

**Pre-Bid Replies for Selection of Lessor for Design, Manufacturing, Supply, Commissioning, Operation and Maintenance of Rolling Stock on PPP Model for BSRP**

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
1.	1.1.2, 2.1.1 (a) of RFP, Article 1 of COC	No. of 3 Cars & 6 Cars Trains	<ol style="list-style-type: none"> <li>At various places in the Tender document, no. of 3 Cars &amp; 6 Cars trains are contradictory. Accordingly, we request you to kindly clarify required number of 3 Cars &amp; 6 Cars Trains.</li> <li>Requirement of no. of trains of 3 car (80 trains) and 6 car (4 trains) configuration specified in RFP is different from RFQ stage (3 car: 30 trains; 6 car: 29 trains). Please clarify and provide updated Supply schedule (APPENDIX-XIV of RFQ).</li> <li>We understand that this definition is Incorrect. Kindly revise it in line with present requirement.</li> </ol>	Please refer Corrigendum -1.
2.	1.2.6	A Bidder is required to submit, along with its Bid, a bid security of Rs. 20,00,00,000 (Rupees twenty crore only) (the "Bid Security") in accordance with Clause 2.20 of the RFP.	As per the Ministry of Finance circular dated 12th Nov' 2020 Bid Security declaration is allowed to the bidder instead of Bid Security amount. Kindly review it and allow for the same.	The instructions of the referred circular are valid up to 31 <sup>st</sup> March, 2021. So, Tender condition prevails.
3.	1.2.8 (1 <sup>st</sup> Para) of RFP, 28.1 of COC	Bidders are required to quote lease charges per Train Hour ("Unit Lease Charges") and maintenance charges per Train Hour ("Unit Maintenance Charges") in the manner specified in the RFP.	<ol style="list-style-type: none"> <li>K-Ride may please confirm total no. of trains for quoting in Unit Lease and Unit Maintenance charges. As mentioned in Schedule -G, 10% Maintenance Reserve and</li> <li>5 % Traffic Reserve, which we understand to be supplied by the lessor.</li> <li>Optional cars terms and quantity to be provided to finalise price and Lessor to be given opportunity for supply on nomination basis</li> </ol>	The bidder shall assess their own maintenance and traffic reserves to guarantee the availability of the 264 cars, organized into 88 trains with 3 cars each, as outlined in the Contract Conditions.
4.	1.2.8 (3 <sup>rd</sup> Para)	The Unit Lease Charges and Unit Maintenance Charges quoted by the Bidders should be inclusive of all taxes, levies, duties, GST on input and any other <b>charges leviable, including tax deducted at source.</b> Applicable	<ol style="list-style-type: none"> <li>We Understand that bidder has to quote Unit lease and Unit Maintenance charges including GST, Import duty, custom Clearance, CIF content etc. Kindly Clarify.</li> </ol>	<ol style="list-style-type: none"> <li>Unit Lease Charges and Unit Maintenance Charges quoted by the Bidders should be inclusive of all taxes, levies,</li> </ol>

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		Goods and Services Tax (GST) payable separately on the Unit Lease Charges and Unit Maintenance Charges as per the terms of the Contract will be borne by the Authority.	<ol style="list-style-type: none"> <li>2. The Present applicable rate at Unit lease charges and Unit maintenance charges to be informed to bidder.</li> <li>3. The Pricing of unit lease charges and unit Maintenance charges quoted by the bidder are based on the assumption that the depreciation and interest tax benefit will be passed on to the lessor. Kindly Confirm.</li> </ol>	<p>duties, GST on input and any other charges leviable. Applicable Goods and Services Tax (GST) payable separately on the Unit Lease Charges and Unit Maintenance Charges as per the terms of the Contract will be borne by the Authority.</p> <ol style="list-style-type: none"> <li>2. Bidder has to calculate their Lease and Maintenance Charges by their own estimate for quoting in the Price Bid.</li> <li>3. <b>Bidder has to make its own due diligence regarding the benefits of the interest and depreciation as per applicable laws &amp; accounting standards.</b></li> </ol>
5.	1.3	Schedule of Bidding Process: Bid Due Date	<ol style="list-style-type: none"> <li>1. we request you to kindly extend the Bid due date by minimum 3 Months which is required as standard Bidding process of such nature.</li> <li>2. This tender being a lease model project for Rolling stock with operation and maintenance for 35 years, which is different model and first time in India, request for extension of due date by 08 Months from existing date i.e. 31st Oct'24. Recently, in Vande Bharat Train sets tender, Indian Railways has given 08 Months for Bid submission, which include procurement contract with 35-years maintenance.</li> </ol>	Please refer Corrigendum -1.
6.	1.4	Pre-Bid Conferences	Considering the criticality of the project, Request for holding 2nd Pre-Bid Meeting after 01 Month	Please refer Corrigendum -1.

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7.	2.1.15(a) 2.2	<p align="center">2.1.15(a)</p> <p>the Bidder shall provide a notice in writing to the Authority at least 30 days prior to the to Bid Due Date, or if such Bidder is declared as the Selected Bidder, 30 days prior to the expected date for executing the Contract, regarding such replacement;</p> <p>2.2 The modified/ reconstituted Consortium shall submit a revised Jt. Bidding Agreement in the form as per Appendix-IV of the RFQ and a Power of Attorney, substantially in the form at Appendix-IV of the RFP, prior to the Bid Due Date.</p>	<p>1. It is possible to form Consortium after award of the contract?</p> <p>2. Kindly clarify whether a single entity post award of contract, can include a new member/s and form consortium or SPV as the case may be for execution of contract.</p>	<p>For 2.1.15(a) Refer Corrigendum</p> <p>clause 2.3.1 (a), Selected Bidder/Consortium shall continue to hold a minimum of 100% (hundred per cent) of the subscribed and paid-up equity share capital of the Lessor for a period of 2 (two) years from the completion of the Supply Period.</p>
8.	2.1.6, 2.11, 2.11.4 (b),3.3.5	<p>The Bid shall consist of the Unit Lease Charges and Unit Maintenance Charges to be quoted by the Bidder in the Price Bid and the PV of the Total Charges to be quoted online on the eProcurement Portal – Karnataka by the Bidder, as per terms and conditions of this RFP.</p>	<p>Clarification requested on online Offline submission.</p>	<p>The bidder is required to determine the present value (PV) of the Total Charges by quoting Lease Charges and Maintenance Charges in the Price Bid. The calculated PV of the Total Charges as per filled Price Bid should be submitted online, and a printed copy of the duly filled Price Bid shall be submitted offline.</p>
9.	2.7.1 & 2.11.3	<p><b><u>2.7.1</u></b> III. Power of Attorney for signing of Bid IV. Power of Attorney for Lead Member of Consortium <b><u>2.11.3</u></b> (c) Power of Attorney for signing of Bid in the format at Appendix–III; (d) If applicable, the Power of Attorney for Lead Member of Consortium in the format at Appendix–IV; and</p>	<p>It is our understanding that in case 'there is no any change' in the POA's &amp; JB/Consortium Agreement of the Bidder; The POA and JB/Consortium Agreement (including originals) submitted at RFQ stage shall be valid and there shall be no requirement of revised POA's &amp; JB/Consortium Agreement at RFP stage bid submission. Further Bidder shall enclose copy of submitted POA's &amp; JB/Consortium Agreement at RFP stage. You are requested to kindly amend the clause 2.7.1 &amp; 2.11.3 accordingly.</p>	<p>If there is no change in POA submitted during the RFQ stage, New POA will not be compulsory. For substitution agreement following change in consortium refer corrigendum-1, sl.no-4 (RFP clause 2.1.15)</p>

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		(e) A copy of the Contract duly initialled by the person signing the Bid in pursuance of the Power of Attorney referred to in Clause (b) hereinabove; and (f) In case of modified/reconstituted Consortium, copy of the Jt. Bidding Agreement, substantially in the format at Appendix-IV of the RFQ.		
10.		b) For the purpose of evaluation of Bids only: PV of the Total Charges will be equal to the sum of the present values of Total Charges for all years as quoted by the Bidder, discounted at a rate of 8.45% per annum. The following formula will be used for calculating PV of the Total Charges.	Discount rate 8.45% how you arrived?	Discount rate is equivalent to the cost of the fund for Government.
11.	3.3.6	It is clarified that the Unit Lease Charges payable to the Lessor for a particular year shall be the Unit Lease Charges quoted by the Bidder for that year and no escalation/ price variation shall be provided for the Unit Lease Charges.	The Tender condition has a provision of Price Variation/Cost Index for Unit maintenance charges, in similar line we request for the provision of price variation to be incorporated for Unit Lease charges.	Tender condition prevails.
12.	3.3.8	After acknowledgement of the LOA, the Selected Bidder or a Company incorporated by the Selected Bidder shall execute the Contract with the Authority. Provided that if the Selected Bidder is a Consortium, or a single entity that is not a body corporate, it shall form a Special Purpose Vehicle, incorporated under the (Indian) Companies Act, 2013 (the "SPV") to fulfil its obligations as a Lessor and execute the Contract with the Authority. The Lessor shall execute the Contract with the Authority within the period prescribed in Clause 1.3. The Selected Bidder shall not be entitled to seek any deviation, modification or amendment in the Contract.	As per the clause no 2.2.6 of RFQ document it is mentioned that " where the applicant is a company and is declared as a selected bidder it may choose to form SPV to execute the agreement". Please clarify whether the same clause is applicable at RFP stage or not.	In case, Selected Bidder is consortium or a single entity that is not a body corporate, it is essential to form a SPV for signing of the Contract.
13.	Appendix VI	ii. Guidelines for filling the Price Bid: For the purpose of evaluation only, the Unit Maintenance Charges shall be escalated by 5% to arrive at Indexed	If in case due to failure of Signalling and track fault and considering commuters response is less. Then train running	K-RIDE ensures the payment for Minimum Guaranteed Annual Availability (95% of the

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		Maintenance Charges. The sum of the Indexed Maintenance Charges and the Unit Lease Charges multiplied with the Minimum Guaranteed Annual Availability in Train Hours for that Year shall be the Total Charges for that Year.	hours may becomes decreases. Is their any guarantee for viability.	Projected Annual Availability) subject to meeting the conditions of the Contract by the Lessor.
14.	Appendix IX	Unit Lease Charges	Is there any provision for Bidder Input for Lease Charge year to be brought down to 6th year, since minimum Guaranteed annual availability of Train hours will be 5,79,766 Hours from 6th year onwards.	No modifications are accepted, as minimum guaranteed annual availability is also stipulated for Year 3, Year 4, and Year 5 as per clause 3.3.5 (b) (ii) of RFP.
15.	2.1 (a)	The Lessor shall estimate the actual number of Trains required to be supplied, operated, maintained and under this Contract such that 80 Trains of 3 Cars each and 4 Trains of 6 Cars each are available for Revenue Operations in accordance with the terms of this Contract.	It is requested that K-Ride should confirm the total no. of trains with its configuration required to be supplied, operated, and maintained and under this Contract depending upon the envisaged ridership as per their detailed project feasibility report.	The bidder is responsible for estimating its own maintenance and traffic reserve to ensure the availability of the 264 Cars comprising of 88 Trains of 3 Cars each in accordance with the Conditions of the Contract.
16.	2.1 (b)	supply of plant and machinery for the Maintenance Depots including simulator;	The installation word is missing in the scope, request kindly modify with supply, installation of plant and machinery for the Maintenance Depots including simulator	Please refer Corrigendum-1.
17.	2.1 (d)	operation and maintenance of the Trains in accordance with the terms of this Contract;	Kindly include provision of train operator by lessor in this clause i.e. operation and maintenance of the Trains including train operator only in accordance with the terms of this Contract.	Please refer Corrigendum-1.
18.	4.1.3 (c) 4.1.3(i)	achieved Financial Closure and provided to K-RIDE 3 (three) true copies of each of the Financing Agreements, duly attested by a director of the Lessor;	In case of contractor is single entity who is not a financial institution then we understand the requirements related to finance closure/ Senior lenders is not applicable please confirm.	No. Even, in the case of a single bidder, whether financing through its own funds or a loan from financial institutions, achieving financial closure is mandatory. Copies of the financial closure documentation must be submitted as part of the requirement.

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			<p>The Requirement of documents attested by Director of the lessor to be reviewed and Executive Director/GM should be allowed.</p> <p>For this Clause, we would like to submit that representative authorized by the board of director of the lessor will execute this contract and any project agreements. Please confirm.</p>	Tender condition prevails.
19.	4.1.3 (d)	delivered to the K-RIDE 3 (three) <b>true copies of the Financial Package and Financial Model</b> , duly attested by a Director of the Lessor, along with 3 (three) soft copies of the Financial Model in Microsoft Excel version or any substitute thereof, which is acceptable to the Senior Lenders.	The requirement specified at this clause is confidential in nature. Request deletion of clause.	Tender condition prevails.
20.	4.1.3 (i)	delivered to K-RIDE copies (certified as true copies by a Director of the Lessor) of all resolutions adopted by the Board of Directors of the Lessor authorising the execution, delivery and performance by the Lessor each of the Project Agreements and this Contract;	It is requested to clarify and define "other agreements or contract" to be entered into by the lessor with other parties during the execution of the contract. We understand that it does not include any supply contract /Technology transfer agreement, Business sharing agreements to be entered by the lessor with any third parties.	<ol style="list-style-type: none"> <li>1. Tender condition prevails.</li> <li>2. It includes all the Agreements in the relation to the execution, delivery and performance of this Project.</li> </ol>
21.	4.3	In the event that: (i) K-RIDE does not procure fulfilment or waiver of the Conditions Precedent set forth in Clause 4.1.2 by the Scheduled CP Satisfaction Date, and (ii) the delay has not occurred as a result of breach of this Contract by the Lessor or due to Force Majeure, K-RIDE shall pay Damages to the Lessor of an amount calculated at the rate of 0.05% (zero point zero five per cent) of the	Is there any provision for increase in percentage pay due to severity of the damage.	Tender condition prevails.

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		Performance Security for each day's delay until the fulfilment of such Conditions Precedent, subject to a maximum amount equal to the Bid Security. If K-RIDE delays in fulfilling its Conditions Precedent such that the cap on Damages set out herein is breached, then K-RIDE may continue to pay the Lessor Damages in an amount calculated at the rate of 0.05% (zero point zero five per cent) of the Performance Security for each additional day's delay and if K-RIDE fails to pay such Damages, the Lessor may, in its sole discretion, terminate the Contract.		
22.	5.1.5 (i)	Take all reasonable precautions for the prevention of accidents while the Trains are in operation or under maintenance at the Depot Site and Maintenance Depots, and assist the K-RIDE in providing all reasonable assistance and emergency medical aid to Accident victims and liaison with emergency services of the Government Instrumentality	To arrive reasonable precautions for prevention of accidents, guidelines to be provided.	Accident and Disaster Management Manual is placed at Annexure-13 of Schedule – R of Conditions of Contract.
23.	5.1.12	The Lessor shall assist K-RIDE, the Independent Engineer and/or K-RIDE's Representative in technical and operational audits performed by K-RIDE on a regular basis by providing the requisite documents related to the Project.	Kindly clarify the requisite documents required for technical and operational audits.	It includes all the documents in the relation to the execution, delivery and performance of this Project.
24.	5.1.15	The Lessor shall provide to K-RIDE schedules pertaining to work during night, traffic diversions required, closure of roads and such other matters that may cause inconvenience to the public during performance of its obligations by itself or through its Contractors. The Lessor shall be deemed to have satisfied itself regarding the suitability and availability of access routes to be used by itself or its Contractors. The Lessor shall use reasonable efforts to prevent any road or bridge from being damaged by the Lessor's or its Contractors traffic	We Understand that this clause is applicable during the transportation of Goods to depots. Please confirm the above or any other event under which lessor shall provide schedule under this clause.	This clause is applicable to all the activities performed by the Lessor fulfilling the requirements of this Project.

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		or by the Lessor's or Contractor's personnel. These efforts shall include the proper use of appropriate vehicles and routes, including providing necessary signs or directions along access routes, and the Lessor shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions.		
25.	5.1.17,11.4.3	The Lessor shall also procure, at its sole cost and risk, electricity and water connections for the Maintenance Depots.	In Railway Board Contract for Vande-Bharat Train sets where the depot up gradation to be done by contractor, the Government is providing free water and electricity for depot maintenance. In similar line we request K-Ride to modify the clause.	Tender condition prevails.
26.	5.2.2, 5.2.3	The Lessor shall submit to K-RIDE drafts of all Project Agreements including, in particular, the rolling stock supply contract (if any), the Financing Agreements and the operation and maintenance contract (if any) or any amendments or replacements thereto for its review and comments. K-RIDE shall have the right but not the obligation to undertake such review and provide its comments and observations, if any, to the Lessor. Lessor shall appropriately consider all such comments/ observations. Within 7 (seven) days of execution of any Project Contract or amendment thereto, the Lessor shall submit to K-RIDE a true copy thereof, duly attested by a Director of the Lessor, for its record. For the avoidance of doubt, it is agreed that the review and comments/ observations by K-RIDE on any Project Contract or failure or omission of K-RIDE to review and/ or comment hereunder shall not be construed or deemed as acceptance of any such agreement or document by K-RIDE. No review and/or observation of K-RIDE and/or its failure to review and/or convey its observations on any document shall relieve the Lessor of its obligations and liabilities	As per the requirement of this clause the lessor have to submit draft of all project agreements to entered by the lessor with any third party for review or comments which the third party may not accept due to confidentiality. Kindly review and delete this clause	Tender condition prevails.



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		under this Contract in any manner nor shall K-RIDE be liable for the same in any manner whatsoever		
27.	5.2.5	The Lessor shall procure that each of the Project Agreements contains provisions that entitle K-RIDE to step into such agreement, in its sole discretion, in substitution of the Lessor in the event of Termination or Suspension (the “Covenant”). For the avoidance of doubt, it is expressly agreed that in the event the K-RIDE does not exercise such rights of substitution within a period not exceeding 90 (ninety) days from the Termination Date, the Project Agreements shall be deemed to cease to be in force and effect on the Termination Date without any liability whatsoever on the K-RIDE and the Covenant shall expressly provide for such eventuality. The Lessor expressly agrees to include the Covenant in all its Project Agreements and undertakes that it shall, in respect of each of the Project Agreements, procure and deliver to K-RIDE an acknowledgment and undertaking, in a form acceptable to K-RIDE, from the counter party(ies) of each of the Project Agreements, where under such counter party(ies) shall acknowledge and accept the Covenant and undertake to be bound by the same and not to seek any relief or remedy whatsoever from K-RIDE in the event of Termination or Suspension. For avoidance of doubt, it is clarified that K-RIDE shall not be responsible for any liabilities arising under the Project Agreements, prior to K-RIDE exercising its step-in rights.	1.K-Ride may kindly inform us how to deal with a situation where " In the event the third party not agreeing to include the covenant clause in their project agreement" 2. Particularly in case the third party is a single supplier /financer?	Tender condition prevails.
28.	5.2.6	Notwithstanding anything to the contrary contained in this Contract, the Lessor agrees and acknowledges that selection or replacement of an O&M Contractor and execution of the O&M Contract shall be subject to the prior approval of K-RIDE from a national security and	Kindly Modify this clause as under "selection or replacement of an O&M Contractor and execution of the O&M Contract shall be subject to mutual consent between K-RIDE and Lessor.....	Tender condition prevails.

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		public interest perspective, the decision of K-RIDE in this behalf being final, conclusive and binding on the Lessor.....		
29.	5.3 (a)	all acquisitions of Equity by an acquirer, either by himself or with any person acting in concert, directly or indirectly, including by transfer of the direct or indirect legal or beneficial ownership or control of any Equity, in aggregate 25% (twenty-five per cent) or more of the total Equity of the Lessor	Is there any possibility to reduce the percentage of Equity of Lead Member.	Tender condition prevails.
30.	5.8	Branding of Trains	In case any damages occurred to train body/interior due to third party /advertiser resulting in maintenance of train by lessor in such situation kindly confirm whether that period is countable as available train hours or not.	No, Train will not be counted as Available Train. As per clause 5.8 (c), if the Lessor is not able to provide Trains for Revenue Services or is required to withdraw Trains from Revenue Services on account of the Advertiser or any work done by the Advertiser then the Lessor shall not be required to pay any Damages as per Article 8 of Schedule – E. It is clarified that Lessor shall provide access to the Advertisers and be present at site for placing the advertisement on Train to avoid any damage.

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31.	6.1.3 (c), 11.3, 11.4, 12.2, 17.2 & 21,11.4.3	Interface with 'Railway Statutory Authority'	<p>It will be appropriate to note that for Rolling Stock Metro &amp; Sub-urban projects executed in India, all Statuary Authority approvals has been under the responsibility of Metro Authorities for better co-ordination as required during approval process. Accordingly, we request tender clause shall be amended and K-RIDE shall take lead on required approval process from Railway Statuary Authority where Lessor shall be responsible for providing all required documentation, test reports etc as required to K-RIDE.</p> <p>K-RIDE shall take lead on Railway Statuary Authority approvals and Lessor shall provide all required documentation, test reports etc to K-RIDE.</p>	Please refer Corrigendum -1.
32.	Article 9, 9.1.1	The Lessor shall, for the performance of its obligations hereunder provide, an irrevocable and unconditional guarantee from a Bank for a sum equivalent to Rs. 240 crores (Rupees Two hundred forty crores) in the form set forth in Schedule - F (the "Performance Security").	<p>In Railway Board Contract for Vande-bharat Train sets Two Separate Performance security of Rs. XXX have been asked for supply and maintenance period. In similar line we request K-Ride to modify the clause as under." The Lessor shall, for the performance of its obligations hereunder provide, an irrevocable and unconditional guarantee from a Bank for a sum equivalent to Rs. 120 crores (the "Performance Security") at the time of appointment of contract valid till supply completion and Rs. 120 Crores for Maintenance period post supply completion".</p> <p>We request you to reduce the amount of Performance BG and amend the clause as <i>"The Lessor shall, for the performance of its obligations hereunder provide, an irrevocable and unconditional guarantee from a Bank for a sum equivalent</i></p>	Please refer clause 9.3 of Conditions of Contract.

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			<p><i>to Rs. 200 crores (Rupees Two hundred forty crores) in the form set forth in Schedule - F (the "Performance Security")".</i></p> <p>Considering the project is not defined, hence performance security to be reviewed.</p>	
33.	9.2.1 & 9.2.2	<p>9.2.1 K-RIDE shall, without prejudice to its other rights and remedies hereunder be entitled to encash and appropriate, from time to time and as many times as required by K-RIDE, from the Performance Security, such amounts as may be due to it under this Contract, including in respect of any Damages payable by the Lessor for a failure to perform its obligations under this Contract, for a Lessor Default or for failure to meet any Condition Precedent, in accordance with the terms of this Contract, Upon such encashment and appropriation of the Performance Security, K-RIDE shall grant a period of 15 (fifteen) days to the Lessor to provide fresh Performance Security and in case of partial appropriation to replenish the Performance Security and the Lessor shall within the time so granted furnish to K-RIDE such Performance Security failing which K-RIDE shall be entitled to Terminate this Contract under Article 35. The provision set forth in above Clause 9.1.1 and Clause 9.1.2 shall apply mutatis-mutandis to replenishments or such fresh Performance Security.</p> <p>9.2.2 Failure of the Lessor to maintain the Performance Security by extending its validity at least 60 (sixty) days before its scheduled expiry shall entitle K-RIDE to encash the Performance Security before its expiry and to terminate this Contract in accordance with the provisions of Article 35.</p>	<p>9.2.1 shall be modified to include the condition that the "Notice is to be given to the Lessor to fulfil its obligations within reasonable period of time before encashment and appropriation of the Performance Security".</p> <p>9.2.1/30 days period shall be available to the Lessor to provide fresh/replenish Performance Security.</p> <p>9.2.2/ Replacement of Performance Security shall be revised as at least 30 days before the scheduled expiry</p>	Tender condition prevails.

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34.	9.3	<p>Release of Performance Security                      Upon expiry of 2 (two) years from the Supply Completion Date in accordance with the provisions of this Contract, the Lessor shall have the right to reduce the Performance Security by an amount equal to 50% (fifty per cent) of the Performance Security. The reduced Performance Security (equal to 50% (fifty per cent) of the original Performance Security value) shall remain in force and effect for the entire Maintenance Period until the Vesting Certificate is issued.</p>	<p>Performance Security reduction shall be allowed in phase manner as per below conditions and accordingly we request you to kindly revise the clause 9.3:</p> <p>1.) The Lessor shall have the right to reduce the Performance Security by an amount equal to 25% (twenty five per cent) of the Performance Security post successful delivery of 50% of total Train sets.</p> <p>2.) The Lessor shall have the right to reduce the Performance Security by an amount equal to 50% (fifty per cent) of the Performance Security post successful delivery of 100% of Train sets.</p> <p>3.) The reduced Performance Security (equal to 50% (fifty per cent) of the original Performance Security value) shall remain in force and effect for the entire Maintenance Period until the Vesting Certificate is issued.</p> <p>Is there any provision to release the increased percentage of Performance security upon expiry of 2 years from supply Completion date. (Instead of 50 to 75 %)</p>	Please refer Corrigendum-1.
35.	Article 11	Design And Supply of Prototype	<p>The Lessor is responsible for Maintenance and fulfilment of Trains availability and maintenance KPIs. Hence, it is requested that design approval/review shall be limited to Statuary Authority approval requirements (Oscillation Trails &amp; EBD Test) only and there shall be no requirement for design approval from the Independent Engineer. Accordingly, we request you to kindly amend the Article 11.</p>	Approval from the Independent Engineer is compulsory, adhering to the terms of the contract. So, no changes are agreed.
36.	11.2.3	<p>.....K-RIDE shall issue a dispatch clearance certificate for the Prototype in accordance with Schedule - A, prior to the dispatch of the Prototype.....</p>	<p>Dispatch clearance Certificate shall not be required. We request you kindly delete this clause. Accordingly, we request you to kindly amend the clause.</p>	K-RIDE is required to issue a dispatch clearance certificate to the Lessor for the Prototype before

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				the Prototype is dispatched. So, no changes agreed.
37.	11.3.3	The Lessor shall prepare, and keep up-to-date, a complete set of "as-built" records of the execution of the works including drawings, showing the exact as-built locations, sizes and details of the work as executed. These records shall be kept on the Site and two copies shall be supplied to the Independent Engineer and K-RIDE prior to the commencement of the Tests on Corridors of K-RIDE.	Submission of 'as built drawings' shall be linked to the condition for pre-mature Termination. Accordingly, we request you to kindly amend the clause.	Please refer Corrigendum-1.
38.	13.3.1	The Lessor agrees that in the event of its failure to Supply a Train in accordance with the Supply Programme set forth in Clause 13.1, K-RIDE shall recover from the Lessor an amount equal to 0.5% (zero point five per cent) of the Performance Security as Damages for each and every month, or part thereof, by which the delivery of that Train is delayed; provided that such Damages shall not exceed 10% (ten per cent) of the Performance Security. If the Damages payable hereunder exceed 10% of the Performance Security, K-RIDE shall have the right to terminate this Contract for a Lessor Default. For avoidance of doubt and by way of illustration, if the Lessor shall have supplied no Trains in the first quarter of a Year that has an annual Supply Programme for [4 (four)] Trains, and the Train is supplied after a delay of [35 (thirty-five)] days, the Lessor shall pay Damages in an amount equal to 1% (one per cent) of the Performance Security and upon reaching such maximum, K-RIDE may, in its sole discretion, Terminate the Contract.	Damages for the delay shall be linked with 'Commissioning of Trains' rather than 'Supply of Trains'. Accordingly, we request you to kindly amend the clause.	Please refer Corrigendum-1.
39.	19.1	The Lessor shall be responsible, at its own cost and expense, for upgradation, operation and maintenance of all infrastructure handed over to it inside the Maintenance Depots. The Lessor may also undertake any structural	K-Ride may kindly inform what are the infrastructure shall be provided to lessor at all four maintenance depots. Does it include complete civil works including few M&P such as crane etc..	K-RIDE will provide following infrastructure at the Depot Sites: 1.Civil works. 2.OHE,

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		change or any additional construction work to the buildings handed over to the Lessor at the Maintenance Depots, if required, only after submission of details of work proposed for seeking prior approval of K-RIDE.		3.S&T 4.Track  Lessor shall be responsible for supplying and installation of M&P at Maintenance Depots for the performing its maintenance responsibilities under this Project.
40.	19.2.1	The Lessor shall be responsible for undertaking the maintenance of the Maintenance Depots and the Depot Sites, including cleanliness, upkeep, housekeeping, repair work, civil maintenance and electrical maintenance. It is clarified that the Lessor shall be responsible to provide cleaning and housekeeping for the entire Depot Sites <b>Including</b> the parts of the Depot Sites which are in possession of and occupied by K-RIDE.	Maintenance and up-keeping of Depot Sites and areas which are in possession of and occupied by K-RIDE shall not be in scope of Lessor. Accordingly, kindly delete the last paragraph highlighted.	Please refer Corrigendum-1.
41.	23.3.1 (b)	Upon completion of each Year, if the Minimum Guaranteed Annual Availability less the Annual Non-Availability for that Year, is greater than the Actual Annual Availability, then the additional Lease Charges (“Additional Lease Charges Till Sixth Year”) payable shall be the product of: (i) Minimum Guaranteed Annual Availability less the Annual Non-Availability less the Actual Annual Availability, and (ii) the Unit Lease Charges.	We are unable to comprehend this clause. Kindly explain with illustration.	Please refer corrigendum-1
42.	23.3.2	Upon completion of each Year, if the Actual Annual Availability for that Year, is greater than the Minimum Guaranteed Annual Availability less Annual Non-Availability, then the additional Lease Charges (“Additional Lease Charges”) payable shall be the product of: (i) Actual Annual Availability less the	We are unable to comprehend this clause. Kindly explain with illustration.	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		(Minimum Guaranteed Annual Availability less Annual Non-Availability), and (ii) the Unit Lease Charges		
43.	25.1.7	The Parties hereby agree and acknowledge that the Lessor shall deliver and transfer relevant records, reports and Intellectual Property (on a royalty free basis) pertaining to the Trains including all software and manuals pertaining thereto, and complete ‘as built’ Drawings so as to enable K-RIDE to operate and maintain the Trains, and shall execute such deeds of conveyance, documents and other writings as K-RIDE may reasonably require in connection therewith, upon the payment of the Purchase Option Price. For avoidance of doubt, the Lessor represents, warrants and undertakes that the Intellectual Property shall be adequate and complete for the operation and maintenance of the Trains and shall be assigned or licensed to K-RIDE, upon the payment of the Purchase Option Price, free of any Encumbrance.	The Requirement of transfer of Intellectual Property pertaining to trains including all software may kindly delete. Further, we clarify that all the requisite documents records and reports /manuals required for operation and maintenance of trains shall be provided to K-ride at the time of payment to lessor under purchase option clause.	Please refer corrigendum-1
44.	26.1.2	K-RIDE shall, within 15 (fifteen) Business Days of receipt of an invoice in accordance with Clause 26.1.1 (the “Payment Due Date”), make payment of the amount claimed under the invoice directly, through electronic transfer, to the nominated bank account of the Lessor, save and except 50% of any amounts which it determines as not payable or disputed (the “Disputed Amounts”). Disputed Amounts, if any, shall be dealt with in accordance with Clause 26.2 below. In case, K-RIDE fails to pay and/or does not dispute an invoice by Payment Due Date, the Lessor shall have the right to receive such amounts from the Escrow Payment Security in accordance with clause 26.4.	Under this clause the deduction on disputed amount is very high i.e. 50%. kindly review it and to be reduced in the range of 5%-10%.	Tender condition prevails



SN	Clause No.	Original Clause	Query & Suggestions	Remarks
45.	26.6.1	<p>K-RIDE shall, on request of the Lessor at any time after the Appointed Date and before the COD of the first Train, and upon the Lessor furnishing a bank guarantee for an amount equal to 110% of the Mobilization Advance in the form specified in Schedule-M, make an advance payment forthwith in a sum not exceeding Rs. 100 crores (Rupees hundred crore only) (the “Mobilization Advance”). The rate of interest on the Mobilization Advance shall be equal to 3% (three per cent) above the Bank Rate. The recovery of Mobilization Advance, including interest thereon, shall commence from the 4th (fourth) anniversary of the Appointed Date and shall be recovered by deduction of 25% of the Total Charges payable on monthly basis, until the total amount of Mobilization Advance including interest is recovered. The Lessor shall utilize the funds made available as Mobilization Advance for this Project only.</p>	<p>It may kindly be noted that, standard commercial loan conditions being considered by various lending institutions as '3 Years moratorium period and maximum 7 years as repayment period'. Accordingly, for Project Viability it will be appropriate to utilize Mobilization Advance Amount for this purpose which will help Project to become financially viable. Also, Clause 26.4 related with the Payment Security does not at length cover the risk associated with the Project. Considering the nature of the Project, revenue risk in the initial year consequence of which the Lessor has a risk of Lease and Maintenance Charges timely payment. Accordingly, it will be appropriate that K-RIDE shall enhance the Mobilization Advance Amount shall be 10% of 'Total Project Cost' as defined under Article 1/Definitions/1.1.2/Total Project Cost /(c) and recovery of same shall commence from 10th Anniversary of Appointed Date.</p> <p>With reference to above we request you to amend the Mobilization Advance Payment and conditions clause as per below suggestion:</p> <ol style="list-style-type: none"> <li>1. Interest free Mobilization Advance Amount shall be 10% of 'Total Project Cost' as defined under Article 1/Definitions/1.1.2/Total Project Cost /(c) in two equal instalments (1st instalment at 'Appointed Date +30 days' &amp; 2nd Instalment with in 6 Months of 'Appointed Date' upon Lessor furnishing Bank Guarantee of 110% of Mobilization Advance</li> <li>2. The recovery of Mobilization Advance shall commence from 10th Anniversary of Appointed Date and shall be recovered by 15th Anniversary of Appointed date in equal instalments from monthly payment of Lease &amp; Maintenance Charges.</li> </ol>	Please refer Corrigendum-1.

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
			K-Ride is requested to enhance the value of Mobilization advance up to Rs. 300 Crores against submission of Bank Guarantee and make it interest free.	
46.	26.1.4	<p>“Taxes” means any Indian taxes including the Goods and Services Tax, excise duties, customs duties, value added tax, sales tax, local taxes, cess and any impost or surcharge of like nature (whether Central, State or local) on the goods, materials, equipment and services incorporated in and forming part of the Project, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever. For avoidance of doubt, Taxes shall not include taxes on corporate income.</p> <p>&amp; 26.1.4 ..... (vi) details in respect of taxes/duties which are reimbursable in accordance with the provisions of this Contract.</p>	Kindly confirm if Project will fall under concessional Custom Duty benefit in 'Project Imports Scheme' and reimbursement of Custom Duty based on Documentary evidences by Lessor to K-RIDE.	At present, the Project does not fall under the Concessional Custom Duty benefit in 'Project Import Scheme'.
47.	27.1.1	The Parties agree that in the event of the cost of repair of a Train or Car thereof, as the case may be, arising out of any reason or event not attributable to the Lessor, including gross negligence, Accident, natural calamities, vandalism, arson, riots or any event of a nature analogous to the foregoing, is more than 50% (fifty per cent) of its depreciated Book Value, the Lessor may, in its discretion, withdraw such Train or Car from the Fleet.	In such scenario, Lessor shall be compensated for the amount equivalent to 'Residual Depreciated Book Value' Lease charges for the conditions of Condemnation of Trains as defined in 27.1.1	Tender condition prevails.

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
48.	28.1	<p>28.1.1 If during the Maintenance Period, K-RIDE requires additional Trains to operate on Corridors, then K-RIDE reserves the right to operate its own additional trains or give to any third party, the concession to operate the additional Trains on the Corridors and the Lessor shall have the right to participate in the competitive bidding process for the supply and operation of additional trains (subject to the terms of the documents for the award of the concession in relation to the additional trains).</p> <p>28.1.2 The Lessor shall provide all reasonable support and assistance as may be required by K-RIDE for the Supply and maintenance of the additional quantity of Trains.</p>	<p>1.We Request K-Ride that in case of requirement of additional trains, the same may be procured from the lessor and lessor shall undertake the full responsibility for supply and maintenance of additional trains.</p> <p>2.Kindly clarify all Reasonable support and assistance mentioned under clause 28.1.2.</p>	<p>During the lease period, if any additional cars are required by the employer due to increase in ridership, the lessor shall have the first right of refusal. The lessor shall provide these additional cars with the same terms and conditions of the original contract and “lease and maintenance charges” shall be paid proportionately applicable for the subsequent period/duration. In addition, T&amp;P needed for the additional cars shall be provided whose incremental cost is covered in lease charge payable at that time. If lessor does not agree, Then the KRIDE reserves the right to operate its own additional train or give it to any third party. Lessor shall have the right to participate in the competitive bidding process for the supply, operation and maintenance of additional trains.</p>
49.	32.6.2 (b)	<p>the Parties agree that no Maintenance Charges shall be due and payable for the period during which O&amp;M Obligations remain suspended on account of such Force Majeure Event.</p>	<p>The clause shall be revised to cover fixed charges and Manpower cost during Force Majeure events:                  .....the Parties agree that fixed charges and Manpower cost shall be due and payable for the period during which O&amp;M</p>	<p>Tender condition prevails.</p>

<b>SN</b>	<b>Clause No.</b>	<b>Original Clause</b>	<b>Query &amp; Suggestions</b>	<b>Remarks</b>
			Obligations remain suspended on account of such Force Majeure Event.	
50.	32.7.2 (b)	upon occurrence of an Indirect Political Event, all Force Majeure Costs attributable to such Indirect Political Event, and not exceeding the Insurance Cover for such Indirect Political Event, shall be borne by the Lessor, and to the extent Force Majeure Costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by K-RIDE to the Lessor; and	Project cost is required to obtain Insurance cover.	Actuals Project Cost will be derived out by the Bidder as per requirements of the Contract.
51.	35.3.1	Subject to Clause 35.4, upon Termination on account of a Lessor Default after the Appointed Date, K-RIDE shall pay to the Lessor, by way of Termination Payment, an amount equal to the following: An amount equivalent to [90% (ninety percent)] of the Debt Due less Insurance Cover. Provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then 80% (eighty percent) of such unpaid insurance claims shall be included in the computation of Debt Due.	It is our understanding that, PPP projects in recent past has allowed 100% compensation of the debt due in the event of termination attributable to the Lessor. It is recommended to kindly revise the Clause accordingly: - .....An amount equivalent to [100% (Hundred percent)] of the Debt Due less Insurance Cover. Provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then the same shall also be compensated.	Tender condition prevails.
52.	40.6.1	Notwithstanding anything to the contrary in this Contract, the liability of one Party towards the other Party for any damages or compensation of any nature whatsoever under this Contract, save and except Termination Payment, shall not exceed the Total Project Cost	Approximate value of project cost?	Total Project Cost is defined in Article 1.
53.	42.4	Arbitrator Personnel	With reference to clause 42.4 we understand that K-RIDE will propose the Arbitrator(s) and Lessor is bound to select from the proposed Arbitrators. The reference clause shall be modified to allow Lessor also to propose Arbitrator(s) where Lessor is a combination of Indian and foreign entity.	Please refer Corrigendum-1.

***Pre-Bid Replies for Selection of Lessor for Design, Manufacturing, Supply, Commissioning, Operation and Maintenance of Rolling Stock on Lease for BSRP***

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
54.	1.1.2	<p>.....</p> <p><b>“Total Trains” means 29 Trains of 6 Cars each and 30 Trains of 3 Cars each;</b></p> <p>With a view to deploy safe, reliable and technologically advanced rolling stock on the BSRP, the Authority wishes to procure: (a) on a lease basis, a total of 264 (two hundred and sixty four) cars comprising of <b>80 trains of 3 Cars each and 4 trains of 6 Cars each</b> (excluding reserve trains).....</p>	Please confirm the correct quantity of trains (59 or 84) in terms of 3/6 car train configuration for 264 cars.	Please refer Corrigendum -1.
55.	1.1.5	<p>Following types of Cars and configuration shall be adopted:</p> <p>The rake formation shall generally be as follows:</p> <p>6 Car consist</p> <p>To be notified later.</p> <p>3 Car consist</p> <p>Where:</p>	<p>We understand from this clause that 3/6 Car train configuration is as below.</p> <p>3 car consist DMC-TC-DMC</p> <p>6 car consist DMC-TC-MC-MC-TC-DMC</p> <p>Trainset configuration shall be defined for cost estimation. Please confirm and update other relevant clauses (1.1.5, 8.2.1 etc) accordingly.</p>	Please refer Corrigendum -1.
56.	1.1.9	Lessor may propose the Train Configuration after award of Contract. A Lessor will not be penalized in any way for proposing this different train configuration from the requirement of K-RIDE. If a Lessor uses a different train configuration, it must still comply with all the performance requirements and all else necessary to full compliance with these Specifications and must be fully compatible in all respects with the rest of the Bengaluru	As per ERTS the requirement of fully compatible in all respects with the rest of the Bengaluru Metro Rail Systems is not possible. Please review and update the clause.	Please refer Corrigendum -1.

***Pre-Bid Replies for Selection of Lessor for Design, Manufacturing, Supply, Commissioning, Operation and Maintenance of Rolling Stock on Lease for BSRP***

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		Metro Rail Systems (i.e. power distribution system, signalling etc.). The Lessor shall be solely and completely responsible for any and all problems that may result from a proposed alternative train configuration from that shown in the Bid documents.		
57.	1.2.3	Oscillation Trials	It shall be conducted by RDSO with the Oscillograph car available with them. Bidder shall provide instrumented wheels and extend support	As per the prevailing procedure adopted by RDSO
58.	1.1.13	Details of RSM	What is RSM?	RSM means Rolling Stock Manufacturer
59.	2.6	Fail Safe Designs	SIL 2 requirement mentioned for door (7.2.1 xix) & TCMS (10.1.7). However, the requirement for other systems and if it is required for all functions of TCMS is not clear.	In tender TCMS, Emergency Brake, passenger door, Detrainment doors, fire and smoke detector, PEA are suggested. Other requirements shall be proposed by the bidder.
60.	2.14.12	Off vehicle test equipment to allow fault finding of smallest replaceable item of equipment	It shall be limited to electronic cards. Clarity may be obtained about the requirement	It is not related electronic cards only; however, it should be able to identify any fault in the vehicle control circuit.
61.	2.16	Interference compliance requirement	<u>The limits of interference current limits are not mentioned.</u>	To be followed as per the EN 50121.
62.	2.18	Ride quality	<u>Ride Quality Index is not mentioned</u>	Refer 15.5.2 of ERTS
63.	3.8.6	It is K-RIDE's understanding that the Lessor will need to depute a team of its design engineers for interaction with K-RIDE's experts at Bengaluru. K-RIDE at his discretion may also consider deputing a team of K-RIDE's Representatives (around six) to Lessor's design office or at Sub vendor's office for requisite duration with a view to expedite finalization of designs. In such case, Lessor shall provide office facilities and, visa etc., travel expense (as per entitlement), boarding, lodging etc. Such visit(s)	<u>The clause content may be modified as below in-line with cl. no.1.10.3 of Appendix TL. Design Submission Requirement:</u> It is K-RIDE's understanding that the Lessor will need to depute a team of its design engineers for interaction with K-RIDE's experts at Bengaluru. K-RIDE at his discretion may also consider deputing a team of K-RIDE's Representatives (around six) to Lessor's design office or at Sub vendor's office for requisite duration with a view to expedite finalization of designs. In such case, Lessor shall provide	Please refer Corrigendum -1.

**Pre-Bid Replies for Selection of Lessor for Design, Manufacturing, Supply, Commissioning, Operation and Maintenance of Rolling Stock on Lease for BSRP**

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		as described above shall not be considered as part of inspection activity.	office facilities and <del>bear full expenditure towards daily allowance (as per entitlement), visa etc., travel expense (as per entitlement), boarding, lodging etc.</del> Such visit(s) as described above shall not be considered as part of inspection activity.	
64.	3.10	Coastal area working	<u>Clarity required as Bangalore is not in coastal region</u>	Please refer corrigendum-1
65.	3.20.3	The Lessor shall confirm that the kinematic envelopes in these specifications will be met. The Lessor shall furnish detailed calculations, showing lateral and vertical shifts due to each factor separately, based on which Kinematic Envelope has been developed. All drawings shall be to the scale.	<u>The clause shall be modified as below:</u> The Lessor shall confirm that the kinematic envelopes in these specifications will be met. The Lessor shall furnish detailed calculations/simulations, showing lateral and vertical shifts due to each factor separately, based on which Kinematic Envelope has been developed.	Please refer corrigendum-1
66.	3.20.4	The Lessor shall develop the Kinematic Envelope for curved track parameters as set out in clauses 3.14 and 3.15.	The clause may please be deleted as there are no separate KE for the curves. Only simulations will be done for clearances	Tender condition prevails.
67.	3.20.5	The Lessor, during design stage, shall submit detailed calculation for minimum clearance between the Carbody exterior and platform edge. It shall be ensured that the maximum permissible clearance between edge of the platform coping and edge of the Carbody shall be 75 mm in Underground corridors and 85 mm in elevated corridor. These shall be respected with speed upto 70 kmph, worn out track and wind speed of 60Km/h. For new track and without considering impact of wind, there shall be no restriction to pass the platform at maximum test speed.	"The clause may be modified as below: The Lessor, during design stage, shall submit detailed <b>calculation/simulation</b> results for minimum clearance between the Carbody exterior and platform edge. It shall be ensured that the maximum permissible clearance between edge of the platform coping and edge of the Carbody shall be 75 mm in Underground corridors and 85 mm in elevated corridor for straight tracks. These shall be respected with speed upto 70 kmph, worn out track and wind speed of 60Km/h. For new track and without considering impact of wind, there shall be no restriction to pass the platform at maximum test speed."	Please refer corrigendum-1
68.	3.20.6	The Lessor, during design stage, shall submit detailed calculation for minimum clearance between the Carbody exterior and platform edge. The calculation shall be made for both Tangent track and 1000mcurves, at wind speed from 30Kmph upto 100 Kmph in the steps of 10 kmph	<u>The clause shall be modified as below:</u> The Lessor, during design stage, shall submit detailed calculation for minimum clearance between the Carbody exterior and platform edge. The calculation shall be made for both Tangent track and 1000mcurves, at wind speed from	Tender condition prevails.

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		and vehicle speed upto 90kmph in the steps of 10 kmph under inflated and deflated springs and shall include the followings: •Allowable dynamic sway after taking into account the platform distance, additional clearance in curve and speed independent contributors. •Max dynamic sway as simulated. •Actual dynamic sway and clearances thereof at different speeds.	30Kmph upto 100 Kmph in the steps of 10 kmph and vehicle speed upto 90 kmph in the steps of 10 kmph under inflated and deflated springs taking into account effects of sway	
69.	3.21.4	Passenger capacity Passenger seating capacity is approx. 72 passengers per Car Performance calculation for AW4 & AW3	Please provide the seat layout prepared by K-RIDE for the requirement of 72 sitting passenger per car. Clarity to be obtained if calculation is required for both SDCL & DCL	Will be provided
70.	3.22.1	Annual running distance of one train (for design purpose) 150,000 km	Apart from design mileage, please provide operational mileage.	It is not applicable as KRIDE is paying on availability basis.
71.	3.22.1 (i)	Minimum designed average acceleration for fully loaded (AW4 -seating plus standees @8 passengers/sqm) Train on tangent track in steps is as under: 0 to 40 kmph: 1.0 m/sec <sup>2</sup> 0 to 60 kmph: 0.85 m/sec <sup>2</sup> 0 to 80 kmph: 0.65 m/sec <sup>2</sup>  Minimum designed average acceleration for fully loaded (AW3-seating plus standee@6 passengers/sqm) Train on tangent track in steps is as under: 0 to 35 kmph: 1.2 m/sec <sup>2</sup> 0 to 60 kmph: 0.85 m/sec <sup>2</sup> 0 to 80 kmph: 0.65 m/sec <sup>2</sup>	As acceleration of AW4 is already defined, AW3 related data can be automatically derived based on load reduction. Also average acceleration 0.65 m/sec <sup>2</sup> from 0-80 kmph is quite high, it can be reduced to 0.6 m/sec <sup>2</sup> .	Tender condition prevails.



<b>SN</b>	<b>Clause No.</b>	<b>Original Clause</b>	<b>Query &amp; Suggestions</b>	<b>Remarks</b>
72.	3.22.1	On the tractive effort – speed curve, shoulder point between constant acceleration and constant power shall be considered as 40km/h. Shoulder point between constant power and characteristic shall be considered as 60 km/h.	As requirement is already defined, motor characteristics shall be left to designer. So, this requirement can be deleted. Same is the case with AW3.	Please refer corrigendum-1
73.	3.22.3	Total time considered for calculating scheduled speed shall be total round trip. Dwell time at each station including terminal stations shall be considered as 30 secs for calculation of scheduled speed.	For calculating DSSP, no detail for route data is given.	Will be made available
74.	3.22.5	Train to start and move at a gradient of 4%	Whereas 3.14 mentions the maximum gradient as 3%. Also 6.15.1 stipulates a gradient of 4% for parking brake	Please refer corrigendum-1
75.	3.22.7	The performance calculation software package shall be provided	The results of calculation shall be provided rather than the software	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
76.	3.23.1	<p>The train shall in addition to the above be capable of meeting the following criteria without any damage to equipment</p> <p>I. One serviceable fully loaded 6/3-Car Train in AW4 condition with one Motor Car cut out shall be capable of pushing a fully loaded defective 6/3-Car train without parking brakes applied, <b>including a section of 4% gradient up to the next station.</b> Thereafter, the healthy train shall, after all the passengers have been detrained at the station, continue to push the defective train up to the terminal station. There shall be no equipment damage or degradation, while maintaining safe operation.</p> <p>ii. A 6/3-Car fully loaded train AW4 shall be capable of clearing the section, with the traction motors of 2/1 motor Cars are cut out (50% motoring at train level). The temperature rise of the traction motor and equipment shall be within rating of traction motor and other equipment's in the above condition.</p> <p>iii. Typical traction effort curves shall be provided and relevant information as wheel rail adhesion ratio, speed etc. shall be correlated.</p>	<p>Rescue operation on 4% gradient with degraded train is very stringent requirement. Request to revisit the clause appropriately considering actual gradient data &amp; use cases impacting overall rating of the product.</p>	<p>Please refer corrigendum-1</p>

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		One serviceable fully loaded 6/3-Car Train in AW4 condition with one Motor Car cut out shall be capable of pushing a fully loaded defective 6/3-Car train without parking brakes applied, including a section of 3% gradient up to the next station. Thereafter, the healthy train shall, after all the passengers have been detrained at the station, continue to push the defective train up to the terminal station. There shall be no equipment damage or degradation, while maintaining safe operation.	Pulling of one defective AW4 loaded 3 car train with another 3 car train with One motor car cutout is not possible. So cutout shall be 25%. One motor car cutout for 6 car is possible which is equivalent to 25% cutout.	
77.	3.24.1	Energy Consumptions requirements are given in Annexure-ECR.	Route data is not provided to check the detail of SEC	Will be provided
78.	4.8.3	A suitable proven energy absorption feature with associated collapse features shall be incorporated into the coupler draft gear. The coupler shall sustain no permanent damage when a fully loaded <b>eight-Car train</b> collides with an impact speed up to 10 kmph.	At cl. No. 4.8.2, it is indicated as carbody design shall be suitable for Six/three-Car train, but at clause 4.8.3, it is indicated as coupler shall sustain no permanent damage when fully loaded eight-car train collides with an impact speed up to 10 kmph. Please clarify whether simulation to be done for six/three-Car train or 8 -Car train.	Please refer corringendum-1
79.	4.14.1 (ii)	It shall incorporate wide double leaf automatic doors along each side, /Transverse seating, enclosed by stand-back areas and draught screens, grab-poles and rails, LED lighting, air conditioning outlet , passenger information displays, public address loud speakers, cameras, smoke and fire detectors, charging sockets, and passenger emergency alarm devices to permit passengers to make the train operator aware of problems.	Transverse seating is asked. At ERTS clause 4.14.4 (i) longitudinal banks of stainless seat is asked. Please provide the seat layout prepared by K-RIDE	Will be provided.

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
80.	4.15	Inter-Car Gangway	The details of attenuation of outside noise through the gangway is not provided. Please provide the same.	Please refer corrigendum-1
81.	5.2.7	<p>Vehicle Dynamic Analysis of Bogie: A Dynamic Analysis, to evaluate the running behaviour of the vehicle with the proposed bogie design, shall be Carried out by means of theoretical calculations applying multi-body simulation techniques. Proven validated software shall be used. The following parameters, at the minimum, shall be evaluated / analysed.</p> <p>(I) Natural frequencies of the suspension.                      (ii) Stability of the vehicle.                      (iii) <math>\Delta Q/Q</math> for the track twist.                      (iv) Bogie rotational resistance                      (v) Wheel wear index at the tread and flange                      (vi) Derailment quotient Y/Q                      (vii) Carbody accelerations                      (viii) Curving capability and any tendency to hunt.</p> <p>The Lessor shall submit a proposal covering the scope of the analysis <b>and the model</b> for review by the Independent Engineer.</p>	<p>Vehicle Dynamic Analysis model are Bidder proprietary items and cannot be shared with anyone. However, the description of model shall be made available in Vehicle Dynamics Report.</p> <p>In this regard, request you to modify the requirement as follows:</p> <p>Vehicle Dynamic Analysis of Bogie: A Dynamic Analysis, to evaluate the running behaviour of the vehicle with the proposed bogie design, shall be Carried out by means of theoretical calculations applying multi-body simulation techniques. Proven validated software shall be used. The following parameters, at the minimum, shall be evaluated / analysed.</p> <p>(I) Natural frequencies of the suspension.                      (ii) Stability of the vehicle.                      (iii) <math>\Delta Q/Q</math> for the track twist.                      (iv) Bogie rotational resistance                      (v) Wheel wear index at the tread and flange                      (vi) Derailment quotient Y/Q                      (vii) Carbody accelerations                      (viii) Curving capability and any tendency to hunt.</p> <p>The Lessor shall submit a proposal covering the scope of the analysis <del>and the model</del> for review by the Independent Engineer.</p>	Tender condition prevails.
82.	5.4.1	The Lessor shall submit a proposal for the primary suspension system using proven steel- and-rubber or helical coil steel springs with requisite dampers and secondary pneumatic suspension. Lessor shall declare the estimated mean service life for operation in the Bengaluru	<p><u>The ERTS shall be modified as below:</u></p> <p>The service life of rubber bonded metal components/rubber of spring type primary suspension shall be not less than 8 years, and shall be warranted for the same.</p>	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		environment. Quality of dampers used shall be very high and guaranteed against any oil leakage/oozing. <b><i>The service life of rubber bonded metal components/rubber of spring type primary suspension shall be not less than 12 years, and shall be warranted for the same.</i></b> Use of chrome vanadium grade steel as per EN10089 for helical coil primary suspension system design shall be ensured.		
83.	5.4.1	The service life of rubber bonded metal components/rubber of spring type primary suspension shall be not less than 12 years, and shall be warranted for the same.	<u>Required service life of rubber bonded metal components seems on a very higher side. May kindly review.</u>	Please refer corrigendum-1
84.	5.4.5	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. <b>The damping factor in lateral mode when measured by quick release side pull test</b> 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	As per our understanding, no specific requirement in EN 14363 is available for the Side Pull Test. Intent of the Side Pull Test is already covered in RDSO defined Tests and Acceleration & Ride Comfort Test will cover the Lateral Damping effect. In this regard, bidder request to remove the Side Pull test requirement and modify the tender requirement as below:  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. <del>The damping factor in lateral mode when measured by quick release side pull test</del> 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	Tender condition prevails.

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
85.	5.4.9	The design life of secondary suspension air bags (all inclusive) shall not be less than <b>12 years</b> . The air bags and its components shall not crack/shear/balloon/ burst or deteriorate in its performance during its design life	Design life of air bags is 10 years generally across all suppliers. So, bidder request following amendment to the clause: The design life of secondary suspension air bags (all inclusive) shall not be less than 10 <del>12</del> years. The air bags and its components shall not crack/shear/balloon/ burst or deteriorate in its performance during its design life Required design life of rubber sec suspension air bags seems on a very higher side. May kindly review.	Tender condition prevails.
86.	5.6.1	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 <b>static load</b> 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.	<u>Bidder request following amendment to the clause for better understanding:</u> 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 <b>standalone static vertical</b> 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.	Please refer corrigendum-1
87.	5.6.2	The bogie frames shall be able to withstand a longitudinal shock load of 5g <b>without failure</b> . This shall be taken as occurring simultaneously with the fully laden vertical load."	<u>Bidder request to amend the clause as follows in line with EN13749:</u> The bogie frames shall be able to withstand a longitudinal shock load of <del>5g</del> 3g without failure. This shall be taken as occurring simultaneously with the fully laden vertical load.	Tender condition prevails
88.	5.7.1	<b>5.7 Availability of Source Code and Development Tools</b>  With the exception of —Commercial off the Shelf Software (COTS), the Independent Engineer shall be provided with access to full software documentation	The clause may be modified as below:  <b><u>5.7 Availability of Source Code and Development Tools</u></b>  With the exception of —Commercial off the Shelf Software (COTS), the Independent Engineer shall be provided with	Please refer Corrigendum-1

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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		including source code listings and development tool details. For Commercial off the Shelf Software (COTS), the Lessor shall provide all available documentation for the application and maintenance of that software.	access to full software documentation <del>including source code listings</del> and development tool details. For Commercial off the Shelf Software (COTS), the Lessor shall provide all available documentation for the application and maintenance of that software.	
89.	5.10.1 (ERGS)	All test software, with the exclusion of built-in test software, shall be produced in accordance with a quality system controlled under the requirements of ISO 90003. Test software shall be developed and documented using structured techniques and shall be designed to be maintainable throughout the term of the Contract. All test software shall be documented to be supportive of maintenance. Any test software that is to be delivered to the K-RIDE (for long term testing use) shall be fully documented including source code listings to allow the K-RIDE to maintain the software for the life of the supported system	<u>The clause may be modified as below:</u> All test software, with the exclusion of built-in test software, shall be produced in accordance with a quality system controlled under the requirements of ISO 90003. Test software shall be developed and documented using structured techniques and shall be designed to be maintainable throughout the term of the Contract. All test software shall be documented to be supportive of maintenance. Any test software that is to be delivered to the K-RIDE (for long term testing use) shall be fully documented <del>including source code listings</del> to allow the K-RIDE to maintain the software for the life of the supported system	Please refer corrigendum-1
90.	5.10.2 (ERTS)	Comprehensive, flexible and fully automatic test bench(s) shall be maintained to test a overhauled/newly assembled gear case with transmission arrangement and duly mounted on the wheel set.	The requirement may please be deleted as overhauling of gearbox is done by OEM for the purpose of warranty and the same is tested in OEM factory. A test bench does not serve any useful purpose. Please consider feedback from other metro operators also in this regard	Please refer corrigendum-1.
91.	5.10.6	Coupling shall not have resonance noise during coasting.	The requirement may please be deleted as coupling does not have any significant noise levels, it's the traction motor & gearbox contributing to higher noise. Also, the noise measurement of gearbox will calculate the total noise levels of the system but for coupling alone is not possible	Please refer Corrigendum -1
92.	5.16.1	<b>Wayside Rolling Stock Condition Monitoring System</b> The Lessor shall provide or maintain proven wayside Rolling Stock condition Monitoring System. The proposed system shall be proven for the similar metro railway application. Location for the installation of the	Request to modify the clause allowing Lessor to choose either to provide onboard solution or wayside solution. Also, kindly remove (iv) and (v) as these are not available and proven.	Please refer Corrigendum -1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		<p>wayside equipments shall be decided in consultation with Independent Engineer.</p> <p>The wayside system shall atleast be able to monitor the following parameters:-</p> <p>(i) Axle Box bearing temperature</p> <p>(ii) Hot wheel detection</p> <p>(iii) Wheel flat detection through Wheel Impact Load detection (WILD)</p> <p>(iv) Detection of non-rotating axles</p> <p>(v) Bogie dynamic characteristics affecting safety including hunting.</p>	<p>The number of such installations required are not mentioned</p>	
93.	5.16.2	<p>The RFID sensors/other suitable means shall be installed on the each axle box &amp; other required places of all the trains to identify the asset. The RFID Sensor shall have unique ID and shall be IP68 protection rating, vandal proof and have UV &amp; outdoor resistant housing. It shall also withstand shock and vibration as per International Standard for Railway Application.</p>	<p><u>The clause shall be modified as below:</u> Train identification by RFID or other proven systems shall be provided by Lesser which shall uniquely identify the trains and shall have suitable protection from environmental degradation, vandalism etc. The details shall be submitted for approval of K-Ride</p>	Tender condition prevails.
94.	5.16.3	<p>The sensor data shall be transmitted to the OCC which shall process the data and generate custom warnings, alarms for the K-RIDE's maintenance team with sensors unique ID and other relevant environmental data/common mode parameters such as ambient temperature, loading conditions, location etc.</p>	<p><u>The clause shall be modified as below:</u> The data from wayside equipment shall be transmitted to the OCC which shall process the data and generate custom warnings, alarms for the K-RIDE's maintenance team.</p>	Please refer corrigendum-1
95.	6.1.3 (vii)	<p>Wheel spin and slide protection</p>	<p>Wheel spin is controlled by propulsion and is not in the scope of brake system. The clause may be updated accordingly for brake system scope.</p>	Please refer corrigendum-1



SN	Clause No.	Original Clause	Query & Suggestions	Remarks
96.	6.2.2	Two oil free air compressors proven in EMU Metro Operations for at least 4 years, operating from a 415 V 3-phase 50 Hz power supply with an adequate free air delivery capacity shall be provided. One compressor shall have sufficient capacity to charge a completely empty six car Train including full air suspension inflation within <b>30 minutes</b> . The average duty cycle of each compressor without electric breaking shall not exceed 45% during operation. The Lessor shall submit calculations to show that the capacity of the compressor will meet the worst conditions.	Charging time with one oil free compressor may be reviewed as the delivery rate of the proven oil free compressor is less than Oil compressor used in our metro projects.	Please refer corrigendum-1
97.	6.2.11	The drive motor shall confirm to the requirement of IEC 60349-2 and the temperature rise of the windings of the motor shall be limited to temperature index of the insulation <b>minus 700C</b> . The motor shall have at least IP55 protection.	"Temperature index of the insulation minus 700C" may be reviewed and corrected.	Please refer corrigendum-1
98.	6.4.3	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.	For oil free compressors it is not required to provide an automatic drain valve before air dryer. Please update the ERTS clause suitably.	Tender condition prevails
99.	6.4.4	Suitable means of dust separation, along with automatic drain valve prior to the air dryer shall be provided. An inter-cooler and after-cooler of liberal capacity shall be supplied to ensure efficient operation of the air dryer. A humidity indicator showing the condition of the outlet air through change of colour shall be provided. Full technical details of the proposed air dryer shall be furnished by the Lessor for review by the Independent Engineer. Interval	As per ERTS 6.2.2, air compressor shall be oil free reciprocating type, therefore oil separator is not required for air supply system. Please review and update the ERTS clause suitably.	Tender condition prevails

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		for replacement of desiccant in the dryer unit shall be furnished.		
100.	6.8.1	6.8.1 All driving cabs all this information shall be provided to the driver: (i) The pressure in the main reservoir. (ii) The pressure in the brake cylinder pipe. (iii) The pressure in the brake pipe	As per the ERTS clause 6.20, the Brake system is single pipe system with only MR pipe. You are requested to review this clause and remove (iii) The pressure in the brake pipe.	Please refer corrigendum-1
101.	6.13.1	Brake System and its components shall be proven, state of art and widely used in modern metro rolling stock. Brake system proposed must have been in satisfactory revenue operation Cars supplied in three Metros (i.e. MRT, LRT, suburban railway or high-speed railway). Out of three metros, at least two metro shall be in the country other than the country of manufacture or in India. Train braking performance shall be as specified in Chapter 3, Clause 3.22.1 and shall be designed for 90 KMPH. The operational speed shall be 80 kmph. The system shall generally conform to EN13452. Brake valves shall be designed and validated for heavy duty cycles required for intensive brake blending. <b>No change of valves or components except rubber items shall be required for at least 15 years.</b> Lessor shall assess the cyclic load under worst service conditions appearing together and validate the same on a test bench.	There are some parts such as valve springs, Valve stems, filters and some of safety items like Safety valve, critical EP valves needs replacement apart from Rubber parts in some of the valves to have reliable service life. Request to please modify the requirement to allow "except critical valve assemblies"	Please refer corrigendum-1
102.	6.13.3	The EP brake shall be so designed that its control function can be taken over by the other control elements or units even in the case of failure of individual electronic or electrical control elements or units. Redundant power supply and processor Card for hot stand by in the control unit and spare slots for I/O Cards shall be ensured.	As per the ERTS clause 6.14.3, each bogie should have independent brake control unit (BCU) and independent brake electronics (BECU). Over this independent BECU for each bogie redundant power supply and processor card hot stand by in control unit will not be required. You are requested to review the clause and amend accordingly.	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
103.	6.13.6	The friction brake system shall be proven and capable of independently achieving all performance requirements for a continuous round trip with maximum speed of <b>50 Km/h with AW3 load case</b> without the aid of electric braking.	Higher load and higher operating speed will lead to temperatures beyond the acceptable limits. Hence the requirement may please be reviewed and changed as "The friction brake system shall be proven and capable of independently achieving all performance requirements for a continuous round trip with maximum speed of 50 Km/h with AW2 load case without the aid of electric braking."	Tender condition prevails.
104.	6.16.11	Complete brake system shall be tested on Brake dynamometer and validated during field tests.	The Brake Dynamometer test is done only for selection of friction material. The test will help to find the durability for material, Thermal capacity of brake pads/shoes or brake discs. Please clarify.	Tender condition prevails
105.	6.22.2	The wheel slide system shall detect the onset of slide by either (a) an axle deceleration exceeding a pre-set parameter, or (b) detection of a difference between the relative speeds of the axles. A proven speed sensor mounted on the cover of each axle box shall be provided to detect the speed of associated wheel for implementing wheel slide protection scheme. Wheel slide indication shall be displayed through TCMS in the driving cab. The Lessor shall submit full details of wheel slide protection scheme and equipment. <b>Dump valves shall be monitored for their correct functioning and shall be monitored by TCMS.</b> System shall ensure correct functioning of dump valves as pretest before train is dispatched from depot or initialized.	Monitoring of the dump valve done by Brake Controls Electronics as it is part of WSP system integrated with Brake Controls Electronics and not by TCMS.  In view of the above, requested to update the ERTS clause suitably.	Tender condition prevails
106.	6.25	Lessor shall supply exhaustive documentation on complete pneumatic system, its sub systems and components, Brake electronics (hardware and software),	Based on prior experience, OEMs will only provide standard documents. Intellectual Property like software block diagrams showing logics, transition states, algorithms, signal	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		<p>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) <b>the logics, transition states, algorithms, signal flow and software parameters etc.</b></p> <p>The Lessor shall supply real time animation of complex pneumatic system, covering all pneumatic valve operations etc., demonstrating the complex pneumatic system for training purpose, which shall help in fault finding during maintenance period.</p>	<p>flow and software parameters etc. will not generally be shared by sub-contractor/OEMs.</p> <p>In view of the above, requested to update the ERTS clause suitably.</p>	
107.	7.2.3 (viii)	<p>The push back feature shall be operative after the door leaves have been closed and locked. It shall be possible to manually push back each closed door leaf to enable entrapped objects such as clothing and other articles, to be withdrawn, even after the mechanical lock has engaged. The force required to push back each door leaf shall not be less than 80N nor more than 120N. However final value shall be decided during design. Expected door gap to be created by push back during intentional operation should not exceed 15mm (the final gap shall be decided during detail design stage of the door). Every operation of push back shall be recorded with time stamp and message shall pop up in cab HMI. The complete scheme shall be of proven type in worldwide metros in ATO/UTO operations. Lessor shall maintain 5 nos. of portable test probe to measure the closing/opening force of any door leaf in situ condition.</p>	<p>According to Door supplier Low push back force (80 to 120N) may create some operational issues. Door supplier recommends the push back force in the range 100-150N</p> <p>The clause content may be modified as below:                      The push back feature shall be operative after the door leaves have been closed and locked. It shall be possible to manually push back each closed door leaf to enable entrapped objects such as clothing and other articles, to be withdrawn, even after the mechanical lock has engaged. The force required to push back each door leaf shall not be less than 100N nor more than 150N. However final value shall be decided during design. Expected door gap to be created by push back during intentional operation should not exceed 15mm (the final gap shall be decided during detail design stage of the door). Every operation of push back shall be recorded with time stamp and message shall pop up in cab HMI. The complete scheme shall be of proven type in worldwide metros in</p>	Tender condition prevails

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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
			ATO/UTO operations. Lessor shall maintain 5 nos. of portable test probe to measure the closing/opening force of any door leaf in situ condition.	
108.	8.2.1	Power shall be drawn from the OHE by pantographs. There shall be three (2) pantographs and associated HV Equipments <b>for the 3/6</b> Car train.	Refer Query related to cl. no. 8.7.1. Please clarify whether redundancy for Pantograph & associated HV roof equipment is required for 3- car consist (DMC-TC-DMC) configuration? These details are required for cost estimation.	Please refer corrigendum-1
109.	8.2.4	A pantograph auto-drop function, which shall drop the pantograph automatically when excessive height is detected or in case of break/damage or excessive wear of the collector strip, shall be provided. An indication shall be provided in the cab HMI when this function has operated. An overreach detection should indicate, when the pantograph raises over the set height.	Please specify pantograph auto-drop function to be provided either of excessive height is detected or in case of break/damage or excessive wear of the collector strip or all of the above functionalities. <u>The clause may be modified as below:</u> A pantograph auto-drop function, which shall drop the pantograph automatically when excessive height is detected <del>or in case of break/damage or excessive wear of the collector strip,</del> shall be provided.	Tender condition prevails
110.	ERGS 8.4.1	Detailed manufacturing drawings for the Works shall be submitted to the Independent Engineer. These drawings shall be available on the Lessor's or his sub-contractor's premises if required. The Lessor shall also maintain at the Site a comprehensive and up- to-date set of drawings properly indexed and catalogued, which shall include complete sets of detailed working drawing and, where applicable, manufacturing drawings and shall permit free access to such drawings by the Independent Engineer at any reasonable time.	Documents of such confidential nature are generally not submitted to our customers, however in special circumstances certain drawings could be disclosed under mutually agreeable terms. We also cannot guarantee to disclose any such documents from sub-suppliers. We can't submit the detailed manufacturing drawings because of company rule of intellectual property rights. <b>Request to please delete this clause.</b>	Please refer corrigendum-1
111.	8.7.1	There shall be one/two (1/2) main transformers for the <b>3/6 Car</b> train. The main transformer shall have a service life of at least 40 years, demonstrable through design calculations to the satisfaction of the Independent Engineer.	We understand from this clause that 3/6 Car train configuration is as below. 3 car consist DMC-TC-DMC 6 car consist	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
			DMC-TC-MC-MC-TC-DMC Trainset configuration shall be defined for cost estimation. Please confirm and update other relevant clauses (1.1.5, 8.2.1 etc) accordingly.	
112.	8.7.7	The kVA rating of the transformer shall be designed to deliver the power to the continuous load as calculated with specified run cycle at Clause 8.10.5, Technical Specification, <b>Section VI B, and 10% extra for maximum load for 60 minutes.</b> The overloading of transformer for typical run shall be specified and type tested. Short time Ratings (say 15 sec & 110 sec as the case may be) shall be submitted along with the justification.	We understand the rating of equipment shall be as per defined duty cycle ensuring normal & degraded operations with all limitations of environmental conditions and hence we request to remove 10% extra capacity affecting the overall mass of product & train.	Please refer corrigendum-1
113.	8.7.9	IP level of blower motor, pump motor and complete transformer including terminal box <b>shall be IP65.</b> Lessor shall declare the Vendors for Transformer's sub-assemblies and shall submit an undertaking & commitment from Vendors to deal directly with K-RIDE in case of future procurement	We request to modify the requirement to IP56 instead of IP65 for blower motor, as it is more relevant for application	Tender condition prevails
114.	8.7.16	Transformer cooling arrangement shall be designed to ensure completion of round trip (without loss of time) of already working train with only <b>one radiator fan working.</b>	We understand this requirement is too stringent and despite DSSP is requested to fulfil in 25% motors failure scenario. Hence, we understand that this requirement shall be removed.	Tender condition prevails
115.	8.9.4	The current rating of the semiconductor shall be such that the junction temperature has the minimum thermal margin of 10°C in the worst loading conditions taking into account the extreme ambient conditions in Bengaluru and surrounding. Lessor shall consider the temperature rise of the air in vicinity of the equipment on account of different factors including proximity impact in the underframe, difference in wheel diameter of the bogie(s) and <b>rescue operation</b> etc	Temperature rise limit for rescue operation shall be removed as it is in very limited operation. Also, we understand that the requirement is of no equipment damage. Kindly Confirm	Tender condition prevails

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
116.	8.9.8	The power converter - inverter shall be designed to cater the <b>pantograph-bouncing phenomenon</b> . Adequate compensation using suitable rating of DC link Capacitor shall be provided for the pantograph bounce time or short time line interruption cases. Lessor shall submit the design calculations.	<p>We understand that traction equipment shall not damage during Pantograph bouncing &amp; recover normal operation post pantograph bouncing gets normal Kindly Confirm</p> <p>The limiting time for panto bouncing to be obtained</p>	Yes, your understanding is correct.
117.	8.9.9	The box for the power converter - inverter shall be of stainless steel/Anodized Aluminium so as to avoid any corrosion in service on any account and the box shall last for the lifetime of the converter/inverter unit without needing any attention. <b>The IP protection level of Converter box and that of aux. converter shall not be less than IP65.</b> The connectors shall have IP67 protection. The cooling arrangement shall ensure no dust deposition on the component and associated electronics. The box cover which may have to be removed for maintenance shall be suitable secured against falling. <b>Hinged opening cover arrangement shall be preferred.</b>	<p>Force air cooled products has air inlet and output path which usually remains IP20 where air is sucked via air filters however electronics/semiconductors etc. remains in IP65 box. IP20 for few areas like connection box, air inlet outlet path, magnetics is required for the traction &amp; auxiliary converter. Hence, we request IP20 shall be allowed for above mentioned.</p> <p>Also, Bidder understands that the hinged opening cover is not mandatory requirement and other proven arrangement will be acceptable. Kindly confirm</p>	Please refer corrigendum-1
118.	8.9.13	<b>(v) Current drawn by each motor shall be measured and recorded.</b>	We understand that in group drive system, important is to measure current delivered by respective inverter which ensures integrity of control and protection aspects. Measuring current on each motor of group drive system will not add any benefit from control and protection prospective. Kindly Confirm.	Tender condition prevails.
119.	8.9.13	<b>(ix)The auxiliary contacts of the contactors used in the converter-inverter and aux/. Converter shall be paralleled and shall be 100% redundant.</b>	We understand that the reliability of auxiliary contacts of the contactor will not increase by paralleling of contacts but rather by having appropriate capacity of contact suited for operational need. This shall be left to system designer to select appropriate contact configuration.	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
			Kindly Confirm.	
120.	8.9.18 vs 8.9.1 vs 3.22.5	<p>8.9.18 The propulsion equipment shall ensure the guaranteed performance for wheel diameter differences for at least up to 4 mm within any bogie without any adverse effect on any equipment. <b>If the wheel diameter tolerances exceed the above limit</b>, there shall be no damage to any equipment.</p> <p>vs</p> <p>8.9.1 <b>There shall be one Converter-Inverter (CI) in each motor Car.</b> However separate CI for each Bogie will also be acceptable. The power converter - inverter shall be a proven for metro application, four quadrant IGBT based unit, with VVVF control. The equipment shall conform to IEC 61287-1. Natural or forced air/water cooling shall be adopted. However, if forced air/water cooling is offered complete details of the arrangement including the method of dust filtration shall be furnished.</p> <p>vs</p> <p>3.22.5 The Lessor should also furnish the inter-station running time for a AW4 &amp; AW3 loaded train, under the 2 emergency conditions of running, each way for: (I) Depends on bogie control or Car control propulsion design 6/3 Car Train with <b>25% or 33% motor cut out</b>. There shall be no loss of time in All-out mode when compared with specified run in coasting mode with all motor Cars in service as defined elsewhere in these specifications. In such case the operation may be in high TE mode: and (ii) 6/3-Car train with 50% of motors cut out.</p>	<p>Requirements are inconsistent for - Car control vs Bogie control and wheel diameter difference. Kindly clarify the requirement.</p> <p>Also, as per our understanding 33% motor cut out is not feasible in current configuration of 6/3 car trains. Request employer to clarify the scenario in which 33% motor cut out can be achieved.</p>	<p>8.9.18- Tender condition prevails. 8.9.1- Please refer corrigendum-1 3.22.5 -Please refer corrigendum-1.</p>



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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		The train shall be able to start and move on a UP gradient of 4%		
121.	8.9.19	Report to be submitted for Substation capacity	This depends on the maximum number of trains possible in a section, the distance between the substations, interfacing with utility etc. Maybe excluded from scope	Please refer corrigendum-1
122.	8.10.8	Motor and gear with flexible coupling	Flexible coupling may not be required for a speed of 90 Kmph. May allow for rigid coupling as well	Tender condition prevails
123.	9.1.1	Three (3) Auxiliary power supply units shall be provided for the 6/3 Car train. This shall consist of a static converter-inverter(s) together with back-up batteries and battery charger. Auxiliary Converter shall be suitable for operation at 25kV ac single phase for the frequency variation from 47 to 53 Hz. The failure of auxiliary power supply equipment shall be annunciate to the train operator in TCMS VDU. Failure/isolation of main converter shall not cause any reduction in performance of auxiliary converter.	Refer Query related to cl. no. 8.7.1.	Please refer corrigendum-1
			Kindly clarify the Auxiliary converter quantity. Also, we understand 2 auxiliary converters for 3 car train shall be enough to fulfil redundancy requirements. Respectively Main transformer and Aux. winding to be updated  Whereas 9.1.3 calls for each main transformer to supply one APS. Clarity required for the number of APS required	Please refer corrigendum-1
124.	9.1.2	The auxiliary power distribution scheme shall be such configured that each main transformer shall feed to one auxiliary power supply. When any Train Operator's cab is activated. All the auxiliary power supply equipment in the Train shall operate. In the event of failure of an auxiliary power supply equipment in 8 Car train, the remaining auxiliary power supply equipment must be capable of supplying all auxiliary power to the motor/trailer Cars for which it is installed, plus all of the 230V 50Hz 1 φ, 110V d.c. loads, 415V 3-phase for at least two third rated cooling capacity in each Car (of defective and healthy unit) and Auxiliary propulsion loads and	IEC60850 shall be preferred instead of full power at 31KV.	Tender condition prevails
			The auxiliary power supply system shall be configured such that it performs reliably for all operating train consists. Full auxiliary power shall be available from 19KV to 31KV.	Tender condition prevails

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		emergency loads of the 6/38 Car train. All three auxiliary power supply units shall work in parallel synchronous operation control in normal as well as degraded and emergency mode.		
125.	9.1.3	The auxiliary power distribution scheme shall be such configured that each main transformer shall feed to one auxiliary power supply. When any Train Operator's cab is activated. All the auxiliary power supply equipment in the Train shall operate. In the event of failure of an auxiliary power supply equipment in 8 Car train, the remaining auxiliary power supply equipment must be capable of supplying all auxiliary power to the motor/trailer Cars for which it is installed, plus all of the 230V 50Hz 1 φ, 110V d.c. loads, 415V 3-phase for at least two third rated cooling capacity in each Car (of defective and healthy unit) and Auxiliary propulsion loads and emergency loads of the 6/38 Car train. All three auxiliary power supply units shall work in parallel synchronous operation control in normal as well as degraded and emergency mode.	Car configuration to be corrected as 6/3 car train.	Please refer corrigendum-1
126.	9.1.5	Aux converters are underframe mounted	The mounting requirement of Traction converter is not mentioned	Underframe mounted
127.	9.2.8	<b>(iv) .....The diagnostics system memory shall be retained for at least 400 events.</b>	We understand that the auxiliary converter shall use a control scheme that contains extensive diagnostic logic, which shall be fully integrated with TCMS. At a minimum, the diagnostics system shall report to TCMS about fault with supporting environmental data to enable maintenance staff to identify the faulty component by following the troubleshooting instructions. Further, expectation is to store the train diagnostics and this shall be done at TCMS level, not at sub-system level to get consolidated diagnostics. Kindly confirm.	Tender condition prevails

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
128.	9.2.10	<b>Industrial 415V 50Hz 3φ socket outlets with spring loaded covers</b> , capable of accepting a shore supply shall be provided on each Car having Auxiliary Power Supply unit at sole-bar level, on both sides. Each shall be accompanied by a red lamp, to warn of live sockets, when a shore supply is plugged in. The control logic shall ensure that train power up is not possible when shore supply is applied to the train. The design and type of the interface connector shall be submitted to the Independent Engineer for review. Adequate numbers of the mating connectors shall be maintained for installation in the depot.	We understand that the Industrial socket is not mandatorily needed to be integrated on auxiliary converter unit, separate socket shall also be acceptable.	Tender condition prevails
129.	9.2.13	In case of failure of one APS, the battery of faulty APS shall also get charged from Healthy one.	It is recommended to charge the battery locally. Hence may review and delete the clause.	Tender condition prevails
130.	9.2.16	24V DC LED based lighting arrangement shall be provided in the APS box for maintenance purpose. <b>Its failsafe interlocking</b> with the box cover shall be ensured. Lessor shall submit the detail document for Independent Engineer's review during design stage.	We understand that the LED based lighting arrangement shall be provided in the inverter box for maintenance purpose with necessary interlock with the box cover to ensure lights goes off when box cover closed. Failure of light or switching element (snap action) can be checked during regular maintenance activity and hence failsafe interlock is not needed.  Kindly Confirm	Tender condition prevails
131.	9.3.2	The battery charger shall be capable of charging a discharged battery to 80% full charge within 4 hours. Once the battery is fully charged, float charge should stop after 10 minutes.	Float charge should not be stopped.	Please refer corrigendum-1
132.	9.3.4	In case of failure of one Auxiliary Power Supply (APS), the battery connected to the faulty APS shall also be charged from the healthy APS. Detailed scheme be finalised during design.	It is recommended to charge the battery locally. Hence may review and delete the clause.	Tender condition prevails

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
133.	9.4.1	6/3-Car train shall be equipped with at least 2/1 battery sets consisting of nickel cadmium cells having a nominal voltage of 110V with cell casing of stainless steel or alternative robust flame-resistant material. The battery shall be rated and tested in accordance with the requirements of IEC 60623 and shall also meet the requirements of IEC 60993.	<p>Clause may be corrected as below for redundancy in 3-car configuration.</p> <p>6/3-Car train shall be equipped with at least 2/4 battery sets consisting of nickel cadmium cells having a nominal voltage of 110V with cell casing of stainless steel or alternative robust flame-resistant material. The battery shall be rated and tested in accordance with the requirements of IEC 60623 and shall also meet the requirements of IEC 60993.</p> <p>We requests to clarify quantity of Battery &amp; Battery chargers as there are inconsistent (1 battery vs 3 ACM )</p>	Please refer corrigendum-1,
134.	9.6.1	HVAC requirements	The redundancy requirement in the operation of HVAC equipment is not clear	Inverter shall be provided to feed the ventilation fans in case of non-availability of APS power.
135.	10.1.6	During the development of TCMS for the project, the K-RIDE may depute team of engineers to fully associate with the TCMS/controls design work so as to make them competent to <b>implement software changes as required</b> within the scope of this contract. Lessor shall ensure full association and support of Lessor's team with the K-RIDE_s team throughout the project or as the case may be	We understand that training of K-RIDE team to make them component to implement software changes as required within the scope of this contract do not require sharing of Source Code or any IPR details with the KRIDE deputed team. As the Source Code of TCMS or any proprietary software can not be shared by any Bidder considering these are proprietary items with Intellectual Property right.	Please refer corrigendum-1
136.	10.1.7	<b>TCMS shall be SIL2 compliant.</b> Any change in SIL Level shall be subject to the hazard analysis and acceptance or otherwise of the same by the Independent Engineer whose decision shall be final & binding.	Bidder understands SIL2 functions will be implemented through low voltage logic(LV) based on preliminary hazard analysis	Yes
137.	10.3.3	All the TCMS nodes of the train shall be linked by a <b>dual redundant Train bus</b> . A single failure in the train bus shall not affect data acquisition and processing.	Request to modify the Clause (10.3.3) as below "All the TCMS nodes of the train shall be linked by a dual redundant Train bus OR Ethernet ring type Network architecture as per IEC 61375-3-4 with TRDP protocol. A single failure in the train bus shall not affect data acquisition and processing."	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
138.	10.4.9	Single point uploading of software and down loading of faults shall be possible from TCMS nodes in each Car. In-case of sub supplier's equipment like doors, PIS, HVAC etc. also, single point uploading of software and down loading of faults train basis shall be ensured. Single point uploading of <b>all software of all sub systems/systems shall be possible in less than 10 minutes.</b> In addition, it shall be possible to update software, modify parameter setting etc. of one or more of the selected sub-systems by Lessor's maintenance personnel using <b>remote wireless access</b>	It is not advisable to upload software from ground to train due to Cyber and safety constraints In this regard, request Employer to modify the Clause (10.4.9) as below - Single point uploading of <del>all</del> software of one sub systems/systems shall be possible in less than 10 minutes.	Tender condition prevails
	10.6.3	The Lessor shall submit the detailed list of features proposed to be controlled through TCMS. Unless otherwise indicated specifically in these specifications, hardwire back up shall be provided for each safety related control functions.	Please define the safety related function required	Including but not limited to a) Vehicle Automatic Train Control operation mode (ATP, ATO, UTO etc.), b) Door Proving loop cut-out, c) PWM transmission (communication), d) PWM signal (Hardware) failure, e) Door Open & Door Close command, f) Direction control of train operation, g) Holding brake release, h) Speed transmission, i) Fire alarm transmission) ED (Electro Dynamic) brake cut-out signal transmission, k) Actual ED brake effort signal transmission l) Wheel Sliding signal transmission to Signalling, Brakes and Traction systems,

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
				m) ED brake effective signal transmission, n) Holding Brake demand signal transmission, o) Holding Brake applied status transmission; p) Deadman function q) Wheel Slip signal transmission to Signalling, Brakes and Traction systems, r) Traction / braking command/demand/authorization signal failure, s) Traction / braking command / demand / authorization transmission (communication), t) Electropneumatic brake isolation in bogie(s), u) Brake demand / applied signal transmission, v) Request and reset of Passenger Emergency Activation w) Real time remote transmission of train data as defined
139.	10.9.3	Remote Downloading Provision (i) Trains on the Mainline  The downloading shall be real time/time interval actuated/fault actuated/manual triggered.	Whether the wayside Signaling provide the communication link between train antenna and the server location ?! Please clarify.  Whether CMMS is in KRIDE's scope? Please clarify.  Please allow the bidder to choose for data storage solution i.e., cloud solution or 'on premise' server.  Please provide Depot's final drawing comprising layout, elevation plan and materials used in construction above ground level.  Computer Based Maintenance Management System (CMMS)/AMS shall be part of/linked with this software	Yes but at the terminal station, depots, micro depots.  Yes, It is in the scope of KRIDE  Agreed  Will be provided  Yes

<b>SN</b>	<b>Clause No.</b>	<b>Original Clause</b>	<b>Query &amp; Suggestions</b>	<b>Remarks</b>
140.	10.11.1	The software and communication protocols used throughout the TCMS and the interfaces to subsystems shall be to a <b>common standard or standards</b>	Request you to modify the requirement to allow TRDP protocol to be followed by subsystems as per the IEC 61375-3-4	Please refer corrigendum-1
141.	11.2.1	Table External/ Internal conditions Summer 36 deg DB, 65% RH monsoon 32 Deg DB , 85% RH	Values seems to be copied form other metro project. The external conditions shall be in line with BMRCL metro projects. Summer 35.2 deg DB, 19.6 deg WB monsoon 27.3 Deg DB, 23 deg WB Request to update the external conditions (In clause 15.21.1 also)	Please refer corrigendum-1
142.	11.2.6 C	Saloon Pressure: The HVAC supply air blower shall pressurize the Car with all doors closed and vestibules blocked condition. The value of interior static pressure shall be between 15 to 40 Pa.	Saloon Pressure: The HVAC supply air blower shall pressurize the Car with all doors closed and vestibules blocked condition. The value of interior static pressure shall be between 5 to 15 Pa.	Tender condition prevails
143.	11.2.6 D	Uniform Air Distribution: Uniform air distribution must meet the specification of EN 14750. CFD analysis in degraded mode of DM Car with worst condition (HVAC adjacent to driver's panel/ Driver's cab failed) must have satisfaction of the Independent Engineer.	The temperature and humidity level inside the car will be higher than the desired conditions in degraded mode of operation. 25 deg and 65 RH cannot be maintained	Tender condition prevails
144.	11.2.8	In case of fire detected inside Car, the emergency ventilation system shall be able to pump in at least 18m <sup>3</sup> /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.	It is preferred to shut off the HVAC unit during internal fire condition	Tender condition prevails
145.	11.6.1	The Lessor shall provide twin or more hermetic scroll/rotary compressors with VVVF control proven for sufficiently long time in Metro service.	Request to update the cluse by adding option of using energy efficient fixed speed service proven compressors also.	Tender condition prevails
146.	11.2.11	The cleaning of the filters shall not be required before 5000 kms of train run	The cleaning of the filters shall not be required before 5000 kms / 15 days of train run which ever is earlier	Please refer corrigendum-1

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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
147.	12.5.3	Fire survival cables for PA system	It shall be made mandatory for door controls and fire detection system as well	Please refer corrigendum-1
148.	14.14.1	Software shall be written in a structured manner and fully documented during all stages of its design and development, with at least two levels of documentation above the source code level.	Software shall be written in a structured manner and fully documented during all stages of its design and development; <del>with at least two levels of documentation above the source code level.</del>	Tender condition prevails
149.	14.14.5	Sufficient software documentation shall be provided to give the Independent Engineer a full understanding of the software function and operation. Documentation shall be complete, yet clear and concise, and include all modifications up to final acceptance. <b>Documentation shall include software block diagrams showing signal flow, logic, and hardware interfaces.</b> A top level flow diagram and description of detailed operation shall be provided.	Based on prior experience, OEMs will only provide standard documents. Intellectual Property like software block diagrams showing logics, transition states, algorithms, signal flow and software parameters etc. will not generally be shared by sub-contractor/OEMs.  In view of the above, requested to update the ERTS clause suitably.	Please refer corrigendum-1
150.	14.15.6	Printed circuit board extenders shall be provided for test purposes. The Lessor shall provide detailed maintenance and troubleshooting procedures, including <b>wave-forms at critical locations</b> of the circuitry.	Wave form of electronic circuit is proprietary information. Based on prior experience, OEMs will only provide standard documents. Intellectual Property documents will not be shared by sub-contractor/OEMs. In view of the above, requested to update the ERTS clause suitably.	Tender condition prevails. It is not necessary to provide detailed circuit of cards however output at junction points shall be able to be checked.
151.	15.29.1	The Independent Engineer reserves right to witness any or all of the type / routine tests or FAI. For following type tests, the Lessor shall bear complete, , visa, lodging etc.) as per Clause 15.1.9 for inspection by Independent Engineer / K-RIDE or it's representatives.	<u>The clause content may be modified as below in-line with cl. no.1.10.3 of Appendix TL. Design Submission Requirement:</u> The Independent Engineer reserves right to witness any or all of the type / routine tests or FAI. <del>For following type tests, the Lessor shall bear complete expenses (including daily allowance, travel, visa, lodging etc.) as per Clause 15.1.9 for inspection by Independent Engineer / K RIDE or it's representatives.</del>	Please refer corrigendum-1.



SN	Clause No.	Original Clause	Query & Suggestions	Remarks
152.	Table 15.2		The maximum speed requirement mentioned in the table (85kmph) may be reviewed in line with ERTS 3.22, where operating speed is 80kmph.	Please refer corrigendum-1
153.	15.16.1	A complete set of brake equipment comprising all items of equipment forming the Brake System shall be assembled and shall be subjected to brake dynamometer tests. These shall include the Brake Controller and interface with ATO equipment and a transceiver to measure force at the push rod of Brake unit. A complete series of tests shall be Carried out on this rig under all service conditions to demonstrate the function of the brake system as a whole, both in manual and auto modes.	<p>Brake system level simulation at basic unit level will be done simulating brake signal interfaces of TCMS/hardwire in a dedicated test bench. It is considered as type test. Reservoir is used to simulate brake cylinder volume and corresponding brake cylinder pressure.</p> <p>Tread brake unit will be tested for brake force in a dedicated test bench for various pressures and to simulate wear of block/wheel for checking the functionality of automatic slack adjustment.</p> <p>Complete series of test will be done either in manual or auto mode.</p> <p>Combined test bench will increase complexity and limit checking all the functionalities of brake controls and bogie brake apart from being highly expensive.</p> <p>As a standard and best engineering practice, Tread brake unit will always be tested in dedicated test bench for checking the functionality of automatic slack adjustment in series manufacturing.</p> <p>The clause may please be suitably changed inline with the above recommendation.</p>	Please refer corrigendum-1
154.	15.23.1	<p>Every roof mounted HVAC package unit shall be subjected to routine test at the manufacturer's works as given below:</p> <ul style="list-style-type: none"> <li>i) Dimensional &amp; Visual inspection</li> <li>ii) Conditioned air-delivery test</li> <li>iii) Fresh air quantity test</li> <li>iv) Measurement of power</li> <li>v) Electrical test.</li> </ul>	<p>The following tests are conducted as type tests only.</p> <ul style="list-style-type: none"> <li>ii) Conditioned air-delivery test</li> <li>iii) Fresh air quantity test</li> <li>iv) Measurement of power</li> </ul> <p>Request to kindly update the clause</p>	Please refer corrigendum-1

SN	Clause No.	Original Clause	Query & Suggestions	Remarks
155.	Appendix TP Clause 1.4.4	<p>The Documents Management System (DMS) shall be PC based, menu driven and user friendly with extensive linkages between OEM’s documents, spare parts catalogues, test certificates, HECPs, SECPs etc. The DMS to be used shall be demonstrated and approval of the Independent Engineer obtained.</p> <p>After Taking Over Certificate, one copy of the DMS, fully functional shall be handed over. The Lessor shall however keep another set updated &amp; handover the second set to K-RIDE one month before the expiry of DLP. Language used shall be subject to Independent Engineer’s review.</p>	<p>What is DLP in context of TS clause 1.4.4(Documents Management System)? Please explain.</p>	<p>Please Refer corrigendum-1</p>
156.	Appendix ECR Clause 1	<p>Lessor shall note that ‘SPECIFIC ENERGY CONSUMPTION (SEC)’ shall be verified in any one corridor of BSRP as agreed with KRIDE under conditions detailed hereafter in this clause shall not exceed 48 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs. Lessor shall submit detailed simulation results for all corridors of BSRP in Pre-Final Design stage.</p>	<p><u>The clause and other relevant clauses may be modified as below as per MOHUA guidelines:</u> Lessor shall note that ‘SPECIFIC ENERGY CONSUMPTION (SEC)’ shall be verified in any one corridor of BSRP (which can be selected by the Lessor) under conditions detailed hereafter in this clause shall not exceed 50 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs. Lessor shall submit detailed simulation results for all corridors of BSRP in Pre-Final Design stage.</p>	<p>Tender condition prevails</p>
157.	Appendix ECR Clause 2	<p>This Specific Energy Consumption shall be total of two components viz. SEC for 3/6 car train (with VAC switched off) i.e. ‘SECP’ value and SEC of VAC for 3/6 car train i.e. ‘SECH’ value. These two values shall be declared by the Lessor (SECP-declared + SECH-declared) during Preliminary Design stage and the same shall be validated in pre-final design stage and verified in combine testing and mainline testing. The total declared SEC value i.e. SEC declared for 3/6 car train as declared</p>	<p><u>The clause and other relevant clauses may be modified as below as per MOHUA guidelines:</u> This Specific Energy Consumption shall be total of two components viz. SEC for 3/6 car train (with VAC switched off) i.e. ‘SECP’ value and SEC of VAC for 3/6 car train i.e. ‘SECH’ value. These two values shall be declared by the Lessor (SECP-declared + SECH-declared) during Preliminary Design stage and the same shall be validated in pre-final design stage and verified in combine testing and</p>	<p>Tender condition prevails</p>

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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
		by the Lessor i.e. SECP-declared + SECH-declared shall not exceed the SECS i.e. 48 Wh/GTKM as mentioned above.	mainline testing. The total declared SEC value i.e. SEC declared for 3/6 car train as declared by the Lessor i.e. SECP-declared + SECH-declared shall not exceed the SECS i.e. 50 Wh/GTKM as mentioned above.	
158.	Appendix ECR Clause 4	In the event of measured SEC exceeding 48 Wh/GTKM, Lessor shall carry out rectification / modification work on the train, within a reasonable time as agreed with KRIDE to achieve 48 Wh/GTKM. Lessor fails to achieve 48 Wh/GTKM, Performance Security will be held and other action will be taken as per Contract.	The clause and other relevant clauses may be modified as below as per MOHUA guidelines: In the event of measured SEC exceeding 50 Wh/GTKM, Lessor shall carry out rectification / modification work on the train, within a reasonable time as agreed with KRIDE to achieve 50 Wh/GTKM. Lessor fails to achieve 48 Wh/GTKM, Performance Security will be held and other action will be taken as per Contract.	Tender condition prevails
159.	Appendix ECR Clause 10 a) (v)	The train operation in Normal mode shall be in maximum acceleration and deceleration with no coasting till maximum speed is achieved and thereafter speed is maintained within 5 kmph below than the maximum speed.	The condition specified for Normal mode in this clause is not aligned with the requirement specified in 3.22.3(a). <u>The clause may be modified as below:</u> The train operation in Normal mode as per the Guaranteed “Declared Schedule Speed (DSSP) in Kmph for a round trip as specified in 3.22.3(a).	Tender condition prevails
160.	Appendix ECR Clause 10 b) (iv)	Inside car temperature shall be maintained at 25°C and relative humidity of 65%. Lessor shall note that the car inside temperature before opening of the saloon doors at each station shall be within 25°C.	Temperature and Humidity are maintained as per the EN 14750 requirements	Tender condition prevails
161.	Appendix ECR Clause 10 b) (vi)	Loading Condition: Heat load of AW3 numbers of persons as per EN 14750-1, throughout the round trip including the terminal turnaround time.	Loading Condition: Heat load of AW3 numbers of persons as per EN 14750-1, throughout the round trip Excluding the terminal turnaround time.	Tender condition prevails
162.	General	Route profile details not provided	This is required for performance calculation	Will be provided
163.	General	Duty cycle details not provided	This is required for performance calculation	Refer Schedule-A-appendix ECR-10(viii)
164.	1.5	K-RIDE reserves the right to optimise the headway, number of Trains to be inducted in service during any	We understand that by exercising this clause it will not dilute the rights of lessor for payment of Unit Lease charges and	No, As K-RIDE guarantees the payment for Minimum Guarantee

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<b>SN</b>	<b>Clause No.</b>	<b>Original Clause</b>	<b>Query &amp; Suggestions</b>	<b>Remarks</b>
		hour, pattern of train operation etc. as per the passenger flow in accordance with the terms of the Contract.	full payment as per the availability of trains shall be payable to lessor.	Annual Availability subject to the ensure the availability of Trains by Lessor.
165.	2.1 (i)	Language: Fluency in English, Kannada and Hindi language is compulsory.	It is requested to kindly review the requirement of Kannada as a compulsory language and make it optional as it may restrict the competent train operator	Tender condition prevails
166.	3.3.2	K-RIDE shall install suitable energy meter(s) to measure the electrical energy consumption by Lessor at the Depot Site(s) for both traction and non-traction usage of electrical energy. The energy meter reading shall be jointly recorded as per the billing cycle and K-RIDE shall advise the Lessor on the energy bills to be paid by the Lessor, the payment of which shall be made by Lessor to K-RIDE within the stipulated time.	Kindly note that based on operational experience by various Metro Authorities, sometimes 25kV traction supply need to be extended from one RSS to another in case of failure of any RSS. Also, we would like to bring to your kind attention that, recent renders where scope covers "Rolling Stock and Maintenance" together, it has been a standard practice to consider 'traction uses and its charges in the Scope of Metro Authorities'. Further it may be kindly noted that Traction Electrical Energy Consumption will have significant impact on the Project costing and may not be appropriate for benchmarking and viability of Project.	Refer clause-3.3.2 of condition of contract..
167.	3 (A)	"Required Hourly Availability", Rh Table 3A: Availability Plan for Weekdays	How to derive 59 (Rh) Required Hourly Availability	Please refer Corrigendum 1.
168.	3 (D)		Public Holidays and Special Events K-RIDE shall provide the list of public holidays and special events such as (odd even drive, sports tournament, religious rally declared etc.) and the corresponding Availability Plan to the Lessor no later than 15 (fifteen) days prior to the beginning of a calendar year, provided that the obligation of the Lessor to provide Available Trains shall not exceed 59 (fifty-nine) Trains in accordance with the Availability Plan during any Specified Hour Slot in a day.	It is agreed that number of maximum Train in any particular hour slot will not be greater than required number of Trains under the Conditions of the Contract. We may agree on that K-RIDE shall provide the list of public holidays and special events such as (odd even drive, sports tournament, religious rally declared etc.) and the corresponding Availability Plan to the Lessor no later than 15 (fifteen)

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SN	Clause No.	Original Clause	Query & Suggestions	Remarks
				days prior to the beginning of a calendar year.
169.	Schedule - G		We request you to amend Schedule G -Key Dates shall be revised to enable Design, Manufacture, Supply of mature Train to meet defined reliability requirements. Revised Schedule G along with the proposed changes in the 'Key Dates' is enclosed for your kind consideration.	Please refer corrigendum - 1.
170.	Schedule - G	Supply of 264 Cars (Excluding anticipated 10% maintenance reserve and 5% traffic reserve)	Is there any provision for reduction of percentage of cars for maintenance reserve & traffic reserve.  Kindly confirm the configuration of trains for anticipated 10% maintenance reserve and 5% traffic reserve under each category.	The bidder is responsible for estimating its own maintenance and traffic reserve to ensure the availability of the required number of trains in accordance with the Conditions of the Contract.
171.	Schedule - G	Integrated testing and commissioning after completion of statutory tests and deployment of Train under revenue service (COD).	1. Kindly confirm when the COD (Commercial operation date) shall be Completed. 2. Please confirm where the COD will be Performed. If it is to be done at depot please mention the name of the depot. 3.Please confirm the place of delivery of rolling stocks	Will be provided
172.	Schedule - G	1.Complete Design Submission-60 Weeks from the appointed date. 2. Supply of Prototype of one train of 3 cars and one train of 6 Cars with associated S&T equipment at the depot site	1. The Time given for design submission seems to be less, BHEL have Technology collaboration agreement with M/s Kawasaki Japan. Being a new design, we request kindly modify with 104 weeks from appointed date in place of 60 weeks. 2. Accordingly delivery timeline for Proto type trains to be amended as 156 weeks and supply of series trains to be modified suitably.	Tender condition prevails
173.	Schedule - G	Supply of Prototype of one train of 3 cars and One train of 6 Cars with associated S&T equipment at the depot site	K-Ride has provided a revised Schedule-G in mail wherein delivery of prototype is mentioned as: -"Supply of Prototype of one train of 3 cars and two train of 3 Cars with associated S&T equipment at the depot site." Clarity needed from K-Ride on prototype delivery requirement, as in earlier 2 trains	Please see Corrigendum -1.

<b>SN</b>	<b>Clause No.</b>	<b>Original Clause</b>	<b>Query &amp; Suggestions</b>	<b>Remarks</b>
			of different configuration is mentioned whereas in revised sheet, 3 trains of 3 cars configuration is mentioned. Please clarify.	
174.	Schedule - G	1 Handover of minor depot sites at Kengeri and Heelalige-52 Weeks from the appointed date 2. Handover of major depot Sites at Devanahalli and Soladevanahalli-70 Weeks from the appointed date	We request K-Ride that major and minor Depots should be handover to lessor at the time of award of Contract.	Tender condition prevails.
175.	Schedule R		Annexure for CORRIDOR PROFILE, DEPOT LAYOUTS etc not available. Request to share.	Corridor Profile and Depot Layout are placed at Annexure 7 and 10 of Schedule – R respectively.
176.			Kindly clarify after supply of trains if there is any delay in readiness of civil infrastructure/S&T/associated equipment's from K-Ride for corridor, then Unit Lease charges along with unit maintenance charges would be payable to lessor or NOT.	K-RIDE guarantees the payment for Minimum Guarantee Annual Availability subject to the ensure the availability of Trains by Lessor as per Conditions of Contract.
177.			K-Ride to clarify how many trains it will operate in which corridor.	Details will be provided in due course