

**CP26 / ARE02A Contract (Addendum 01)**

S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition																												
1	Part 1	Section III (EQC)	Section 2 All EQC Tables	Existing Compliance Requirements Column Header: <table border="1"> <thead> <tr> <th colspan="4">Compliance Requirements</th> </tr> <tr> <th rowspan="3">Single Entity</th> <th colspan="3">Joint Venture (Existing or Intended)</th> </tr> <tr> <th>All Parties Combined</th> <th>Each Member</th> <th>One Member</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Compliance Requirements				Single Entity	Joint Venture (Existing or Intended)			All Parties Combined	Each Member	One Member				Revised Compliance Requirements Column Header: <table border="1"> <thead> <tr> <th colspan="4">Compliance Requirements</th> </tr> <tr> <th rowspan="3">Single Entity</th> <th colspan="3">Joint Venture (Existing or Intended)</th> </tr> <tr> <th>All Parties Combined</th> <th>Each Member</th> <th>Lead Member</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Compliance Requirements				Single Entity	Joint Venture (Existing or Intended)			All Parties Combined	Each Member	Lead Member			
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2	Part 1	Section III (EQC)	2.3.1	In case of JV: All Parties Combined: N/A Each Member: Must meet requirement One Member: N/A	In case of JV: All Parties Combined: N/A Each Member: Must meet requirement # <b>Lead Member: Must meet requirement</b>  # -In case the JV member is a wholly owned Indian Subsidiary of the Lead member, apart from fulfilling the criteria for Lead member, the JV as a whole (All parties combined) has to fulfil the full requirements. In such a scenario, the criteria for each member requirement for the wholly owned Indian subsidiary will not be applicable, provided that they are part of JV.																												
3	Part 1	Section III (EQC)	2.3.2	In case of JV: All Parties Combined: Must meet requirement Each Member: Must meet 25% of the requirement One Member: Must meet 40% of the requirement	In case of JV: All Parties Combined: N/A Each Member: Must meet 25% of the requirement # <b>Lead Member: Must meet 40% of the requirement</b>  # -In case the JV member is a wholly owned Indian Subsidiary of the Lead member, apart from fulfilling the criteria for Lead member, the JV as a whole (All parties combined) has to fulfil the full requirements. In such a scenario, the criteria for each member requirement for the wholly owned Indian subsidiary will not be applicable, provided that they are part of JV.																												
4	Part 1	Section III (EQC)	2.3.3	In case of JV: All Parties Combined: Must meet requirement Each Member: Must meet 25% of the requirement One Member: Must meet 40% of the requirement	In case of JV: All Parties Combined: N/A Each Member: Must meet 25% of the requirement # <b>Lead Member: Must meet 40% of the requirement</b>  # -In case the JV member is a wholly owned Indian Subsidiary of the Lead member, apart from fulfilling the criteria for Lead member, the JV as a whole (All parties combined) has to fulfil the full requirements. In such a scenario, the criteria for each member requirement for the wholly owned Indian subsidiary will not be applicable, provided that they are part of JV.																												
5	Part 1	Section III (EQC)	2.4.1	In case of JV: All Parties Combined: N/A Each Member: Must meet requirement One Member: N/A	In case of JV: All Parties Combined: N/A Each Member: Must meet requirement # <b>Lead Member: Must meet requirement</b>  # -In case the JV member is a wholly owned Indian Subsidiary of the Lead member, apart from fulfilling the criteria for Lead member, the JV as a whole (All parties combined) has to fulfil the full requirements. In such a scenario, the criteria for each member requirement for the wholly owned Indian subsidiary will not be applicable, provided that they are part of JV.																												
6	Part 1	Section III (EQC)	2.6	<b>Establishment of manufacturing facility in India:</b> The successful bidder shall ensure that 75% of the quantity ordered in this bid is achieved by establishing / established metro cars manufacturing facility in India to manufacture or utilize existing Rolling Stock manufacturing facility in India for assembly Works.  The Contractor shall provide declaration through the Form Manufacturing Facility that he will establish / established manufacturing facility in India to manufacture or utilize existing Rolling Stock manufacturing facility in India for assembly Works 75% of the total ordered quantity.	<b>Establishment of a Rolling Stock manufacturing facility in India:</b> The successful bidder shall ensure that 75% of the <b>rolling stock (applicable to Base order quantity only)</b> ordered in this bid <b>shall be</b> achieved by establishing a metro car manufacturing facility in India (or otherwise utilizing an existing Rolling Stock manufacturing facility in India) for assembly Works.  By way of declaration, Bidders shall fill <u>6.11 Form Manufacturing Facility: Establishment of manufacturing facility in India.</u>																												
7	Part 1	Section - IV (Bidding Forms)	2 Table A	Note (b) : Bidder shall submit the filled above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof.	Note (b): Bidder shall duly fill and submit the above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof. <b><u>Indices values which are not available during the bid submission date shall be submitted before signing of Contract Agreement.</u></b>																												
8	Part 1	Section - IV (Bidding Forms)	2 Table B	Note (b) : Bidder shall submit the filled above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof.	Note (b): Bidder shall duly fill and submit the above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof. <b><u>Indices values which are not available during the bid submission date shall be submitted before signing of Contract Agreement.</u></b>																												
9	Part 1	Section - IV (Bidding Forms)	2 Table C	Note (b) : Bidder shall submit the filled above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof.	Note (b): Bidder shall duly fill and submit the above table (Column d, Column e & Column g) and include along with their Price bid and necessary proof. <b><u>Indices values which are not available during the bid submission date shall be submitted before signing of Contract Agreement.</u></b>																												
10	Part 1	Section - IV (Bidding Forms)	3.2.2(g)	If the currency of the index specified in 'Schedule of adjustment data' of Section IV – Bidding Forms is different from the currency of payment, a correction factor will be applied to avoid incorrect adjustment of the Contract Price. The correction factor shall correspond to the ratio of the exchange rates between the two currencies (Currency of payment and currency of index) on the Base date and the date of adjustment, as defined above.	Deleted																												

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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
11	Part 1	Section - IV (Bidding Forms)	3.2.2(h)	The value of the index on the Base date will be converted into a notional index in the currency of payment using the exchange rate on the base date between the currency of the index and the currency of payment. This notional index value will be used as "So", "Ao", "Co" "Fo" and "Lo" as applicable. The value of the index on the adjustment date in notional terms will be computed likewise using the exchange rate on the date of adjustment. These notional index values will correspond to "Sn", "An", "Cn", "Fn" and "Ln" as applicable.	<p>If the currency of the index specified in 'Schedule of adjustment data' of Section IV – Bidding Forms is different from the currency of payment, the value of the index on the Base date will be converted into a notional index in the currency of payment using the exchange rate on the base date between the currency of the index and the currency of payment. This notional index value will be used as "So", "Ao", "Co" "Fo" and "Lo" as applicable. The value of the index on the adjustment date in notional terms will be computed likewise using the exchange rate on the date of adjustment. These notional index values will correspond to "Sn", "An", "Cn", "Fn" and "Ln" as applicable.</p> <p>For instance, Consider, Currency of index = USD Currency of Payment = JPY Here, currency of index is different from Currency of payment</p> <p>Exchange rate of USD to JPY on base date = X<sub>o</sub> Exchange rate of USD to JPY on date of adjustment = X<sub>n</sub> "Exchange rate" means equivalent value of JPY for 1 USD</p> <p>Cost index of stainless-steel S<sub>n</sub> and S<sub>o</sub> considered for calculation. Cost Index fraction of stainless steel is S<sub>n</sub>/S<sub>o</sub></p> <p><b>Notional index fraction calculated is = <math>\frac{S_n}{S_o} \times \frac{X_n}{X_o} = \frac{S_n^{notional}}{S_o^{notional}}</math></b></p>
12	Not Used				
13	Part 1	Section - IV (Bidding Forms)	3.3.1	The Employer may at its entire discretion advise the Contractor in writing of its intention to increase the total quantity by up to 126 cars (42 Trainsets of 3 Car configuration).	The Employer may at its entire discretion advise the Contractor in writing of its intention to increase the total quantity by up to <b>30 cars (10 Trainsets of 3 Car configuration)</b> .
14	Part 1	Section - IV (Bidding Forms)	4.1.19	Price Centre 'RS-D' and 'RS-E' comprises of all those obligations and ongoing activities throughout the Contract associated with Formation and running of 'Offshore manufacture' and 'Indigenous manufacture' of trains respectively in Depot/ test track. This includes but not limited to. a) Formation of trains, b) completion of functional tests and c) running of trains in the Depot and test track.	Price Centre 'RS-D' and 'RS-E' comprises of all those obligations and ongoing activities throughout the Contract associated with Formation and running of 'Offshore manufacture' and 'Indigenous manufacture' of trains respectively in Depot/ test track. This includes but not limited to. a) Formation of trains, b) completion of functional tests and c) running of trains in the Depot and test track. <b>d) All inspection, testing of train static and dynamic in Depot and mainline as per ERTS section 17.8</b>
15	Part 1	Section - IV (Bidding Forms)	4.3	All of Section 4.3	All of Section 4.3 is replaced by <b>Annexure (01)</b> .
16	Part 1	Section - IV (Bidding Forms)	4.4.7	<u>Table form header</u> Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a) Formation of train, obtaining certificate of satisfactory completion of functional tests and running of train in the Depot. For;	<u>Table form header</u> Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a) Formation of train, obtaining certificate of satisfactory completion of functional tests, running of train in the Depot <b>and train static &amp; dynamic tests in the mainline.</b>
17	Part 1	Section - IV (Bidding Forms)	4.4.13	Bidding Forms Table: DM&P-Q : Taxes, Duties, Levies etc	<b>The Second (2nd) Table Only in Section 4.4.13 is replaced by Annexure (02)</b>
18	Part 1	Section - IV (Bidding Forms)	4.4.14	Bidding Forms Table: DM&P-R : Taxes, Duties, Levies etc	<b>The Second (2nd) Table Only in Section 4.4.14 is replaced by Annexure (03)</b>
19	Part 1	Section - IV (Bidding Forms)	4.4.15	Bidding Forms Table: DM&P-S : Taxes, Duties, Levies etc	<b>The Second (2nd) Table Only in Section 4.4.15 is replaced by Annexure (04)</b>
20	Part 1	Section - IV (Bidding Forms)	4.4.16	Bidding Forms Table: DM&P-T : Taxes, Duties, Levies etc	<b>The Second (2nd) Table Only in Section 4.4.16 is replaced by Annexure (05)</b>
21	Part 1	Section - IV (Bidding Forms)	4.4.8	<u>Table form header</u> Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a) Formation of train, obtaining certificate of satisfactory completion of functional tests and running of train in the Depot. For;	<u>Table form header</u> Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a) Formation of train, obtaining certificate of satisfactory completion of functional tests, running of train in the Depot <b>and train static &amp; dynamic tests in the mainline.</b>
22	Part 1	Section - IV (Bidding Forms)	4.4.11	Training for the Employer's staff shall be arranged and will be conducted at: .....	Training for the Employer's staff ( <b>two trainer man months</b> ) shall be arranged and will be conducted at: .....

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23	Part 1	Section - IV (Bidding Forms)	4.4.13	DM&P-Q2 : Automatic Train Wash Plant ( 1 Nos ) DM&P-Q16 : Bogie Manipulator ( 2 Nos )	DM&P-Q2 : Automatic Train Wash Plant ( 2 Nos ) DM&P-Q16 : Bogie Manipulator ( 1 Nos )
24	Part 1	Section - IV (Bidding Forms)	5.15	Certificate confirming Tender requirement for Japanese Goods & Services  This is to certify that we, M/s. [Insert name of the company (Single Entity / JV)] have carefully examined all the requirements stipulated in Part 1: Section V – ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS for meeting a minimum of 30.069% Japanese Goods & Services as required by the tied loan conditions (excluding Price Centre RS-CMC & DM&P-CMC).	Certificate confirming Tender requirement for Japanese Goods & Services  This is to certify that we, M/s. [Insert name of the company (Single Entity / JV)] have carefully examined all the requirements stipulated in Part 1: Section V – ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS for meeting a minimum of 30.069% Japanese Goods & Services as required by the tied loan conditions (excluding Price Centre RS-CMC, DM&P-CMC <b>and Taxes &amp; Duties</b> ).
25	Part 1	Section - IV (Bidding Forms)	6.12.23	We, M/s (Name of the End user) have procured (mention Quantity) numbers of Catenary Maintenance Vehicle from M/s. (Name of the manufacturer) on (Contract Award date).  The Catenary Maintenance Vehicle equipped with onboard signaling system (mention Quantity) are in service since (DD-MM-YYYY).  The performance of Catenary Maintenance Vehicle is found satisfactory.	We, M/s (Name of the End user) have procured (mention Quantity) numbers of Catenary Maintenance Vehicle from M/s. (Name of the manufacturer) on (Contract Award date).  The Catenary Maintenance Vehicle (mention Quantity) are in service since (DD-MM-YYYY).  The performance of Catenary Maintenance Vehicle is found satisfactory.
26	Part 2	Section - VI A (ERTS RS)	2.14.1	b) The control system shall prevent line voltage oscillation and instability of the traction equipment.	<u>b) The power control system(s) shall ensure that when oscillation (or momentary fluctuations) of line voltage occur; there shall be no instability or damage caused to any train systems (in accordance with IEC 60850).</u>
27	Part 2	Section - VI A (ERTS RS)	2.14.1 Table 2-7	Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @ 8 passengers /sq.m) train on level tangent track : 1.0 m/s2	<b>Minimum Average</b> Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @ 8 passengers /sq.m) train on level tangent track : 1.0 m/s2
28	Part 2	Section - VI A (ERTS RS)	2.14.1 Table 2-7	Service braking rate from 80 kmph to standstill for - (seating plus standees @ 6 passengers / m2) train on level tangent track : 1.1 m/s2	<b>Minimum Average</b> Service braking rate from 80 kmph to standstill for - (seating plus standees @ 6 passengers / m2) train on level tangent track : 1.1 m/s2
29	Part 2	Section - VI A (ERTS RS)	2.14.1 Table 2-7	Emergency braking rate from 80 kmph to 0 kmph for fully loaded train on level tangent track : 1.3 m/s2	<b>Minimum Average</b> Emergency braking rate from 80 kmph to 0 kmph for fully loaded train on level tangent track : 1.3 m/s2
30	Part 2	Section - VI A (ERTS RS)	2.15.7.3	The parking brakes shall be capable of being applied or released from TCMS / OCC when the compressed air supply is present, or manually released, from outside the rake at track level when no compressed air is present.	The parking brakes shall be capable of being applied or released from TCMS / OCC when the compressed air supply is present, or manually released, from <b>the saloon</b> when no compressed air is present.
31	Part 2	Section - VI A (ERTS RS)	2.17.3.9	Door Operation Noise produced by simultaneous operation of all saloon doors on one side of the car shall not exceed 72dBA during the sliding operation and 75dBA for the locking / unlocking, measured on the fast meter scale. This should be measured at all points in the car 300mm from the doors and 1000mm above the floor during train stationary condition.	Door Operation Noise produced by simultaneous operation of all saloon doors on one side of the car shall not exceed <b>75 dBA</b> during the sliding operation and <b>78 dBA</b> for the locking / unlocking, measured on the fast meter scale. This should be measured at all points in the car 300mm from the doors and 1000mm above the floor during train stationary condition.
32	Part 2	Section - VI A (ERTS RS)	2.25.10 (b) v	Ambient (summer) conditions to be maintained outside the car. Ambient temperature, humidity and air speed of outside car shall be monitored as per EN 14750-2. Energy Consumption test shall be conducted at an air speed of 40 kmph.	Ambient (summer) conditions to be maintained outside the car. Ambient temperature, humidity and air speed of outside car shall be monitored as per EN 14750-2. Energy Consumption test shall be conducted at an air speed of <b>5 kmph</b> .
33	Part 2	Section - VI A (ERTS RS)	3.14.5.4	At closing speeds of 10 kmph to 25 kmph, the coupler shall absorb the additional energy within its sacrificial elements for AW2 loading condition. The couplers shall progressively collapse bringing into play the anti-climb protection which shall remain fully engaged and operational under the action of vertical shear loads (upwards and downwards) equivalent to half the Crush Loading Condition Car weight. For survival zone during collision scenario, the requirements of EN15227 Section 6.3 shall apply, or an equivalent analysis, if approved by CMRL.	At closing speeds of 10 kmph to 25 kmph, the coupler shall absorb the additional energy within its sacrificial elements <b>(loading condition as mentioned in EN 15227)</b> . The couplers shall progressively collapse bringing into play the anti-climb protection which shall remain fully engaged and operational under the action of vertical shear loads (upwards and downwards) equivalent to half the Crush Loading Condition Car weight. For survival zone during collision scenario, the requirements of EN15227 Section 6.3 shall apply, or an equivalent analysis, if approved by CMRL.
34	Part 2	Section - VI A (ERTS RS)	3.14.5.5	At a closing speed in excess of 25 kmph, the energy of impact of a car loaded to AW2 condition shall be absorbed initially as described above and then by appropriate measures, e.g., deformation and/or absorber concept, up to a speed advised by the Contractor.	At a closing speed in excess of 25 kmph, the energy of impact of a car <b>(loading condition as mentioned in EN 15227)</b> shall be absorbed initially as described above and then by appropriate measures, e.g., deformation and/or absorber concept, up to a speed advised by the Contractor.
35	Part 2	Section - VI A (ERTS RS)	3.14.9	3.14.9Crashworthiness  The carbody structure shall be designed according to European standard EN 12663 category PIII and crash scenarios defined in EN 15227 (Category CII), or as described below.  The end of each car shall have two corner posts, two collision posts and an anti-climbing device. In lieu of corner posts and collision posts the Contractor may propose a service proven collision buffer system that meets the requirements of EN 15227. For crash scenarios (under standard EN 15227 the car loading shall be taken as AW2).	3.14.9Crashworthiness  The carbody structure shall be designed according to European standard EN 12663 category PIII and crash scenarios defined in EN 15227 (Category CII), or as described below.  The end of each car shall have two corner posts, two collision posts and an anti-climbing device. In lieu of corner posts and collision posts the Contractor may propose a service proven collision buffer system that meets the requirements of EN 15227. For crash scenarios <b>(loading condition as mentioned in EN 15227)</b> .
36	Part 2	Section - VI A (ERTS RS)	3.14.10.1	i) one 3-car train in AW2-loading condition, traveling at 25 kmph, impacts another 3-car train similarly AW2 loaded Condition, which is standing still with friction brakes applied on level, tangent track so that the anti-climbing mechanisms engage.	i) one 3-car train <b>(loading condition as mentioned in EN 15227)</b> , traveling at 25 kmph, impacts another 3-car train similarly AW2 loaded Condition, which is standing still with friction brakes applied on level, tangent track so that the anti-climbing mechanisms engage.

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37	Part 2	Section - VI A (ERTS RS)	3.14.10.1	ii) one 3-car train in AW2-loading condition, traveling at 25 kmph, impacts another 3-car train similarly AW2 loaded Condition, which is standing still with unbraked on level, tangent track so that the anti-climbing mechanisms engage.	ii) one 3-car train ( <b>loading condition as mentioned in EN 15227</b> ), traveling at 25 kmph, impacts another 3-car train similarly AW2 loaded Condition, which is standing still with unbraked on level, tangent track so that the anti-climbing mechanisms engage.
38	Part 2	Section - VI A (ERTS RS)	3.14.10.1	iii) one 6-car train in AW2-loading condition, traveling at 25 kmph, impacts another 6-car train similarly AW2 loaded Condition, which is standing still with friction brakes applied on level, tangent track so that the anti-climbing mechanisms engage. (Trainsets configuration defined as per clause 2.2.12)	iii) one 6-car train ( <b>loading condition as mentioned in EN 15227</b> ), traveling at 25 kmph, impacts another 6-car train similarly AW2 loaded Condition, which is standing still with friction brakes applied on level, tangent track so that the anti-climbing mechanisms engage. (Trainsets configuration defined as per clause 2.2.12)
39	Part 2	Section - VI A (ERTS RS)	3.14.10.1	iv) one 6-car train in AW2-loading condition, traveling at 25 kmph, impacts another 6-car train similarly AW2 loaded Condition, which is standing still with unbraked on level, tangent track so that the anti-climbing mechanisms engage. (Trainsets configuration defined as per clause 2.2.12)	iv) one 6-car train ( <b>loading condition as mentioned in EN 15227</b> ), traveling at 25 kmph, impacts another 6-car train similarly AW2 loaded Condition, which is standing still with unbraked on level, tangent track so that the anti-climbing mechanisms engage. (Trainsets configuration defined as per clause 2.2.12)
40	Part 2	Section - VI A (ERTS RS)	3.14.10.2	a) Collision Scenario : • One 3-car trainset loaded to AW2 operating on level tangent track and moving at velocity V, impacts a similar, 3-car trainset loaded to AW2 stationary trainset which has all friction brake systems applied with a wheel/rail coefficient of friction of 0.3.	a) Collision Scenario : • One 3-car trainset ( <b>loading condition as mentioned in EN 15227</b> ), on level tangent track and moving at velocity V, impacts a similar, 3-car trainset loaded to AW2 stationary trainset which has all friction brake systems applied with a wheel/rail coefficient of friction of 0.3.
41	Part 2	Section - VI A (ERTS RS)	3.14.10.2	a) Collision Scenario : • One 3-car trainset loaded to AW2 operating on level tangent track and moving at velocity V, impacts a similar, 3-car trainset loaded to AW2 stationary trainset which is unbraked.	a) Collision Scenario : • One 3-car trainset ( <b>loading condition as mentioned in EN 15227</b> ), on level tangent track and moving at velocity V, impacts a similar, 3-car trainset loaded to AW2 stationary trainset which is unbraked.
42	Part 2	Section - VI A (ERTS RS)	3.14.10.2	a) Collision Scenario : • One 6-car trainset loaded to AW2 operating on level tangent track and moving at velocity V, impacts a similar, 6-car trainset loaded to AW2 stationary trainset which has all friction brake systems applied with a wheel/rail coefficient of friction of 0.3. (Trainsets configuration defined as per clause 2.2.12)	a) Collision Scenario : • One 6-car trainset ( <b>loading condition as mentioned in EN 15227</b> ), on level tangent track and moving at velocity V, impacts a similar, 6-car trainset loaded to AW2 stationary trainset which has all friction brake systems applied with a wheel/rail coefficient of friction of 0.3. (Trainsets configuration defined as per clause 2.2.12)
43	Part 2	Section - VI A (ERTS RS)	3.14.10.2	a) Collision Scenario : • One 6-car trainset loaded to AW2 operating on level tangent track and moving at velocity V, impacts a similar, 6-car trainset loaded to AW2 stationary trainset which is unbraked. (Trainsets configuration defined as per clause 2.2.12)	a) Collision Scenario : • One 6-car trainset ( <b>loading condition as mentioned in EN 15227</b> ), on level tangent track and moving at velocity V, impacts a similar, 6-car trainset loaded to AW2 stationary trainset which is unbraked. (Trainsets configuration defined as per clause 2.2.12)
44	Part 2	Section - VI A (ERTS RS)	6.9.4	If the Contractor chooses to propose a non-hybrid design; thus requiring conversion of the operating mode to be performed by staff at a maintenance depot, then the design of the detrainment door must ensure that the conversion process requires minimal effort and can easily be accomplished by no greater than two (2) maintenance staff, in less than 2 hours. The conversion process shall be a simple to follow maintenance work instruction which does not call for the use of an overhead crane or other specialist lifting equipment.	If the Contractor chooses to propose a non-hybrid design; thus requiring conversion of the operating mode to be performed by staff at a maintenance depot, then the design of the detrainment door must ensure that the conversion process requires minimal effort and can easily be accomplished by no greater than two (2) maintenance staff, in less than <b>six (6) hours</b> . The conversion process shall be a simple to follow maintenance work instruction.
45	Part 2	Section - VI A (ERTS RS)	7.3.9	DC motors shall not be used for the compressors within the VAC units. If DC motors are proposed for Evaporator fans, they must be of a Brushless type.	All compressors within the VAC units shall be inverter controlled variable voltage, variable frequency (VVVF) type motors. If DC motors are proposed for the Evaporator fans; they must be of a Brushless type.
46	Part 2	Section - VI A (ERTS RS)	7.4.8.3	In the event of a loss of the emergency power supply after smoke mode is activated, the fresh air dampers shall be kept in "Closed" position and shall not allow any outside air through fresh air dampers.	In the event of a loss of the power supply after smoke mode is activated, the fresh air dampers shall be kept in "Closed" position and shall not allow any outside air through fresh air dampers.
47	Part 2	Section - VI A (ERTS RS)	7.5.2	The heater shall be installed to condition the fresh air intake and for reheating to control humidity.	The heater shall be used for reheating to control humidity.
48	Part 2	Section - VI A (ERTS RS)	7.7.19 (f)	Heat detectors / temperature sensors shall be used and integrated to TCMS / Fire Detection Control Unit for real time monitoring of all connections / points of the VAC cables in vicinity of return air duct as specified in clause 2.26.	Heat detectors / temperature sensors shall be used and integrated to TCMS / Fire Detection Control Unit for real time monitoring of all connections / terminals of the VAC cables.
49	Part 2	Section - VI A (ERTS RS)	9.6.9	The design and control of the battery shall ensure that there is sufficient capacity left under all conditions to raise all the pantographs of 3 car train simultaneously.	The proposed design of the battery (including the selected chemistry, capacity and control functions) shall ensure the battery will always have sufficient charge remaining to successfully wake-up the train and raise either of the pantographs immediately after either of the following two (2) scenarios:- i) The train was put into Sleep-Mode # ii) The train is being restarted from OFF condition after a shutdown was ordered due to low battery voltage detection  # Note: 24hrs is the minimum duration of Sleep Mode condition which must be achieved (and demonstrated by the Contractor) before the battery charge depletes to the level where the voltage supervision orders a full shutdown of the train. Battery voltage supervision shall always be available including when the train is in Sleep Mode.  Detailed Sleep Mode power requirements will be finalized based on the electrical load interface of the Onboard Signalling Requirement during the Design Stage.
50	Part 2	Section - VI A (ERTS RS)	12.6.8.12	In case of train immobilization due to application of Parking brakes, it shall be possible to mechanically release the lever from Platform level for release of Parking brakes without the necessity to access train under frame during train operation in mainline / depot.	In case of train immobilization due to application of Parking brakes, it shall be possible to mechanically release the lever from <b>the saloon</b> for release of Parking brakes without the necessity to access train under frame during train operation in mainline / depot.
51	Part 2	Section - VI A (ERTS RS)	12.12.3 (g)	Wheel slide protection shall be available during emergency braking. Any failure in the wheel slide protection in emergency braking shall result in the application of full brake force and deactivation of the slip/slide system.	Wheel slide protection shall be available during emergency braking. Any failure in the wheel slide protection in emergency braking shall result in the application of full <b>emergency</b> brake force ( <b>load corrected</b> ) and deactivation of the slip/slide system.

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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
52	Part 2	Section - VI A (ERTS RS)	12.16.1	It shall be possible to rescue a sick train (E.g. Defective, Immobilized, No battery power or in a shutdown condition) using only an air connection from the rescue train or locomotive. The emergency brake application of the dead train shall be possible by its operator. The detailed scheme shall be subject to the Engineer's review during design finalization.	It shall be possible to rescue a sick train (E.g. Defective, Immobilized, No battery power or in a shutdown condition) using only an air connection from the rescue train. The emergency brake application of the dead train shall be possible by its operator. The detailed scheme shall be subject to CMRL review during design finalization.
53	Part 2	Section - VI A (ERTS RS)	14.9.5 (a)	a) Single point uploading of software (for all sub-systems connected with TCMS) shall be possible via TCMS nodes. In-case of sub-supplier's equipment like Saloon Doors, PAPIS & CCTV, VAC, CI, APS, Brake system, etc. also, single point uploading of software and downloading of faults on unit / car / train basis shall be ensured from TCMS only.	a) Upload of application software to all TCMS connected train systems (except Onboard Signalling system & Onboard Telecommunication system) shall be possible from a single ethernet port or any latest technology port. At least one suitable port shall be provided in the saloon of each car. It shall be possible to upload to all three cars from any of the ports provided.
54	Part 2	Section - VI A (ERTS RS)	14.9.5 (c) (New)		c) Download of fault logs and trace data for all connected systems shall also be possible from any of the ethernet ports referred to in point (a)). (This is in addition to the remote download capability that is defined in Clause 14.11.1(b))
55	Part 2	Section - VI A (ERTS RS)	14.11.2 (n)	n) If fault data downloading is interrupted somehow, it should resume from the same point, at which it was interrupted.	n) If the fault data downloading is interrupted somehow, it shall start from the beginning.
56	Part 2	Section - VI A (ERTS RS)	14.11.3 (d)	Train to ground connection from the on-board network to a ground network shall be provided by Mobile Communication Gateways (MCG) as defined in Para 4.5 of IEC 61375-1. A MCG shall provide at least two interfaces, one to the on-board network and one to the ground network. Mobile Communication Gateways shall support 5G and upgradable to latest technology.	Deleted.
57	Part 2	Section - VI A (ERTS RS)	15.18.1	Notwithstanding any other provisions of the Contract, at any time prior to sixty (60) months from taking over certificate of the 70th Trainset for the whole Works, if an "Endemic Failure" occurs in any component or sub-assembly, CMRL shall issue notice in writing to the Contractor.	Notwithstanding any other provisions of the Contract, at any time prior to <b>completion of DNP/DLP</b> , if an "Endemic Failure" occurs in any component or sub-assembly, CMRL shall issue notice in writing to the Contractor.
58	Part 2	Section - VI A (ERTS RS)	17.5.2.3.3	b) The test car shell shall be supported on bogies and shall be loaded to have the equivalent total weight of the complete ready-to-run car (AW0) minus the weight of the bogies.	b) The test car shell shall be supported on <b>test fixtures / supports</b> and shall be loaded to have the equivalent total weight of the complete ready-to-run car (AW0) minus the weight of the bogies.
59	Part 2	Section - VI A (ERTS RS)	17.5.3.4.2	Brake System Endurance Qualification Test A complete friction brake system including the electronic control unit shall be subjected to and shall successfully complete an endurance test of one half million cycles of normal apply and release applications. Brake reaction forces shall be simulated on the actuators.	Brake System Endurance Qualification Test A complete friction brake system including the electronic control unit shall be subjected to and shall successfully complete an endurance test of one <b>and half (1.5)</b> million cycles of normal apply and release applications. Brake reaction forces shall be simulated on the actuators.
60	Part 2	Section - VI A (ERTS RS)	18.6.4.1 (a)	Type 1 / Service Failure: Failures that result in service operational delay in the specific train for more than 2 minutes at any location of the mainline or during induction from depot/mainline in the CMRL Phase 2 Network. These failures also include the list of scenarios for which the train shall be withdrawn from revenue service (refer Appendix I). Unscheduled removal of train from revenue service, prevention of scheduled entry of a train into service due to a failure at starting from depot / mainline shall also be included in this category.  The train withdrawal scenarios are described in Appendix I. It includes possible anticipated failure scenarios which can affect safety, punctuality and passenger comfort. The train withdrawal scenario defined in Appendix I shall be considered as a Type 1 failure irrespective of whether or not CMRL is able to withdraw the train due to its operational constraints. This list shall be further developed during DNP/ DLP	Type 1 / Service Failure: Failures that result in service operational delay in the specific train for more than 2 minutes at any location of the mainline or during induction from depot/mainline in the CMRL Phase 2 Network. These failures also include the list of scenarios for which the train shall be withdrawn from revenue service (refer Appendix I). Unscheduled removal of train from revenue service, prevention of scheduled entry of a train into service due to a failure at starting from depot / mainline shall also be included in this category.  The train withdrawal scenarios are described in Appendix I. It includes possible anticipated failure scenarios which can affect safety, punctuality and passenger comfort. This list shall be further developed during DNP/ DLP. <b>It is clarified that when such failures occur, the incident will not be categorised as a Type-1 / Service Failure if the train had continued running until the end of service without affecting punctuality.</b>
61	Part 2	Section - VI A (ERTS RS)	18.6.5.6 (New)		It is clarified that even if trainsets are not deployed to the network to the extent that is required to earn the design mileage (defined in Clause 1.4.5) the same MDBF targets and respective calculations taken for Reliability demonstration shall prevail.
62	Part 2	Section - VI A (ERTS RS)	18.7.5.2	A 15-day interval will be acceptable for the HVAC filter cleaning under dusty conditions.	A <b>30</b> -day interval will be acceptable for the HVAC filter cleaning under dusty conditions.
63	Part 2	Section - VI A (ERTS RS)	Appendix C 2.6.3	Minimum Design Average Acceleration rate for fully loaded (seating plus standees @ 8 passengers /sq. m) train on level tangent track shall be as under: 0 kmph to 40 kmph -- > 1.0 m/s <sup>2</sup> 0 kmph to 60 kmph -- > 0.6 m/s <sup>2</sup> 0 kmph to 80 kmph -- > 0.3 m/s <sup>2</sup>	Minimum Design Average Acceleration rate for fully loaded (seating plus standees @ 8 passengers /sq. m) train on level tangent track shall be as under: 0 kmph to 40 kmph -- 1.0 m/s <sup>2</sup> 0 kmph to 60 kmph -- 0.6 m/s <sup>2</sup> 0 kmph to 80 kmph -- 0.3 m/s <sup>2</sup>
64	Part 2	Section - VI A (ERTS RS)	Appendix C 2.6.3	Minimum Operational Average Acceleration rate for (seating plus standees @ 6 passengers/sq. m) loaded train on level tangent track shall be as under: 0 kmph to 35 kmph -- > 1.2 m/s <sup>2</sup> 0 kmph to 60 kmph -- > 0.65 m/s <sup>2</sup> 0 kmph to 80 kmph -- > 0.35 m/s <sup>2</sup>	Minimum Operational Average Acceleration rate for (seating plus standees @ 6 passengers/sq. m) loaded train on level tangent track shall be as under: 0 kmph to 35 kmph -- 1.2 m/s <sup>2</sup> 0 kmph to 60 kmph -- 0.65 m/s <sup>2</sup> 0 kmph to 80 kmph -- 0.35 m/s <sup>2</sup>
65	Part 2	Section - VI B (ERTS DM&P)	1.2 Table 1-1	DM&P-Q2 : Automatic Train Wash Plant ( 1 Nos ) DM&P-Q16 : Bogie Manipulator ( 2 Nos )	DM&P-Q2 : Automatic Train Wash Plant ( <b>2</b> Nos ) DM&P-Q16 : Bogie Manipulator ( <b>1</b> Nos )
66	Part 2	Section - VI B (ERTS DM&P) ATWP	2.2.2 (iv)	At least 2 sets of brushes shall be used per side.	<b>At least 3 sets of brushes shall be used per side</b> for the detergent application, scrubbing and washing of lateral surfaces of moving trains evenly. Type of water to be sprayed and used in various washing stations will be finalized during the detailed design stage of automatic train wash plant. The Contractor shall furnish the details during design stage for approval of Engineer/ Employer.



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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
67	Part 2	Section - VI B (ERTS DM&P) ATWP	2.2.4 (i)	First rinsing: The fresh water shall be sprayed onto the surface of the trains	First rinsing: The fresh / <b>soft</b> water shall be sprayed onto the surface of the trains via spray nozzles aimed all over with adjustable flowrate.
68	Part 2	Section - VI B (ERTS DM&P) ATWP	2.2.4 (ii)	Second rinsing: Demineralized water shall be sprayed onto the surface of the trains via spray nozzles aimed all over with adjustable flow-rate. This process shall eliminate scaling and water stains from the coach body.	Second rinsing: <b>RO</b> water shall be sprayed onto the surface of the trains via spray nozzles aimed all over with adjustable flow-rate. This process shall eliminate scaling and water stains from the coach body. <b>Filtration of water shall be done with Reverse Osmosis(RO) system for the second rinse of the train.</b>
69	Part 2	Section - VI B (ERTS DM&P) ATWP	2.2.5	Drying station : This station shall be capable of completely eliminating water droplets and water streaks from the rake after final rinsing.	Drying station: <b>pressurized air blowers</b> shall be positioned on both sides of the train to completely eliminating water droplets after the second rinsing.
70	Part 2	Section - VI B (ERTS DM&P) ATWP	2.2.7	Water softening system: The fresh water shall be demineralized by using a	The water softening system: shall be used to reduce the hardness of recycled water. This system shall filter the used water to a standard that eliminates the possibility of spray nozzles getting clogged.
71	Part 2	Section - VI B (ERTS DM&P) ATWP	2.6.1 (ix) (New)		<b>New Clause Inserted :</b> ix. Material for the detergent tank and RO water <b>storage tanks</b> shall be of <b>SS-316 grade</b> . All other tanks in the plant room shall be of HDPE material.
72	Not Used	Not Used	Not Used	Not Used	Not Used
73	Part 2	Section - IV B (ERTS Depot M&P) CMV	3.2.3.5 (e)	The CMV shall be fitted with gradual release air brakes. The brake system shall be of UIC approved type and shall meet all UIC requirements. It shall have the following distinct positions: I. Release positions. II. Minimum reduction position III. Full service position IV. Emergency position	Deleted
74	Part 2	Section - IV B (ERTS Depot M&P) CMV	3.4.10.1 (a)	The wheel tread shall be of the wear adapted wheel profile S 1002 / h28 / e32.5 / 6.7% as defined in EN 13715.	Proven Wheel Profile to RDSO drawing no. 91146 (Latest Revision) shall be provided.
75	Part 2	Section - IV B (ERTS Depot M&P) CMV	3.26.1.1	The Supplier shall interface with concerned statutory authorities to obtain the certificates viz provisional speed certificate, oscillation trial test report and final speed certificate after oscillation trials at his cost. It shall also be ensured that there are no infringements to Schedule of Dimension of SG of CMRL.	Supplier shall support & provide all relevant drawings / documents related to CMV required for obtaining speed certificate & CRS inspection. CMRL will process for approval from statutory authorities. However shall be considered as part of final commissioning of CMV.
76	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.9	Designated Depot(s) refers to (i) Madhavaram Depot, which is the principal site for all heavy maintenance AND (ii) further Satellite Depot(s) (mostly for inspection, cleaning activities and Corrective Maintenance).	Designated Depot(s) refers to (i) Madhavaram Depot, which is the principal site for all heavy maintenance AND (ii) <u>One Satellite Depot for light maintenance</u> (mostly for inspection, cleaning activities and Corrective Maintenance).
77	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.10	The location of the Satellite Depot(s) shall be designated by CMRL. However, CMRL may at its sole discretion instruct the Contractor (by giving 60 days' notice) to deploy their maintenance operations at further Satellite Depot facilities. The Contractor shall comply with the deployment request without any cost implications to CMRL.	The location of the Satellite Depot shall be designated by CMRL. However, CMRL may at its sole discretion instruct the Contractor (by giving 60 days' notice) to <u>move their light maintenance operations (only) to an alternative Satellite Depot facility</u> . The Contractor shall comply with the deployment request without any cost implications to CMRL.
78	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.15 (New)		<u>New Clause (1.1.15) added after Clause 1.1.14:</u>  In the event that lines are extended, ARE02A Rolling Stock may be deployed in revenue service within the newly added lines / extensions. Such deployment shall not relinquish the Contractor of any existing maintenance and/or asset performance obligations defined in this Contract.
79	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.16 (New)		<u>New Clause (1.1.16) added after Clause 1.1.15:</u>  In addition to being the principal depot for ARE02A Rolling Stock, Madhavaram Depot has also been classified as a Heavy Maintenance Hub and is therefore expected to serve other Chennai Phase-II Metro Fleets. A Standard Operating Procedure (SOP) shall be established by CMRL in order to provide governance that will fairly and reasonably determine how the allocation of depot facilities will be apportioned between the respective fleets and their Contractors'; without unreasonable hinderance to the ARE02A Contractor's ability to deliver the deliverables required under the scope of this Contract.
80	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.17 (New)		<u>New Clause (1.1.17) added after Clause 1.1.16:</u>  Operation of Depot Machinery and Plant for all rolling stock maintenance needed to be carried out at Madhavaram Depot shall be solely under the scope of the ARE02A Contractor. The Contractor is required to provide the resource necessary to fulfil this obligation; regardless of fleet type or underlying maintenance schedule.
81	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.1.18 (New)		<u>New Clause (1.1.18) added after Clause 1.1.17:</u>  If at anytime during the course of the CMC Period, CMRL purchases additional Rolling Stock for Chennai Metro Phase-II (or extension thereof) the Contractor shall at no additional cost to CMRL provide all necessary resource to support the required interface activities that involve CMC Assets (E.g. sharing of technical information and answering technical queries by other Contractors).  It is clarified that the scope of this requirement does not include the cost of any hardware modifications to CMC Assets.

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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
82	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	1.5.12	The Contractor shall ensure that Spares are replaced at intervals that are set in accordance with the OEM's recommendations for time, distance, wear limits etc as the case may be. The Contractor shall ensure the maintenance regime has an optimized schedule, such that inspections are frequent enough to avoid components wearing beyond serviceable limits during the normal course of operation of CMC Assets.	The Contractor shall ensure that Spares are replaced at intervals that are set in accordance with the OEM's recommendations for time, distance, wear limits etc as the case may be. <u>During the CMC Period only, CMRL will use its fair and reasonable discretion to decide whether extended maintenance intervals can be accepted based on justifications submitted by the Contractor.</u> CMRL's decision shall be final and binding on the Contractor. The Contractor shall ensure the maintenance regime has an optimized schedule, such that inspections are frequent enough to avoid components wearing beyond serviceable limits during the normal course of operation of CMC Assets.
83	Part 2	Section IV (C) ERTS – CMC of RS & DM&P – Management of Maintenance Depot	1.15.8 (New)		New Clause (1.15.8) added after Clause 1.15.7:  DM&P assets supplied under this Contract, may be required to be utilised by other Contractor(s) for their undertaking of maintenance on other Chennai Metro Phase-II Fleet(s) at the same depot. Such utilization of CMC Assets shall be at no additional cost to CMRL.
84	Part 2	Section IV (C) ERTS – CMC of RS & DM&P – Management of Maintenance Depot	1.15.9 (New)		It is clarified that a Standard Operating Procedure (SOP) shall be established by CMRL in order to provide governance that will fairly and reasonably determine how the allocation of Depot M&P facilities will be apportioned between the respective fleets; without unreasonable hinderance to the ARE02A Contractor's ability to deliver the deliverables required under the scope of this Contract.
85	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	2.5.2	i) During its period of custody, the Contractor shall be responsible for undertaking the maintenance of the RS Maintenance Depot including cleanliness, upkeep, housekeeping, repair work, civil maintenance and electrical maintenance for the entire premises of the RS Maintenance Depot.	i) During its period of custody, the Contractor shall be responsible for undertaking the maintenance of the RS Maintenance Depot including cleanliness, upkeep, housekeeping of the area allocated to the Contractor in the RS Maintenance Depot.
86	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	3.2.1 (a)	Type 1 / Service Failure: Failures that result in a service operational delay of a specific train for more than 2 minutes at any location of the mainline or during induction from depot to the mainline of CMRL Phase 2 Network. This category of failures also includes an unscheduled withdrawal of a trainset from revenue service.  A list of anticipated scenarios which may lead to an unscheduled withdrawal is provided in Appendix I of Part 2 Section VIA). When such failures occur, it shall be considered as a Type 1 failure event even if CMRL was unable to successfully withdraw the train from service due to operational constraints.	Type 1 / Service Failure: Failures that result in a service operational delay of a specific train for more than 2 minutes at any location of the mainline or during induction from depot to the mainline of CMRL Phase 2 Network. This category of failures also includes an unscheduled withdrawal of a trainset from revenue service.  A list of anticipated scenarios which may lead to an unscheduled withdrawal is provided in Appendix I of Part 2 Section VIA). <b>It is clarified that when such failures occur, the incident will not be categorised as a Type-1 / Service Failure if the train had continued running until the end of service without affecting punctuality.</b>
87	Part 2	Section IV C (ERTS - CMC of RS & DM&P)	4.5	4.5 RETENTION OF PAYMENTS DUE  4.5.1 Arrangements for Retention of Payments, release of Retention Money against a Bank Guarantee as well as the final release of Retention Money or Bank Guarantee is defined in Part 3: Section VIII Particular Conditions Clause 50 which is to be read in conjunction with Part 3: Section VII General Conditions of Contract Clause 14.9.  4.5.2 Pursuant to Part 3: Section VIII Particular Conditions Clause 50, the Contractor shall accept that the CMC Period shall only be deemed to have completed; following the Contractor's fulfilment of all the Handover Obligations defined in the Clause 4.1, 4.3 and 4.4.	Deleted
88	Part 3	Section - VIII (PCC [Part A])	Sl. No. 21	Total advance payment:  The interest free mobilization advance at the rate of 10 % of the accepted contract amount (Excluding Provisional Sum, Price Centre 'RS-CMC' and 'DM&PCMC') in the currencies and proportions is payable against production of Bank guarantee from a public sector bank. And the guarantee shall be in the form of a BG for 110% of the advance amount requested plus GST. (in parlance with CVC guidelines). GST on the mobilization advance is not reimbursable.  Mobilization advance shall be paid in two equal instalments	Total advance payment:  The interest free mobilization advance at the rate of 10 % of the accepted Contract amount (Excluding <b>Taxes &amp; Duties</b> , Provisional Sum, Price Centre 'RS-CMC' and 'DM&P-CMC') in the currencies and proportions is payable against production of Bank guarantee from a public sector bank. And the guarantee shall be in the form of a BG for 110% of the advance amount requested. (in parlance with CVC guidelines). GST on the mobilization advance is not reimbursable.  Mobilization advance shall be paid in two equal instalments.
89	Part 3	Section - VIII (PCC [Part A])	Sl. No. 25	Minimum Amount of Interim Payment Certificates : 0.33%	Deleted
90	Part 3	Section - VIII (PCC [Part B])	Sl. No. 46	<u>(e): 'Car Shell Structural Qualification Testing' Payment Security and 'First Article Inspections' Payment Security</u>  The Contractor shall at the time of the submission of the invoice for payment of Car Shell Structural Qualification Testing and First Article Inspections provide a security in an amount equal to the payment for these price centres (milestones) (calculated in accordance with Price Schedule to the Contract Agreement, and in the same currency or currencies.  The security shall be in one of the forms of bank guarantee in the form provided in the bidding documents or in another form acceptable to the Employer. The security will become null and void when the first 35 trains are issued with the Taking-Over Certificate by the Employer. The security shall be returned to the Contractor immediately after its expiration.	Deleted

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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
91	Part 3	Section - VIII (PCC [Part B])	Sl. No. 52	<p><u>Retention Money (Throughout the Contract Period)</u></p> <p>Retention money shall be deducted at the rate of 5% on each Interim payment certificate (IPC), excluding taxes &amp; duties, in respective currencies and up to the cumulative value equal to 5% of the Accepted Contract Amount (Excluding Provisional sum), excluding taxes &amp; duties.</p>	<p><u>Retention Money (Throughout the Project Period)</u></p> <p>Retention money shall be deducted at the rate of 5% on each Interim payment certificate (IPC), excluding taxes &amp; duties, in respective currencies and up to the cumulative value equal to 5% of the Accepted Contract Amount (Excluding RS-CMC and DM&amp;P-CMC and Provisional sum), excluding taxes &amp; duties.</p>
92	Part 3	Section - VIII (PCC [Part B])	Sl. No. 52	<p><u>Release of Retention Money Against BG (Project Phase)</u></p> <p>Upon the request of the Contractor, the Employer after issuance of TakingOver certificate of each trainset / each Depot Machinery &amp; Plant may release the withheld retention money specific to that trainset / Depot Machinery &amp; Plant, on submission of Bank Guarantee for an equivalent amount in respective currencies from a Public sector bank (PSB) of India or Scheduled Commercial Banks in India or any Japanese Bank as listed under Schedule of Commercial Banks by The Reserve Bank of India (RBI), in the format annexed to the Particular Conditions.</p>	<p><u>Release of Retention Money Against BG (Project Phase-Period)</u></p> <p>Upon the request of the Contractor, the Employer after issuance of Taking Over certificate of each trainset / each Depot Machinery &amp; Plant may release the withheld retention money specific to that trainset / Depot Machinery &amp; Plant, on submission of Bank Guarantee for an equivalent amount in respective currencies from a Public sector bank (PSB) of India or Scheduled Commercial Banks in India or any Japanese Bank as listed under Schedule of Commercial Banks by The Reserve Bank of India (RBI), in the format annexed to the Particular Conditions.</p>
93	Part 3	Section - VIII (PCC [Part B])	Sl. No. 52	<p><u>Release of Retention Money Against BG (CMC Phase)</u></p> <p>Upon the request of the Contractor and after completion of every 3 years of CMC period for Rolling stock, the Employer may release the withheld retention money specific to Price Centre RS-CMC and DM&amp;P-CMC accrued until then, on submission of Bank Guarantee for an equivalent amount in respective currencies from a Public sector bank (PSB) of India or Scheduled Commercial Banks in India as listed under Schedule of Commercial Banks by The Reserve Bank of India (RBI), in the format annexed to the Particular Conditions</p>	Deleted
94	Part 3	Section - VIII (PCC [Part B])	Sl. No. 52	<p><u>Final Release of Retention or BG (Project Phase)</u></p> <p>Upon completion of DNP of Rolling Stock and Depot Machinery &amp; Plant, the Retention money amount or the Retention money Bank Guarantees (less the value of claims made by the Employer for uncompleted warranty work) for Rolling Stock and Depot Machinery &amp; Plant (excluding Price Centre RS-CMC and Price Centre DM&amp;P-CMC) shall be certified by the Engineer / Employer for releasing to the Contractor</p>	<p><u>Final Release of Retention or BG (Project Phase Period)</u></p> <p>Upon completion of DNP of Rolling Stock and Depot Machinery &amp; Plant, the Retention money amount or the Retention money Bank Guarantees (less the value of claims made by the Employer for uncompleted warranty work) for Rolling Stock and Depot Machinery &amp; Plant (excluding Price Centre RS-CMC and Price Centre DM&amp;P-CMC) shall be certified by the Engineer / Employer for releasing to the Contractor</p>
95	Part 3	Section - VIII (PCC [Part B])	Sl. No. 52	<p><u>Final Release of Retention or BG (CMC Phase)</u></p> <p>Upon completion of CMC Period of Rolling Stock and Depot Machinery &amp; Plant the Retention money amount or the Retention money Bank Guarantees (less the value of claims made by the Employer for uncompleted warranty work) pertaining to Price Centre RS-CMC and Price Centre DM&amp;P-CMC shall be certified by the Engineer/ Employer for releasing to the Contractor</p>	Deleted
96	Part 3	Section - VIII (PCC [Part B])	Sl. No. 56	<p><u>Add the following at the end of sub-clause 18.1</u></p> <p>Insurance cover for Contractor's All Risk and other requirements as specified in GCC shall cover 100 % of the Total Contract price and also cover the variation price. This insurance shall cover Project period, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</p>	<p><u>Add the following at the end of sub-clause 18.1</u></p> <p>Details of all relevant insurance policies shall be submitted within 28 days from the date of commencement of the respective Contract Periods in accordance with the following requirements:-</p> <p><u>During the Project Period:</u> Insurance cover for the Contractor's All Risk and other requirements as specified in GCC shall cover 100 % of the Total Contract price (excluding CMC Price Centres) and also cover the variation price.</p> <p><u>During the CMC Period:</u> The Contractor's insurance need only cover those risks which arise within the scope of the CMC Works. The extent of cover shall cover 100% of the sum of Price Centres ('RS-CMC' + 'DM&amp;P-CMC').</p>
97	Part 3	Section - VIII (PCC [Part B])	Sl. No. 63 (New)	<p><u>The 2nd Paragraph of GCC Clause 17.6 Limitation of Liability states the following:-</u></p> <p>The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Employer's Equipment and Free Issue Material], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Contract Data, or (if such multiplier or other sum is not so stated), the Accepted Contract Amount.</p>	<p><u>The 2nd Paragraph of GCC 17.6 is replace with:</u></p> <p>The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Employer's Equipment and Free Issue Material], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the following sums:</p> <p>1) <b>Limitation of Liability During the Project Period:</b> = Accepted Contract Amount – Less [sum of (Price Centres 'RS-CMC' + 'DM&amp;P-CMC')]</p> <p>2) <b>Limitation of Liability During the During CMC Period:</b> = The sum of Price Centres ('RS-CMC' + 'DM&amp;P-CMC') Only"</p>
98	Part 3	Section - VIII (PCC [Part B])	Sl. No. 62 (New)	<p><u>The 2nd Paragraph of GCC Clause 18.2 Insurance for Works and Contractor's Equipment states the following:-</u></p> <p>The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability] and Clause 12 [Tests after Completion]).</p>	<p><u>The 2nd Paragraph of GCC 18.2 is replace with:</u></p> <p>The insuring Party shall maintain this insurance to provide cover until the date of issue of the <b>Project</b> Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability] and Clause 12 [Tests after Completion]).</p>
99	Part 3	Section - IX (Annex to Particular Conditions - Contract Forms)	5	Form of Bank Guarantee for Car Shell Structural Qualification Testing Payment / First Article Inspections Payment	Deleted.



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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
100	Part 2	Section IV (C) ERTS – CMC of RS & DM&P – Management of Maintenance Depot	1.10.2	For guidance of the operating staff of CMRL, the Contractor shall provide an Operations and Maintenance Manuals to CMRL. The Contractor shall be also responsible for the training of TO's, instructors, Supervisors and CMRL's other officers and staff associated with the Trains operational management including but not limited to controllers (herein after referred as Rolling Stock Controllers or RSC), nominated officers and staff deployed by CMRL in the Depot for assessment/reconciliation of the Maintenance work etc.	Deleted.
101	Part 2	Section - VI A (ERTS RS)	Appendix C (New)		<u>New Clause (2.1.14) added after Clause 2.1.13:</u>  The Contractor may be required to commission the RSC workstation / console(s), the Central Server and any other equipment related to the RTR-DMS system to a Temporary OCC (TOCC) during initial stages of the project. Such equipment may need to be relocated from TOCC to the final locations for allocated for OCC and/or BCC.  Any migration of the physical location of this equipment occurring prior to the end of the Project Period shall be at no additional cost to CMRL.
102	Part 2	Section VI A: ERTS – RS – Appendix C – Interfaces	1.1.2	Major Designated Contractors for the project are mentioned below:  a) Signalling and Train Controls Contractor (STC) b) Tele-communication TETRA Contractor c) Platform Screen Door Contractors d) Railway Electrification, Power Supply Contractors e) Track work Contractors f) Detailed Design Consultants - Viaduct g) Detailed Design Consultants - Tunnel h) Detailed Design Consultants – Underground Station i) Detailed Design Consultants - Depot j) Depot Equipment Contractor k) Tunnel Ventilation System Contractors l) Other Designated Contractors m) Other Rolling Stock Contractors n) Asset Management System (Depot Management Tools)	A summary of the interface relationships between Designated Contractors is illustrated in the Master Interface Matrix (MIM) which is appended at the end of this Chapter.  The MIM shall not be considered to be an exhaustive list and is therefore without prejudice to Appendix-C Clause 1.2.4.
103	Part 2	Section - IV B (ERTS Depot M&P) SPJ	3.3.6	The Pit Jack Contractor shall interface with Depot Civil Contractor to provide the pit & foundation design for construction by the civil Contractor. In case the Pit jack Contractor is unavailable, the Civil Contractor shall initially construct an oversized / generic pit at the likely location of each Bogie Hoist / Lifter. The Pit Jacks Contractor shall submit a pit and foundation design and Depot civil Contractor shall construct (or otherwise modify the oversize pits) as per the requirement of pit jack Contractor including the infilling of the oversize area.”)	The Pit Jack Contractor shall interface with Depot Civil Contractor to provide the pit & foundation design for construction by the civil Contractor.
104	Part 2	Section - VI B (ERTS DM&P) Bogie Manipulator	13.1.3	Additional set of Bogie Manipulator shall be installed and commissioned at CMRL designated depot in Chennai. The Contractor shall be responsible to design the equipment as per bogies and frames design of rolling stocks which shall be provided by CMRL during design phase.	Deleted
105	Part 2	Section - VI A (ERTS RS)	2.14.1.z)	The continuous thermal rating of the traction system shall meet all the conditions of normal working. During emergency conditions operation (Clause 2.14.1.12), the rake starting after a continuous working, thermal rating should not be exceeded for continuous working, in each Line.	The continuous thermal rating of the traction system shall meet all the conditions of normal working. During emergency conditions operation (Clause <b>2.14.1.Y</b> ), the rake starting after a continuous working, thermal rating should not be exceeded for continuous working, in each Line.
106	Part 2	Section - VI A (ERTS RS)	2.14.1.aa)	The Contractor shall handover one complete set of software(s) package and associated hardware employed by him for the above studies including assessment of energy conservation modes (Clause 2.14.1.12) along with the requisite documentation, during design stage to CMRL. The software shall simulate Run Time performance of the train under varied loads, route profiles, headway, inter-station distances, train resistance, Train formation and Tractive Effort & Braking Effort characteristics, evaluation of energy conservation modes etc. The software shall not be restrictive to the above and shall be for general application with provision for CMRL to select parameters. Nominated staff shall be fully trained and made fully conversant by the Contractor for this purpose. The handed over set shall be fully functional during the contract period and post warranty period & shall require no inputs or facilities whatsoever from CMRL.	The Contractor shall handover one complete set of software(s) package and associated hardware employed by him for the above studies including assessment of energy conservation modes (Clause <b>2.14.1.Y</b> ) along with the requisite documentation, during design stage to CMRL. The software shall simulate Run Time performance of the train under varied loads, route profiles, headway, inter-station distances, train resistance, Train formation and Tractive Effort & Braking Effort characteristics, evaluation of energy conservation modes etc. The software shall not be restrictive to the above and shall be for general application with provision for CMRL to select parameters. Nominated staff shall be fully trained and made fully conversant by the Contractor for this purpose. The handed over set shall be fully functional during the contract period and post warranty period & shall require no inputs or facilities whatsoever from CMRL.
107	Part 2	Section - VI A (ERTS RS)	3.4.1.2.4	The loads mentioned in clause 11.5.1.1 d) and end underframe structural requirements as per EN 12663-1 including buffers loads shall be validated during carbody structural test.	The loads mentioned in clause <b>11.5.1.d)</b> and end underframe structural requirements as per EN 12663-1 including buffers loads shall be validated during carbody structural test.
108	Part 2	Section - VI A (ERTS RS)	3.4.1.4.6	The equipment shall be mounted in accordance to IEC 61133:1992 (Clause 5.3.6) regarding weight distribution	The equipment shall be mounted in accordance to <b>IEC 61133 and the Contractor shall comply clause 11.9.23 regarding weight distribution.</b>

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S. No.	Part	Section	Clause No.	Original Bid Condition	Revised Bid Condition
109	Part 2	Section - VI A (ERTS RS)	11.9.23	<p>Axle Load, Wheel Load and Imbalance</p> <p>The car axle (including AW0 unbalanced weight) shall not be more than 16T Under AW4 load condition of car, weight shall comply to IEC 61133 standard. The following requirements of IEC 61133:1992 Clause 5.3.6 are acceptable for the vehicle:</p> <p>(i) Measured load on the line of wheels on one side does not differ by more than <math>\pm 4\%</math> from the average of the measured loads on both sides of the wheels.</p> <p>(ii) For a given axle, the measured load per wheel does not differ by more than <math>\pm 4\%</math> from the average load per wheel on this axle.</p> <p>(iii) For the load on each axle does not differ by more than <math>\pm 2\%</math> compared to the average value of the loads on axles.</p>	<p>Axle Load, Wheel Load and Imbalance</p> <p>The car axle (including AW0 unbalanced weight) shall not be more than 16T Under AW4 load condition of car, weight shall comply to IEC 61133 standard. <b>The Contractor shall also comply with the following weight distribution requirements:-</b></p> <p>(i) Measured load on the line of wheels on one side does not differ by more than <math>\pm 4\%</math> from the average of the measured loads on both sides of the wheels.</p> <p>(ii) For a given axle, the measured load per wheel does not differ by more than <math>\pm 4\%</math> from the average load per wheel on this axle.</p> <p>(iii) For the load on each axle does not differ by more than <math>\pm 2\%</math> compared to the average value of the loads on axles.</p>
110	Part 2	Section - VI A (ERTS RS)	14.14 (New)		<p><b><u>New Clause (14.14) to be added after Clause 14.13:-</u></b></p> <p><b>14.14 TCMS System Integration Test Lab</b></p> <p>14.14.1 The Contractor shall establish a TCMS test lab at the site of the Rolling Stock Factory (or elsewhere subject to CMRL approval). The lab shall be fully established at least 3 months' prior to the start of integration type test activities.</p> <p>14.14.2 The intended purpose of the lab is to replicate the actual TCMS architecture of the fleet (including train subsystems and interfaces with other designated Contractors) in order to mature the design development of software and hardware interfaces.</p> <p>14.14.3 The Contractor shall ensure that its supply chain agreements (SLA) with all major train Subsystem supplier's shall contractually oblige on-time delivery of Subsystem hardware to complete the installation of a fully functional test lab. The SLA's shall also include deployment of the supplier's engineering staff / resources to participate in lab based development tests and activities.</p> <p>14.14.4 Notwithstanding the requirements for an "integrated test bed" (called for in the Clause 2.5 of the Appendix-C Interface Chapter) the Contractor shall also include STC and Telecom hardware within the TCMS Test Lab.</p>
111	Part 1	Section - II (BDS)	ITB 4.1 (New)		<p><b><u>New BDS Item against ITB 4.1:</u></b></p> <p><b><u>Replace Sub-Clause 4.1 with the following:</u></b></p> <p>4.1 A Bidder may be a firm that is a single entity or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a JV:</p> <p>(a) all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms, and</p> <p>(b) the JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during Contract execution.</p> <p>c) In the case of a Joint Venture / Consortium each member shall participate with a minimum stake of 15% in the overall Joint Venture / Consortium.</p>
112	Part 2	Section - VI A (ERTS RS)	11.9.15 (h) (New)		<p>(h) The HABD System provided by the Contractor shall be fleet agnostic (E.g. it shall be fully capable of detecting axle box temperatures and triggering OCC alarms in the event of defects arising on any passenger Rolling Stock fleet type that is serving corridors 3 and 5 of the Chennai Phase-II network). The Contractor shall propose suitable validation tests (for all planned fleets) as part of the Master Test Plan in accordance with ERTS Clause 17.2.2 for CMRL's review and acceptance.</p>
113	Part 2	Section - VI A (ERTS RS)	Appendix C 2.6.3	Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @ 8 passengers /sq.m) train on level tangent track -- $>1.0$ m/s <sup>2</sup>	<b>Minimum Average</b> Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @ 8 passengers /sq.m) train on level tangent track -- 1.0 m/s <sup>2</sup>
114	Part 2	Section - VI A (ERTS RS)	Appendix C 2.6.3	Service braking rate from 80 kmph to standstill for - (seating plus standees @ 6 passengers/sq.m) train on level tangent track -- $>1.1$ m/s <sup>2</sup>	<b>Minimum Average</b> Service braking rate from 80 kmph to standstill for - (seating plus standees @ 6 passengers/sq.m) train on level tangent track - 1.1 m/s <sup>2</sup>
115	Part 2	Section - VI A (ERTS RS)	Appendix C 2.6.3	Emergency braking rate from 80 kmph to 0 kmph for fully loaded train on level tangent track -- $>1.3$ m/s <sup>2</sup>	<b>Minimum Average</b> Emergency braking rate from 80 kmph to 0 kmph for fully loaded train on level tangent track -- 1.3 m/s <sup>2</sup>