflection. •PSG frame members on which the top of PSG facade shall be 20 mm from the static position and no part of facade should infringe the KE or damage the PSG facade under deflection.	Tender Condition Prevail.
174	Part II	Section-6-B5 Employer's Requirement / Depot Machinery & Plant	1.UNDER FLOOR PIT WHEEL LATHE Clause 1.4.20.3 Axle centering and Page 16 of 17	During center-less profile turning i) Axle centering during center-less re-profiling shall be achieved by means of the drive rollers and lateral guide rollers locating the axle in the vertical and horizontal planes. Only one train wheel setting-up operation shall be required for a particular type of vehicle.	the lathe does not handle the center-less profile turning.so, we suggest to cancel this function.	Tender Condition Prevail.
175	Part II	Section-6-B5 Employer's Requirement / Depot Machinery & Plant	4.7 Storage racks 4.7.1 General Description Of The Equipment And Scope Of Supply page 62	Godrej Long span shelving system ; Godrej Mobile shelving system ; Godrej Heavy duty shelving system ; Godrej Selective Pallet Racking System	Can we use the Chinese reputed make products?	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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176	Part II	Section-6-B5 Employer's Requirement / Depot Machinery & Plant	4.8Trolley For The Stator Of Traction Motor 4.39General Purpose Trolley and page 88	The steel used for fabrication works shall be rust free and be of reputed make Salem Steel, SAIL, TISCO etc.	Can we use the Chinese reputed make steel?	Tender Condition Prevail.
177	Part II	Section-6B5.9 Employer's Requirement	7. RESCUE VEHICLE COMPRISING OF RAIL-CUM-ROAD VEHICLE (RRV) ALONG WITH RE-RAILING & RESCUE EQUIPMENT (RRE) and Page 4	Maximum Running speed on rails≥40 kmph without load on the Line 5 alighment.	Under load conditions, the traction speed should not be less than 40km/h, which is a high requirement. Can the standards be lowered?	Tender Condition Prevail.
178	Part II	Section 6B-6: Employer's Requirements: Maintenance Services ERMS	Clause 3 and Page 8 of 81	3.2Major Schedule Maintenance (Overhauls) of Rolling Stock 3.2.1The Contractor shall carry out Intermediate Overhaul (IOH) and Periodical Overhaul (POH) as per the following mileage/time: i)1st IOH after 4 years or 4.8 lakh km whichever is earlier. ii)2nd IOH after 12 years or 14.4 lakh Km whichever is earlier. iii)1st POH after 8 years or 9.6 lakh Km whichever is earlier. iv)2nd Full Rehabilitation POH after 16 years or 19.2 lakh Km whichever is earlier.	It is suggested to change this clause to "i)1st IOH after 5 years or 6 lakh km whichever is earlier. ii)2nd IOH after 15 years or 18 lakh Km whichever is earlier. iii)1st POH after 10 years or 12 lakh Km whichever is earlier. iv)2nd Full Rehabilitation POH after 20 years or 24 lakh Km whichever is earlier."	Tender Condition Prevail.
179	Part II	Section 6B-6: Employer's Requirements: Maintenance Services ERMS	Clause 3 and Page 8 of 81	3.2.3The Contractor shall note that the re-discing of the wheel is also part of his Maintenance Obligations and shall supply and replace the disc as and when reaches the condemning limit. Contractor may note that wheel re-discing facility is not available with the Employer. The Contractor shall innovate for improving wheel life with the use of WFL or any other system with the knowledge of the Employer.	The employer provide wheel re-discing facility.	Tender Condition Prevail.
180	Part II	Section 6B-6: Employer's Requirements: Maintenance Services ERMS	Clause 5.3 and Page 18 of 81	a)For Rolling Stock and Depot M&P: A minimum manpower of 0.9 staff/car shall be progressively build from the first day of the start of the ROD and before the start of CMP. This includes rest giver, leave reserve, working on national holidays, PPIO functions on 24x7 hours basis with minimum one supervisor and one technician and RSC (Rolling Stock Controller) functions on 24x7 hours basis with minimum one supervisor in each shift.	1.For Rolling Stock and Depot M&P: A minimum manpower of 0.9 staff/car shall be progressively build from the first day of the start of the ROD and before the start of 1st IOH. 2.44engineers, including 17 non-resident engineers	Tender Condition Prevail.
181	Part II	Section 6B-6: Employer's Requirements: Maintenance Services ERMS	Clause 9.1 and Page 28 of 81	a) The exterior of Trains is to be washed once every forty-eight (48) hours or as and when required using the auto wash in the Depot. b) The Employer may at any time during the Comprehensive Maintenance Period advise the Contractor to increase or decrease the frequency of cleaning specified above. c) In case the auto wash plant is defective the manual cleaning shall be in the scope of the Contractor.	a) The exterior of Trains is to be washed once every 2 weeks or as and when required using the auto wash in the Depot.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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182	Part II	II	Section 6-B6: Employer's Requirements: Maintenance Services ERMS  3.3.3 i) & iii), Page 11	i) If the cost toward such repair is below INR 1,00,000/- in each case, then Contractor shall carry out the repair and cost towards such repair shall be borne by the Contractor. The Contractor shall take approval from the Employer to approve the methodology of repair. iii) If the cost towards such repair is more than INR 5,00,000 then the Contractor shall, on its own or engage an independent third party at its own cost and expense to conduct a root cause analysis of the damage. Such an independent third party shall be engaged with prior consent of the Employer. The decision of the Employer regarding the appointment of an independent third party shall be communicated within a period not exceeding 15 (fifteen) days of receipt of written communication from Contractor. The Contractor shall submit such a report by the third party to the Employer. If the root cause analysis report identifies the damage attributable to solely any act or omission of the Employer then the difference in the amount recovered by the Contractor under the insurance and the amount claimed towards the loss shall be borne by the Employer, upon submission of relevant documents in support of its claim by the Contractor to the satisfaction of the Employer. However, any findings of the investigations conducted by the Railway Statutory Authority for analyzing the cause of the Failure/Accident resulting in the loss shall be binding on both the Contractor and the Employer. The Contractor shall carry out the maintenance after receiving approval from the Employer	<b>Addendum 1 Pt II, S. No. 6B6.6</b> All unscheduled maintenance such as arson, riots, thefts, vandalism, fire, faults pertaining to other contractor, solely and directly not attributable to the Contractor (other than the operational reasons); shall be dealt with as below. 3.3.3 (i) If the cost of material toward such repair is below INR 1,00,000/- in each case, then Contractor shall carry out the repair and cost towards such repair shall be borne by the Contractor.If cumulative expenses towards such repairs are more than INR 15,00,000 in a year then such additional expenses beyond INR 15,00,000 shall be borne by Employer. In every case it shall include the material cost only. The Contractor shall take approval from the Employer to approve the methodology of repair. 3.3.3 (ii) If the cost of material towards such repair is more than INR 1,00,000 and less than 5,00,000, in each case, then the Contractor shall determine the cost & time required of such repair work, excluding manpower cost, and share the same with the Employer along with the basis of the assessment of the repair cost & time and Employer shall bear such cost unless such incident is not covered in para (c) below. The Contractor shall carry out the maintenance after receiving approval from Employer. 3.3.3 (iii) If the cost of material towards such repair is more than INR 5,00,000, then the Parties (Contractor, Other Contractor and Employer) shall jointly, conduct a root cause analysis of the cause of failure and damage.In case of any disagreement between the Parties, the decision of the Employer shall be final and binding on the Parties. If the root cause analysis report identifies the cause of the failure and damage attributable to the Employer or the Other Contractor, then the difference in the amount recovered by the Contractor under the insurance ( if applicable as provided in Section 8 Part A Clause 19.3) and the amount claimed towards the loss, shall be borne by the Employer subject to, upon submission of relevant documents in support of its claim by the Contractor to the satisfaction of the Employer. However, any findings of the investigations conducted by the Statutory Authority for analyzing the cause of the Failure/Accident and fixing the responsibility on the Contractor shall be binding on the Contractor The Contractor shall carry out the repair after receiving approval from the Employer. In case, the cause of the damage is attributed to the Other Contractor, the Employer shall recover the cost from the Other Contractor.	Tender Condition Prevail.
183	Part II	II	Section 6-B6: Employer's Requirements: Maintenance Services ERMS	The Performance Damages shall be limited to 10% in any quarter and if exceed more than 10% in any quarter, it shall be carried to next quarter till completion of the recovery.	<b>Addendum 1 Pt II, S. No. 6B6.18</b> The Performance Damages shall be limited to 10% of the maintenance invoice raised in any quarter and if exceed more than 10% in that quarter, it shall be carried to next quarter till completion of the recovery. <b>Addendum1 Pt III, S. No. 5</b> <b>10.6a: Maximum compensation payable by Contractor:</b> 10% of Design Build Cost and in addition damages for performance as per Chapter 13 of Section 6_B6 ERMS Key Performance Indicators and Performance Damages	Tender Condition Prevail.
184		Ltr ref: No. K-14011 /04/2023-MR TS-Coord, dtd 11 Aug 2023 to all MDs reg Joint Civil-Military Training programme on National Security including Cyber Security Based on Clause No: 4.9.1 Page No: 33	108 Pg 106 of 209	<b>Setting Up Rail SOC (Security Operations Centre).</b> Building a Security Operations Centre (SOC), deploy robust rail specific network monitoring tools to detect and respond to suspicious network activities. Implement intrusion detection systems (IDS) to identify malicious activities in proprietary systems and alert on potential cyber-attacks in real time. Creating threat response playbooks and feeding threat intelligence, performing regular updates to operating software, applications and scanning for viruses. Identifying current threats and countermeasures through help from CERT IN and NCIPC and reporting any type of malicious activities back to security agencies. Modem operational control centre (OCC) or Backup OCC uses wireless connections to control activities, like monitoring metro train speeds or regulating traffic signals. These types of wireless signals can expose a network's vulnerabilities and leave the infrastructure wide open for attack.	The contractor understanding of this (b.IV Section 4 )states that , the setting up of rail SOC center, the Building and infrastructure of SOC will be provisioned by the employer and bidder will provide the inputs for SOC operations. <b>Please confirm.</b>	Tender Condition Prevail.



CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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185		Ltr ref: No. K-14011 /04/2023-MR TSCoord, dtd 11 Aug 2023 to all MDs reg Joint Civil-Military Training programme on National Security including Cyber Security Based on Clause No: 4.9.1	109 Pg 107 of 209	<b>Conduct Regular Security Awareness Training.</b> All employees should undergo regular security awareness training to educate them on the latest cybersecurity threats and best practices to prevent cyberattacks. This training should cover topics such as phishing, password security, and social engineering. Continuously monitor and analyse emerging cyber threats targeting urban transportation systems. Participate in cybersecurity forums and stay connected with cybersecurity experts to understand new attack vectors and vulnerabilities.	The contractor understands the Government's regulatory requirement for awarness and training will be responsibility of Employer for their own employee. Bidder will be responsible for cyber awarness training for their own employee. Request Employer to modify the requirement stating " <b>All contractor employees should undergo security awareness training</b> ".	Tender Condition Prevail.
186		Ltr ref: No. K-14011 /04/2023-MR TSCoord, dtd 11 Aug 2023 to all MDs reg Joint Civil-Military Training programme on National Security including Cyber Security Based on Clause No: 4.9.1	110 Pg 107 of 209	<b>Conducting a Comprehensive Security Audit.</b> The first step should be to conduct a thorough security audit of the metro system to identify any vulnerabilities and assess the existing security measures. Perform regular security audits and risk assessments to identify vulnerabilities and weaknesses, engage independent third-party security experts, ethical hackers to conduct penetration testing and vulnerability assessments. Fix identified vulnerabilities promptly and track the progress. Generally, it was observed that Cert-In empanelled agencies or Intelligence Bureau audits are never done on the critical OT networks like signalling systems etc. Periodically engage independent cybersecurity auditors to assess the effectiveness of security controls and compliance with industry standards and regulations. Regularly perform simulated cyber-attack exercises, also known as red teaming, to test the effectiveness of existing security measures. These exercises can help identify weaknesses and areas for improvement before a real attack occurs.	As per the GOVT regulatory dated Aug 2023 : Conducting a Comprehensive Security Audit, Bidder understands the need for enaging a independent third party security experts , ethical hackers to conduct penetration testing and Vulnerabilitiy assements, will be provisioned by regulatory body / Employer. <b>Please confirm.</b>	Tender Condition Prevail.
187		Ltr ref: No. K-14011 /04/2023-MR TSCoord, dtd 11 Aug 2023 to all MDs reg Joint Civil-Military Training programme on National Security including Cyber Security Based on Clause No: 4.9.1	111 Pg 107 of 209	<b>Appointment of Chief Information Security Officer (CISO).</b> As per the recent guidelines (ref. No. 6(12)/2017-PDP-CERT-In dated 14/03/2017), CISO's shall be an independent function and shall directly report to MD/CEO. CISO should establish a comprehensive cybersecurity strategy specifically tailored to urban transportation systems i.e. IT (information technology) and OT ( operation technology) both.	Bidder would like to clarify that <b>Appointment of CISO is the responsibility of Regulatory Body / Empolyer</b> as this person will be directly reporting to MD/ CEO of regulatory body/ Employer. <b>Please confirm.</b>	Tender Condition Prevail.
188	Part II	Combined Horizontal & Vertical Alignment for Line No.4 & 4A		The speed limit information of phase 2 line is not found in this document.	Speed limit information is required for the Run Curve Simulation and Energy Consumption Calculation.	SEC will be evaluated based on phase-1 alignment. Phase-2 data will be provided later.
189	Part II	Appendix TK: Deliverables	Clause16.11	The Contract deliverables (tools/equipment/software etc.) required to be supplied by the Contractor under this Chapter of ERTS are listed below:	According to the practice of previous projects, the depot equipment in this table is purchased by the client, so it is suggested to delete this section and purchase the depot related equipment by the client.	Tender Condition Prevail.

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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190	Part III		PCC(A)-9.6 (Liquidated Damages)	Applicable on delays in sectional completion and/or delay in complete Design Build works 0.03 % per day of design build cost	<p>Liquidated Damages(LD) for achieving any Key Date are based on overall Design-Build works cost. 0.03% of Design- Build Works cost results in very high amount of LD per day compared to any other contract for metro tenders relating to Rolling Stock, Signalling and other packages. Since the Design Build Works envisages different packages (RS, Signalling, Telecom, PSD, Depot M&amp;P), the LD should be applied on the value of delayed goods of such respective package and not overall Design Build Works cost. It is proposed that the %age LD should be 0.5% of the value of delayed goods per week of delay as per international practices and as followed in most of the metro contracts.</p> <p>Hence, it is requested to replace this clause as follows:</p> <p><b><i>" Delay Damages (amount per week of delay): 0.5% of value of delayed goods under respective part of works (RS, Signalling, Telecom, PSD, Depot M&amp;P)</i></b></p> <p><b><i>The liquidated damages calculated in accordance with clause 9.6 of Contract Data shall be proportionately reduced for the part of the works delivered corresponding to a concerned Key Date.</i></b></p> <p><b><i>For e.g. if Integrated Testing &amp; Commissioning of Mainline, Depot, All Train Sets &amp; Completion of Service Trials in ATO Mode (GoA-2) is completed for 16 trainsets, then the LD shall be proportionately applicable only for remaining 2 trainsets."</i></b></p>	Tender Condition Shall Prevail
191	Part III		PCC(B)- 8.1 Commencement Date	Commencement Date	<p>Please add the following in Contract Data:</p> <p><b><i>"Commencement Date- Commencement Date shall not be a date earlier than the date of signing of the Contract Agreement."</i></b></p>	Tender Condition Shall Prevail
192	Part III	Section 8 - Particular Conditions of Contract (PCC)	SL.No 11 of Addendum 1 of Part 3; Section 8 - Particular Conditions of Contract (PCC)	<b>Addendum1 Pt III, S. No. 11</b>  14.19 Amount of Maintenance Retention Fund : 5% of that portion of the Accepted Contract Amount attributable to the Operation Service Period (Price Schedule B1)	<p>We would like to highlight that Performance Bank guarantee will already be submitted to MMRDA during the maintenance period, hence MMRDA will have adequate safety for contractor fault. So, bidder once again request to delete the requirement of Maintenance Retention amount. As and alternate we request MMRDA to allow Contractor to submit a retention Bank guarantee of equivalent value instead of Maintenance Retention amount deduction.</p>	Tender Condition Shall Prevail
193	Part III	III	8 - Conditions of Contract and Contract Forms 14.19, PCC, Part B, Page 36	<p>Maintenance Retention</p> <p>During the Operation Service Period, five percent (5%) shall be deducted from the value of each interim payment as Maintenance retention money in addition to other retentions specified, _____ the unrecovered costs shall be set off against any payment due to the Contractor under the Contract, or to the extent that no such payment is due, shall become a debt due by the Contractor to the Employer.</p> <p>Following the issue of the Contract Completion Certificate under Sub- Clause 8.6 [Contract Completion Certificate], all amounts retained shall be included in the Final Payment Certificate Operation Service and paid to the Contractor with the final payment.</p>	<b>Addendum1 Pt III, S. No. 11</b>  14.19 Amount of Maintenance Retention Fund : 5% of that portion of the Accepted Contract Amount attributable to the Operation Service Period (Price Schedule B1)	Tender Condition Shall Prevail
194	Add 1 of Part 3	Section 8,Condition of contract	SL.No 8 of Addendum 1 of Part 3 Section 8 – Particular Conditions of Contract (PCC)- PART A Sl.No.14.2 Amount of Advance Payment	<b>Recovery of Advance payment</b> Mobilization Advance shall be recovered in 12 equal monthly instalments in 12 months starting the date of disbursement of Mobilisation Advance and entire recovery shall be made not later than 18 months from commencement date in case the Contractor fails to submit the Interim Payment request, the proportionate recovery has to be paid by the Contractor to the Employer.	<p>The recovery of the advance payment is stringent, as it is to be recovered in 12 equal installments and no later than 18 months from commencement. Given the total project duration of 39 months, recovering the advance payment within 18 months would make it difficult to maintain a positive cash flow.</p> <p>Additionally, in other metro projects, the amortization rate is set at 25% for each interim payment, starting from 30% of the payment billed by the contractor.</p> <p>Therefore, we request an amendment to the advance payment recovery clause</p>	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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195	Addendum 1 of Part 3	Section 8, Condition of contract	SL.No 8 of Addendum 1 of Part 3; Section 8 – Particular Conditions of Contract (PCC)- PART A; Sl.No.14.2 Amount of Advance Payment	Delete and Replace with Amount of Advance Payment: (Interest free) 10% of that portion of the Accepted Contract Amount attributable to the Design Build of the Works into TWO equal instalments of 5% each. The first instalments shall be disbursed after commencement Phase 1 and second installment shall be disbursed after commencement Phase 2.	We once again request MMRDA to kindly review and amend the referred Clause as under Amount of Advance Payment: (Interest free) 15% of that portion of the Accepted Contract Amount attributable to the Design-Build of the Works into TWO equal instalments of 10% and 5% each respectively. <del>The first instalments shall be disbursed after commencement Phase 1 and second installment shall be disbursed after commencement Phase 2.</del> Rate of interest: Interest Free  Above request is inline with other Metro Contracts line DMRC IV (RS-17), Mumbai Metro Line 3.	Tender Condition Shall Prevail
196	Addendum 1 of Part 3	Section 8, Condition of contract	SL.No 8 of Addendum 1 of Part 3; Section 8 – Particular Conditions of Contract (PCC)- PART A; Sl.No.14.2 Amount of Advance Payment	Recovery of Advance payment Mobilization Advance shall be recovered in 12 equal monthly instalments in 12 months starting from the 3rd month after issue of advance instalment for the respective Phase. The date of disbursement of Mobilisation Advance and entire recovery shall be made not later than 15 months from commencement date of the respective phases. In case the Contractor fails to submit the Interim Payment request, the proportionate recovery has to be paid by the Contractor to the Employer.	We once again request MMRDA to kindly review and amend the Clause as under which help to utilize during development stage and also inline with other Metro Contracts The recovery of the Mobilisation Advance Payment shall commence when 25% of the original contract value of the work has been paid in respective currencies (in addition to the Mobilisation advance) and shall be recovered by deduction of 25% of the amount of each Interim Payment, until the total of the Mobilisation advance is recovered.	Tender Condition Shall Prevail
197	Part III		GCC-14.2 Advance Paymnet	Advance Payment	Please add the following at the end of clause 14.2: <b><i>"For the avoidance of doubt, it is agreed that Advance Payment (first instalment) shall be a condition precedent for Commencement of Works and shall be paid to the Contractor despite delay in execution of Contract Agreement and / or its registration in accordance wtih the applicable law."</i></b>	Tender Condition Shall Prevail
198	Part III	Section 8 - Particular Conditions of Contract (PCC)	SL.No 12 of Addendum 1 of Part 3;	Delete and Replace with 17.8 Total Liability of the Contractor shall not exceed: 125% of that portion of the Accepted Contract Amount attributable to the Design-Build of the Works for the period extending until 2 years after the date of issue of the Commissioning Certificate of Phase- 1, at which point the Total Liability of the Contractor shall reduce to 50% of the Accepted Contract Amount attributable to the Design-Build of the Works until Contract Completion.	Exposure of limitation of liability case is huge considering the complete Design Build Scope Value. So, we once again request to replace this clause as follows: "100% of the Accepted Contract Amount for its respective scope as mentioned below: a) 100% of the Accepted Contract Amount for Design-Build Works; b) 100% of the annual maintenance contract amount for DLCMP of Rolling Stock; c) 100% of the annual maintenance contract amount for DLCMP of Signalling, Telecommunication and Platform Screen Doors Systems."	Tender Condition Shall Prevail
199	Addendum 1 of Part III	Section 8 - Particular Conditions of Contract (PCC)	NEW Cl 23 Defects Liability Maintenance Period	The Defects Liability Maintenance Period (DLMP) is 2 years from the date of completion of Design Build period (GOA2-ATO mode) of the respective Phases. The Employer shall issue the commissioning certificate to the Contractor for train-sets and all sub-systems after last train-set is commissioned in GOA2-ATO mode for each Phase and and is in revenue operation. DLMP starts from the date of issue of commissioning certificate for GOA2-ATO mode for each Phase. During DLMP the Contractor shall successfully complete the commissioning of all train sets in GOA4- UTO mode. The Employer shall issue the commissioning certificate for GOA4- UTO mode phase wise after the last train and all subsystems are commissioned under GOA4- UTO mode. The Maintenance requirement of all system under this Contract prior to the start of the ROD is in the scope of the Contractor. The DLMP shall be extended, in case the Contractor fails to achieve the RAMS and other performance parameters as specified in Section 6- Employers requirement. In such case the DLMP period may be more than 2 years and Comprehensive Maintenance Period (CMP) shall start only after the RAMS targets are achieved.The Employer shall notify the defects within the earliest reasonable time period and NOT later than 18 months from the start of DLMP of each Phase. The contractor shall rectify the defects within the DLMP period of each Phase. If the contractor fails to rectify the defects notified or achieve the RAMS and other performance parameters as specified in Section 6- Employers requirements then the DLMP of each Phase shall be extended suitably till the corrective actions are taken.	The defect liability period here starts from the date of issuance of the trial operation certificate. While Addendum 01 Part II Annex 2.5, DLMP Phase 1 starts after ROD of 12 trains in ATO mode (GOA2). DLMP Phase 2 starts after ROD of remaining 10 trains in ATO mode (GOA2). The defect liability period starts from the date of operation. Are the two dates consistent? Which one shall be used?	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
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200	Addendum 1 of Part III	Section 8 - Particular Conditions of Contract (PCC)	NEW Cl 23 Defects Liability Maintenance Period	<p>The Defects Liability Maintenance Period (DLMP) is 2 years from the date of completion of Design Build period (GOA2-ATO mode) of the respective Phases.</p> <p>The Employer shall issue the commissioning certificate to the Contractor for train-sets and all sub-systems after last train-set is commissioned in GOA2-ATO mode for each Phase and and is in revenue operation.</p> <p>DLMP starts from the date of issue of commissioning certificate for GOA2-ATO mode for each Phase.</p> <p>During DLMP the Contractor shall successfully complete the commissioning of all train sets in GOA4- UTO mode. The Employer shall issue the commissioning certificate for GOA4- UTO mode phase wise after the last train and all subsystems are commissioned under GOA4- UTO mode.</p> <p>The Maintenance requirement of all system under this Contract prior to the start of the ROD is in the scope of the Contractor. The DLMP shall be extended, in case the Contractor fails to achieve the RAMS and other performance parameters as specified in Section 6- Employers requirement.</p> <p>In such case the DLMP period may be more than 2 years and Comprehensive Maintenance Period (CMP) shall start only after the RAMS targets are achieved. The Employer shall notify the defects within the earliest reasonable time period and NOT later than 18 months from the start of DLMP of each Phase. The contractor shall rectify the defects within the DLMP period of each Phase. If the contractor fails to rectify the defects notified or achieve the RAMS and other performance parameters as specified in Section 6- Employers requirements then the DLMP of each Phase shall be extended suitably till the corrective actions are taken.</p>	<p>The defect liability period here starts from the date of issuance of the trial operation certificate, as stated in Addendum 01 Part II Annex 2.9 DLMP Phase 1 starts after ROD in ATO mode (GOA2) DLMP Phase 2 starts after ROD of balance trains in ATO mode (GOA2).. The defect liability period starts from the date of operation. Are the two dates consistent and which one should be used?</p>	Tender Condition Shall Prevail
201	Part III	II & III	<p>6B6 - Employer's Requirements: Maintenance Specifications &amp; 8 - Conditions of Contract and Contract Forms</p> <p>1 b), Page 1 &amp; NEW Cl 23, Page 39</p>	<p>1 b) The DLMP begins on the start of the Revenue Operation Date in GOA-2 of all the Trainsets of each Phase and continues for a period of 24 (twenty-four) months unless the DLMP is extended on account of non-compliance of Contractual Obligations such as non performance of RAMS standards as per Section 6-B1 of ERTS Table 2.1 of clause 2.8.2 and Performance Parameters stated in Section 6-B2, B3 and B4 regarding RAMS requirements and non-availability of the defined UES, mandatory spares, special Tools in chapter 18 of 6B6 and Appendix TK of ERTS.</p> <p>&amp; NEW Cl 23: The Defects Liability Maintenance Period (DLMP) is 24 months from the date of completion of Design Build period (GOA2-ATO) Phase-1 &amp; Phase-2 separately.</p> <p>Employer shall issue the commissioning certificate to the contractor for train-sets and all sub-systems, of respective phases, after last train-set is commissioned in ATO mode and is in revenue operation. DLMP starts from the date of issue of commissioning certificate.</p> <p>During DLMP the Contractor shall successfully complete the commissioning of all train sets in UTO mode. Employer shall issue final commissioning certificate after the last train and all subsystems are commissioned under UTO mode.</p> <p>The Maintenance requirement of all system, Phase-1 &amp; Phase-2 separately, under this Contract prior to the start of the ROD is in the scope of the Contractor.</p> <p>The DLMP shall be extended, in case the Contractor fails to achieve the RAMS and other performance parameters as specified in Section 6- Employers requirement and unable to deliver the spares as mentioned in Section 6 -Employer' Requirement. In such case the DLMP period may be more than 2 years and CMP shall start only after the RAMS targets are achieved and receipt of spares. If DLMP extends beyond 02 years, CMP will be adjusted proportionately, so as DMLP+CMP shall be 17 years.</p>	<p><b>Addendum 1, Pt III, S. No. 30</b></p> <p>The Defects Liability Maintenance Period (DLMP) is 2 years from the date of completion of Design Build period (GOA2-ATO mode) of the respective Phases.</p> <p>The Employer shall issue the commissioning certificate to the Contractor for train-sets and all sub-systems after last train-set is commissioned in GOA2-ATO mode for each Phase and and is in revenue operation.</p> <p>DLMP starts from the date of issue of commissioning certificate for GOA2-ATO mode for each Phase.</p> <p>During DLMP the Contractor shall successfully complete the commissioning of all train sets in GOA4- UTO mode. The Employer shall issue the commissioning certificate for GOA4- UTO mode phase wise after the last train and all subsystems are commissioned under GOA4- UTO mode.</p> <p>The Maintenance requirement of all system under this Contract prior to the start of the ROD is in the scope of the Contractor.</p> <p>The DLMP shall be extended, in case the Contractor fails to achieve the RAMS and other performance parameters as specified in Section 6- Employers requirement. In such case the DLMP period may be more than 2 years and Comprehensive Maintenance Period (CMP) shall start only after the RAMS targets are achieved.</p> <p>The Employer shall notify the defects within the earliest reasonable time period and NOT later than 18 months from the start of DLMP of each Phase. The contractor shall rectify the defects within the DLMP period of each Phase.</p> <p>If the contractor fails to rectify the defects notified or achieve the RAMS and other performance parameters as specified in Section 6- Employers requirements then the DLMP of each Phase shall be extended suitably till the corrective actions are taken.</p> <p>If the DLMP extends beyond 02 years, the Comprehensive Maintenance Period (CMP) will be adjusted proportionately, so as the DLMP of Phase 1 + CMP shall be 7 years.</p> <p>During the DLMP the payment will be made as per prices quoted in Price Schedule A and B1.1. In case of the extended DLMP no payment shall be made by the Employer during the extended period.</p> <p>The CMP shall be payable (as per prices quoted in Price Schedule B1.2) only after completion of the DLMP, either 2 years or as extended by the Employer. No payment of CMP shall be payable during the DLMP.</p>	Tender Condition Prevail.
202	Part III		<p>New Clause 1.1.72;</p> <p>New clause 13.1</p>	<p>Add at end of the definition</p> <p>Site shall also mean extension of the Line 5, if any, which may be named by different number/ colour.</p>	<p>We request MMRDA to delete this clause as unlimited extension of any line by way of variation will leave open ended risk for all bidder, which cannot be quantified.</p> <p>Also, it will be not be fissible for any tenderer to maintain the prices without being aware of extend/length of extension prior to tender submission.</p>	Tender Condition Shall Prevail

CA-241: DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF ROLLING STOCK, COMMUNICATION BASED SIGNALLING & TRAIN CONTROL, TELECOMMUNICATION, PLATFORM SCREEN DOORS AND DEPOT MACHINERY & PLANT OF LINE 5 (Phase 1 – KAPURBAWADI - KASHELI - DHAMANKAR NAKA & Phase 2 - DHAMANKAR NAKA - BHIWANDI- KALYAN APMC) OF MUMBAI METRO RAIL PROJECT OF MMRDA INCLUDING 5 YEARS OF COMPREHENSIVE MAINTENANCE AFTER 2 YEARS OF DEFECT LIABILITY MAINTENANCE PERIOD						
Note: The following further inputs/clarifications are provided to the Bidders based on the Employer's review of various provisions of the tender documents and other considerations for better understanding of the Bidders of various requirements to enhance their participation in the Tender						
SN	Part No.	Section	Clause No. and Page No.	Existing Provision (As per issued tender document, including Addendums issued)	Issue for Consideration (FAQ)	Further Inputs from MMRDA / Final Provision
203	Part III	Section 8	Addendum I Part III Section 8 –ParticularConditions ofContract (PCC)- PART B – SPECIALPROVISIONS	Definitions  NEW "Specialist Subcontractor  "1.1.87 "Specialist Subcontractor" The Specialist Sub-contractor for this Contract purpose is meant for an agency (a contractor/ manufacturer/ supplier) who associates with the Bidder before submitting the Bid and meet the required specific key experience as laid down in Section-3, by way of an agreement or firm commitment to perform the specified job under this Tender, for a part of the Works; and the legal successors in title to each of these persons.	We request MMRDA to amend the clause as follows considering higher participation & qualification by eligible bidders:  1.1.87 "Specialist Subcontractor" The Specialist Sub-contractor for this Contract purpose is meant for an agency (a contractor/ manufacturer/ supplier (including its Subsidiary(ies) & Associate(s)) who associates with the Bidder before submitting the Bid and meet the required specific key experience as laid down in Section-3, by way of an agreement or firm commitment to perform the specified job under this Tender, for a part of the Works; and the legal successors in title to each of these persons.	Tender Condition Shall Prevail
204	Part III	Section 8 – Particular Conditions of Contract (PCC)- PART B – SPECIAL PROVISIONS	Definitions NEW "Specialist Subcontractor" <b>1.1.87</b>	"Specialist Subcontractor" The Specialist Sub-contractor for this Contract purpose is meant for an agency (a contractor/ manufacturer/ supplier) who associates with the Bidder before submitting the Bid and meet the required specific key experience as laid down in Section-3, by way of an agreement or firm commitment to perform the specified job under this Tender, for a part of the Works; and the legal successors in title to each of these persons.	<b>We request MMRDA to amend the clause as follows:</b> "Specialist Subcontractor" The Specialist Sub-contractor for this Contract purpose is meant for an agency (a contractor/ manufacturer/ supplier <b>including its subsidiary/associate</b> ) who associates with the Bidder before submitting the Bid and meet the required specific key experience as laid down in Section-3, by way of an agreement or firm commitment to perform the specified job under this Tender, for a part of the Works; and the legal successors in title to each of these persons.	Tender Condition Shall Prevail
205	Part III		Add. No. 12	Delete and Replace with 17.8 Total Liability of the Contractor shall not exceed: 125% of that portion of the Accepted Contract Amount attributable to the Design-Build of the Works for the period extending until 2 years after the date of issue of the Commissioning Certificate of Phase- 1, at which point the Total Liability of the Contractor shall reduce to 50% of the Accepted Contract Amount attributable to the Design-Build of the Works until Contract Completion	Exposure of limitation of liability case is huge considering the Design Build Scope Value. Suggested to replace this clause as follows: <b>"100% of the Accepted Contract Amount for its respective scope as mentioned below: a) 100% of the Accepted Contract Amount for Design-Build Works; b) 100% of the annual maintenance contract amount for DLCMP of Rolling Stock; c) 100% of the annual maintenance contract amount for DLCMP of Signaling, Telecommunication and Platform Screen Doors Systems."</b>	Tender Condition Shall Prevail
206	Addendum 1 of Part III	Section 8 – Particular Conditions of Contract (PCC)- PART B	Annexure 3.1, Indicative Payment Schedule	All Interim Payment Applications shall be certified as per following Table for Design and Build Part of the Contract, in the broad guideline of detailed Price Break-up approved by the Engineer as per SCC Cl. 5.2 Contractor's Documents and as per Section 4C Pricing Document.	Is the mid-term payment proportional to the completion of a portion of the work, rather than the completion of each major task as a whole?	Tender Condition Shall Prevail
207	Addendum 1 of Part III	Section 8 – Particular Conditions of Contract (PCC)- PART B	Annexure 3.1, Indicative Payment Schedule	All Interim Payment Applications shall be certified as per following Table for Design and Build Part of the Contract, in the broad guideline of detailed Price Break-up approved by the Engineer as per SCC Cl. 5.2 Contractor's Documents and as per Section 4C Pricing Document.	Is the mid-term payment proportional to the completion of a portion of the work, rather than the completion of each major task as a whole?	Tender Condition Shall Prevail
208	Part III	Section 9: Contract Forms	APPENDIX 2 (2)	(1) In accordance with Sub-Clause 13.8 of the Conditions of Contact, adjustments changes in cost shall apply during the Design-Build Period on of Contract Price Adjustments for fluctuations in prices after the Base Date.  <u>(2) The total escalation paid shall be capped at 15% of the DB cost during the original Design Build Period. If the Design and Build period is extended beyond the period defined in the contract for reasons beyond the control of the contractor and if the 15% ceiling of the escalation on DB cost is exhausted, then in such case, the ceiling will be increased by 7.5% for the first year of extension and further by 7.5% for the second year of extension only.</u>	In line with line 6 tender (CA-232) and Line 4 tender (CA-234) we request to remove the ceiling limit for price adjustment and accordingly delete the underlined sub clause. This is particularly important because the goahead timeline for phase 2 of line 5 is tentative.	Tender Condition Shall Prevail. Further Refer Addendum-2
209	Part III	Section 9: Contract Forms 35R1 Annexure 3.2	Appendix 4- Key Date / Time Schedule	<b>Appendix 4- Key Date / Time Schedule : Table given in Appendix 4</b>	According to our previous projects' experience, and this is a big project, so it is suggested to change the clause to " KD1 - 20 W, KD 2- 40W, KD3- 62W, KD4- 102W, KD5 -78W, KD6-86W, KD7-86W,KD8-106W , KD-9.2 -111W, KD10- 86W, KD11- 110W, KD12-120,KD13-120W,KD14-117,KD15-122W	Tender Condition Shall Prevail