General Bid Bulletin No. 2
31 March 2021

IFB No. 21-031-4

THE MALOLOS-CLARK RAILWAY PROJECT AND THE NORTH SOUTH RAILWAY PROJECT-SOUTH LINE (COMMUTER) PACKAGE CP NS-03: ROLLING STOCK-LIMITED EXPRESS TRAINSETS

This General Bid Bulletin is issued to amend/clarify certain provisions in the Bidding Documents for the abovementioned project. Please refer to the attached Annexes[1] of this General Bid Bulletin duly approved by the end-user and co-implementer for details:

1. **Annex "A"** – Answers to Queries from Prospective Bidders including clarifications to the Bidding Documents;

2. **Annex "B"**– Revisions to the Bidding Documents; and

3. **Annex "B – 1"** – Revised pages/amendments and final form as revised/amended.

All other portions of the Bidding Documents affected by these revisions, amendments and/or clarifications shall be made to conform to the same.

Revisions/amendments/clarifications made herein shall be considered an integral part of the Bidding Documents for this project.

For your information and guidance.

For the Bids and Awards Committee IV:

SIGNATURE REDACTED

JOSEPH CONRAD D. DUEÑAS
Chairperson

[1] Annex A and B, including its attachment, for General Bid Bulletin No. 2 are attached to this covering page

Annex A

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Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
1	Part 1 – Bidding Procedures Section II. Bid Data Sheet ITB8 7. Clarification of Bidding Documents, Site Visit, Pre-Bid Meeting	Assuming the Bidder needs enough time allowance for making copies and final packing before submission under the current difficult situation by COVID-19, it would be appreciated if the Employer states assumption until how many days before the bid submission date, the Employer shall respond to the Bidder's final questionnaire.		Responses to any request for clarification, if any, will be published on the web pages indicated ITB 7.1, provided that such request is received not later than fourteen (14) days prior to the deadline for submission of Bids. Employer will promptly respond and publish any request for clarification.
2	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS4 ITB16.1	1) Looking at following provisions, the Bidder understands the period to be considered for spare parts supply shall be 2 years. Please confirm if the Bidder's understanding is correct. ERT 24.2.1;	The contract spare parts, special tools, etc. shall be supplied for a ~~period of four (4) years from the date of completion of the Works, as a part of a Lump Sum offer, and~~ as specified in the Employer's	The Bidder's request is rejected. 1) The spares shall be supplied from the issuance of the Taking Over Certificates of each trainset and the spares shall be replenished before the end of the DNP. 2) Bidder's understanding is not correct. Reference to the ERT 24.8, final list of special tools will be determined during

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		The Contractor shall provide a list of capital spares and consumables (spares and consumables) and supply for the Defects Notification Period (DNP). ERT 24.2.6; "The Contractor shall provide a list for material and spares use for 2 years based on the anticipated train mileage and previous contracts experience." 2) In common, special tools is not consumed in such short term. Please confirm ERT 24.8 shall prevail to this provision under ITB.	Requirements. The spare includes the Operation and Maintenance spare during the DNP. Reference must also be made to the Employer's Requirements Technical Specifications Sections regarding the provision of spare parts and special tools, required during the Defects Notification Period.	implementation stage. Reference to ERT 24.8.3, any additional special tools and diagnostic test equipment are identified during the development of the (O&M) Manuals, those items shall be added to the list proposed during the Bid and shall be provided by the Contractor. The cost for the additional special tools and diagnostic test equipment shall be deemed to have been included in the Price Schedules.
3	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS5	The Bidder understands that "their own materials and equipment needed for the	-NA-	Bidder's understanding is not correct.

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	ITB 18.72(i) Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC18 14.1 The Contract Price	implementation of the Project" shall include the Contractor's Goods itself (i.e. Trains, Spares, Tools to be supplied to the Employer). Please confirm if the Bidder's understanding is correct.		It is referring to the plant and equipment required for the implementation of the Project.
4	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS5 ITB 18.7 2(i) Part 1 – Bidding Procedures Section IV – Bidding Forms BF49 GRAND SUMMARY	The Bidder understands, only local currency amount is subject to 12% VAT. 1) Please confirm if the Bidder's understanding is correct. 2) If not, - Please clarify what part of foreign currency amount to be subject to 12% VAT. - For the avoidance of any confusion, please do not consider VAT amount for Price Evaluation purpose.	-NA-	1) Bidder's understanding is not correct. Reference to the description in the Note no. 3 in Grand Summary, the Value Added Tax (VAT) for the Foreign Currency portion shall be converted to the Local Currency according to ITB 37.1 and added to the VAT for the Local Currency portion. Refer to the guideline stipulated in the BDS ITB 18.7 for the detail description. 2) Bidder may refer to the guideline reference shown in the BDS ITB 18.7. The evaluation of the Price Bids is in accordance with the guideline stipulated in the ITB 38.

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5	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS5 ITB 18.7 2(ii) Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC18 14.1 Contract Price	The Bidder understands from his experience that the Contractor shall submit following documents to request assumption of Import VAT and Import duties to the Employer; - Invoice - Packing List - Bill of Lading - DOF Form 91 - Single Administrative Document (SAD) 1) Please clarify if any additional documents the Contractor is required to submit. 2) Please clarify how many days after the Contractor's submission of these documents to the Employer, the Employer shall complete assumption		1) Employer/Engineer will advise the Contractor if any additional document required during project implementation. 2) Employer/Engineer will advise the Contractor the duration during project implementation.

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		process. This is necessary information for the Bidder to ensure there will be no additional cost at custom such as demurrage or storage cause by out of the Contractor's control.		
6	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS7 ITB 18.9	This is important provision for the Bidder/the Contractor to ensure that Extension of Time and/or Additional Cost can be compensated in unforeseen event due to COVID-19. However, as ITB/BDS are not part of the Contract Documents, the Bidder would request consideration to add similar provisions to the Condition of Contract as the next column.	[Additional Particular Conditions] Add the following Sub-Clause; 2.6 Eventual Claim due to COVID-19 Employer recognizes the eventual Contractor's claims for: (a) Extension of Time for delays that the Contractor can demonstrate to the satisfaction of the Engineer were	The Bidder's request is rejected. The ITB clearly mentioned the guidelines for the preparation of Bids, the Employer is in the process of finalizing a mechanism to address all COVID-19 Effects related issues and claims that it intends to use for all its ADB- and JICA-funded projects. This mechanism, once finalized, will be published in a bid bulletin.

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			caused by the COVID-19 Effects, including but not limited to complying with instructions from the Employer on COVID-19 response measures; (b) Additional Costs, as defined in the Part 3 - Conditions of Contract in the Bidding Documents, including for delay, impediment, prevention, disruption, and/or prolongation that the Contractor can demonstrate to the satisfaction of the Engineer were caused by the	

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			COVID-19 Effects, including but not limited to complying with instructions from the Employer on COVID-19 response measures, further including COVID-19 related measures in the Contractor's Engineer-approved Health and Safety Plan, and further including financing cost that may be incurred as a result of the COVID-19 Effects, such as security and insurance, provided, that overhead was actually incurred and related to the COVID-19 Effects,	

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			and provided further, that in cases covered by sub-clauses 3.3. (Instructions of Engineer) and 13 (Variations and Adjustments), the additional Cost shall be together with profit; and (c) Additional Costs that the Contractor can demonstrate to the satisfaction of the Engineer are necessary to comply with instructions from the Employer for COVID-19 acceleration measures, which shall comprise of measures intended	

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			to accelerate the realization of Key Dates and/or Completion to offset any Extension of Time that may be caused by the COVID-19 Effects, pursuant to the General Conditions ("GC") and Particular Conditions ("PC") in the Bidding Documents, including sub-clauses 3.3. (Instructions of Engineer), 3.5 (Determinations), 8.4 (Extension of Time for Completion), 8.5 (Delays Caused by Authorities), 13	

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			(Variations and Adjustments), 13.7 (Adjustment for Changes in Legislation), 19 (Force Majeure), and 20.1 (Contractor's Claims), and subject to observance of the applicable communication obligations under the Contract, such as sending of notices and keeping of contemporary records, with the Engineer taking due regard of all relevant circumstances, including the FIDIC Golden Principles and the extraordinary	

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			challenge posed by COVID-19.	
7	Part 1 – Bidding Procedures Section II. Bid Data Sheet BDS9 ITB22.1 Part 1 – Bidding Procedures Section III. Evaluation and Qualification Criteria EQC2 2.3(2)	In the Bidder's Experience in previous bids under JICA loan, the Bidder followed document titles and orders stated on ITB 11.2 (for Technical Bid) and ITB 11.3 (For Price Bid). However the Bidder understands provisions under Bid Submission Index shall prevail to ITB 11.2 and 11.3 in this bidding. Please confirm if the Bidder's understanding is correct.	-NA-	The Bidder's understanding is not correct. ITB 11 stipulated the documents to be submitted by the Bidders. Reference to the BDS ITB 11.2(l) and 11.3(d), the Bidder shall refer to Section IV for the list including additional documents to be attached to the Technical and Financial Bid, hence the Bidders are required to submit their Bids with index tabs corresponding to the order of Appendix 8: Bid Submission Index.
8	Part 1 – Bidding Procedures Section III. Evaluation and Qualification Criteria	The Bidder is planning to put original signatures or initials on all pages of	-NA-	Reference to the ITB 22.1, the Bidder's understanding is acceptable.

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	EQC2 2.3(2)	Technical Bid – Original and Price Bid – Original. And make five sets of photocopies from those signed/initialed original copies. Please confirm if the Bidder's procedure above is acceptable.		
9	Part 1 – Bidding Procedures Section IV – Bidding Forms BF20 APPENDIX 6.5	The Bidder understand, this provision shall be applicable only the case proposed subcontractor/manufacturer does not comply to the experience requirement under ECQ5.1 and/or provisions under Employer's Requirement. Please confirm if the Bidder's understanding is correct.	-NA-	The Bidder's understanding is correct. In accordance to the EQC 5.1, other than experience requirements, the proposed subcontractors /manufacturers shall meet the eligibility requirement and conflict of interest requirement, as stipulated in ITB 4 and ITB 5 respectively.

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10	Part 1 – Bidding Procedures Section IV – Bidding Forms BF28 APPENDIX 8: BID SUBMISSION INDEX	The Bidder plans to insert page numbers for each documents of bid submission, but not consecutive number for whole bid submission. This is more convenience arrangement as bid submission documents to be revised even last moment before the bid submission, and the Employer still easily find concerned documents from file number (binder number) and section number. With consideration of above arrangement, please allow the Bidder to keep the column of "Page" as blank.	-NA-	The Bidder's request is rejected. Every pages of the submission shall be numbered in sequence (consecutive) and the Bidder shall include the page number in the "Page" column.
11	Part 1 – Bidding Procedures Section IV – Bidding Forms BF37 Schedule 1.1 : General Items	1) The Bidder understands, payment for these Milestones to be made monthly in proportion	Payment for Milestones 102, 103, 104, 106, 108, 109 and 111 will be paid	1) The Bidder's request is rejected. This item shall be finalized during implementation stage.

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		to the overall duration. Please confirm if the Bidder's understanding is correct. 2) The Contractor's demobilization will be after the completion of Defect Liability Period. However the Bidder understands all Milestone payment shall be made until completion of Taking Over as the Employer will keep securing Retention Money/Performance Security During DNP. With this please consider to amend this provision as the next column.	monthly for in proportion to the overall duration of the Contractor's presence on the Site at the date of the relevant payment application, calculated from the date on which mobilization was fully completed, and based on the date when the Employer is reasonably expected to be fully Taking Over the Contractor's Works.)	2) The Bidder's request is rejected. Reference to the GC 11.9, 14.2, 18.2, the period is calculated until the end of the Defects Notification Periods.

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12	Part 1 – Bidding Procedures Section IV – Bidding Forms BF37 Schedule 1.1 : General Items	We understand these three milestones intend the Contractor's mobilization, operation during the Contract execution and demobilization. As the Project is supply of EMU, the Bidder understand the Contractor's office is not necessary to locate at the Site (which is among or inside of railway construction site we understand) but at convenience location near the Site for the Contract implementation. With this please accept to delete word of "the Site" from these milestones as the next column.	105 Establishment of the Contractor's Offices and other temporary ~~Site~~ facilities required by the Contractor. 106 Running and maintenance costs for the Contractor's offices and other temporary ~~Site~~ facilities required by the Contractor. 112 Removal of Contractor's office and other facilities from the ~~Site~~.	The Bidder's request is rejected. The definition of "Site" is defined in the GC 1.1.6.7. Reference to the ERT 22.6.6, Contractor shall provide office space, the Contractor might be having temporary Site facilities for the transport, delivery / unloading and assembly of the cars. Bidder shall propose his resources for the completion of the Works.

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13	Part 1 – Bidding Procedures Section IV – Bidding Forms BF37 Schedule 1.1 : General Items Part 1 – Bidding Procedures Section IV – Bidding Forms BF41 Schedule 1.4 : Transportation, On-Site Assembling and Testing	The Contractor understands all Milestone payment shall be made until completion of Taking Over as the Employer will keep securing Retention Money/Performance Security during DNP. With this please consider to amend this provision.	Payment will be made at the time of completion of Taking Over. 404 Completion of In-service Operations, comprising 10,000 km or 2 months of continuous Fault Free Running for all 7 trainsets, and obtaining the Performance Certificate from the Engineer for the entire fleet of 7 trainsets. (Payment for Milestone 404 will be made upon completion of the	The Bidder's request is rejected. Reference to the GC 11.9, 14.2, 18.2, the period is calculated until the end of the Defects Notification Periods.

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			Trial Operations for each trainset, in proportion to the total number of trainsets required.)	
14	Part 1 – Bidding Procedures Section IV – Bidding Forms BF40 Schedule 1.3 : Manufacturing / Fabrication and Shipping	The Bidder understand, the Bidder can suggest additional milestones e.g. readiness of 1st carbody for FAI or other milestones which would be applicable for a part payment before Milestone 301. Please confirm if the Bidder's understanding is correct.	-NA-	The Bidder's understanding is correct.
15	Part 1 – Bidding Procedures Section IV – Bidding Forms BF41 Schedule 1.5 : Training, and Operation and Maintenance Manuals	The Bidder understand the obligation of NS03 Contractor is supply required parts to the NS01 Contractor and delivery of Simulator itself is out of NS03 Contractor's control	503 (Payment for Milestone 503 will be made at only after handing over of required parts for Driving Simulator to	The Bidder's request is rejected. The Contractor is obliged to ensure the compatibility of the component with the driving simulator.

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		with this please amend this provision.	the NS01 Contractor.)	
16	Part 1 – Bidding Procedures Section IV – Bidding Forms BF46 Schedule 1.7 : Capital Spares	The Bidder understands, these detailed spare parts list become available only after design stage. With this please allow the Bidder/the Contractor to submit it during implementation stage and remove from bid submission requirement.	- NA -	The Bidder's request is rejected. The Bidder shall submit the Schedule 1.7 as stated in the ITB.
17	Part 1 – Bidding Procedures Section IV – Bidding Forms BF48 Schedule 1.9 : Provisional Sums	Although Provisional Sum is only amounted by Local Currency, the Bidder assume actual cost of those Provisional Sum might be happened in foreign currency. With this, please confirm if these Provisional Sum items can be implemented with conversion of local currency to foreign currency.	-NA-	This item shall be finalized during implementation stage.

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18	Part 1 – Bidding Procedures Section IV – Bidding Forms BF48 Schedule 1.9 : Provisional Sums	As these are part of Provisional Sum, the Bidder understands these requirements of HIV/AIDS program and GAD stated in Employer's Requirement or other Contract Documents are only applicable when the Contractor be instructed by the Engineer.		The Bidder's understanding is correct.
19	Part 1 – Bidding Procedures Section IV – Bidding Forms BF57 SCHEDULE 3: LIST OF JAPANESE ORIGIN, GOODS, SERVICES AND MAJOR COMPONENTS Part 1 – Bidding Procedures Section IV – Bidding Forms BF58 FORM SCJ: SUMMARY FOR THE TOTAL COST OF GOODS, SERVICES AND	The Bidder would like to reconfirm how the VAT to be considering for the computation of Japanese Contents %. From both of Forms, the Bidder understand applicable computation method is as follows; Total % of Japanese Contents = (a)/(b)	-NA-	The Bidder's understanding is correct. Reference to the Section V Eligible Source Countries Of Japanese ODA Loans (ESC), Section VIII Appendix 1 and Special Terms for Economic Partnership (STEP) Operational Rule and, the contract amount/bid price with VAT, hence the denominator is with VAT.

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	MAJOR COMPONENTS PROCURED FROM JAPAN	(a) Total Amount Japanese Content without VAT (b) Total Bid Amount with VAT Please confirm if Bidder's understanding is correct. And if so, please clarify why on (b) considers VAT.		
20 "	Part 1 – Bidding Procedures Section IV – Bidding Forms BF84 Form MAN	The Bidder, Japanese trading firm, intends to subcontract required works to rolling stock manufacturer. And suppliers for required major items will be subcontractor to such rolling manufacturer. With this situation, suppliers for required major items will not have direct contract relationship with the Bidder and should not bounded by	-NA-	The Bidder's request is rejected. The Bidder shall use the Form MAN shown in the BF-84 for the Bidder and subsequently the Bidder may use the "Authorization from Supplier of major items to rolling stock manufacturer" with the major components' supplier.

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		General Condition of Contract, and therefore cannot declare part of contents on Form MAN which is underlined. Facing these difficulties, the Bidder wants to have the Employer's consideration to accept the Bidder to submit only one authorization (Form MAN) issued by train rolling stock manufacturer. We believe it is enough to proof appearance of actual manufacturers, as rolling stock manufacturer is one to be responsible to integrate and supply all specific major items. And if it is not acceptable, the Bidder wants to propose following two step authorizations ;		

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		1) Authorization from suppliers of major item to the rolling stock manufacturer by Form MAN with slightly modified wording. 2) Authorization from rolling stock manufacture to the Bidder by Form MAN with required wording Please also refer proposed modification on From MAN in Appendix 1 of this questionnaire.		
21	Part 1 – Bidding Procedures Section IV – Bidding Forms BF85 Form CM: Compliance Matrix	The Bidder understands that it is required to copy the requirement under Employer's Requirements especially, Scope of Works (SOW), General Requirements (ERG) and Technical Requirements (ERT) clause by clause to the column "Description"	-NA-	Bidder's understanding is correct. It shall state the compliance to the clauses in SOW, ERG and ERT. However, the Bidder shall comply with the Appendix C: Rolling Stock Gauge and Construction Gauge shown in the ERT.

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		and "Reference Clause", and to state the Bidder's compliance to the column of Conformance or Partial Conformance. The Bidder would ask the Employer's confirmation that the Bidder does not has to copy the provisions and state compliance of all the appendix documents attached to the Employer's Requirement above and Alignment Drawings as well, as these are only reference documents.		
22	Part 1 – Bidding Procedures Section IV – Bidding Forms PC 3 Particular Conditions (PC) Part A - Contract Data Sections 1.1.5.6	As parts number is not available at the time of bidding, the Bidder would like to have the Employer's consideration to delete column of "Parts No".	-NA-	The Bidder's request is rejected. For the purpose of Bids submission, it is not mandatory to include the parts number in this column. However, the Contractor shall provide this information during implementation stage.

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23	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC3 Particular Conditions (PC) Part A - Contract Data Sections 1.1.5.6	The Bidder understand following Key Date events are not directly link to Taking Over nor Defect Liability, and thus not applicable to the "Section"; With this, the Bidder would propose the Sections as specified in next column.	Section 1): Delivery of the following Rolling Stock equipment for training purposes to the CP NS-01 Contractor at the North Depot (for Training Center Facility): - Equipment for driving simulator, - Pantograph, and - Bogie assembly for motor car including traction motor, gearbox and coupling. Section 2) Delivery of 1st trainset and completion of testing and commissioning	The Bidder's request is rejected.

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			thereof plus handing over Section 3) Delivery of 2nd trainset and completion of testing and commissioning thereof plus handing over Section 4) Delivery of 3rd trainset and completion of testing and commissioning thereof plus handing over Section 5) Delivery of 4th trainset and completion of testing and commissioning thereof plus handing over	

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			Section 6) Delivery of 5th trainset and completion of testing and commissioning thereof plus handing over Section 7) Delivery of 6th trainset and completion of testing and commissioning thereof plus handing over Section 8) Delivery of 7th trainset and completion of testing and commissioning thereof plus handing over Section 9) Delivery of all spare parts,	

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			consumables, special tools and jigs.	
24	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC6 Particular Conditions (PC) Part A - Contract Data Relevant Percentage Weighting for Release of Retention for each Section 14.9 Part 3 – Conditions of Contract and Contract Forms- Section VIII – Particular Conditions PC14 4.2 Performance Security	If the Bidder's proposal on the Section above is acceptable, please also adjust i) relevant percentage of release of Retention for each Sections under Contract Data 14.9 and ii) release of Performance Security under PC4.2.	-NA-	The Bidder's request is rejected.

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25	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC3 Particular Conditions (PC) Part A - Contract Data Electronic transmission systems 1.3 Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG42 7.8 Electronic Document Management System (EDMS)	The Bidder would like to propose Microsoft Share Point for this requirement. As it may able to make huge price impact depends on the system, please confirm if the Bidder's proposal is acceptable.	-NA-	The Bidder's request is rejected. The Electronic Document Management System (EDMS) shall comply with the ERG 7.8 and ERG 7.9. ACONEX was used as the EDMS for the NSCR-EX project wide, thus Bidder's proposal shall include the same EDMS to ensure the compatibility. Clause ERG 7.8.1 was amended.
26	Part 3 – Conditions of Contract and Contract Forms	The Bidder is afraid that review of design documents is out of the Contractor's	KD 1	The Bidder's request is rejected. The KD includes the approval of the Final Design.

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	Section VIII – Particular Conditions PC8 ATTACHMENT 1 SUMMARY OF KEY DATES	control. With this, the Bidder would ask consideration to revise provision to the Bidder's proposed wording on the next column.	Achievement: Completing Final Design Submission. 18 months	
27	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC11 ATTACHMENT 2 TIME FOR ACCESS TO THE SITE	The Bidder would request the Employer to specify additional Time for Access for the event that the NS01 Contractor become available for interface coordination. The Bidder also understand, this event shall be occurred at the same time or before the Commencement Date of NS03 Contract (i.e Time for Access shall be 0 month).	-NA-	The Bidder's request is rejected. The Contractor shall coordinate with the Interface Contractor for any interface coordination.
28	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions	1) As it is understood this Limited Express Train will be manufactured outside of Japan most	AD 1 The E&M System and Track Works Contractor will	1)The Bidder's request is rejected. The delivery location can be at alternative agreed location(s) as mentioned in the clause.

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	PC11 ATTACHMENT 2 TIME FOR ACCESS TO THE SITE Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC8 ATTACHMENT 1 SUMMARY OF KEY DATES	probably, the Bidder would like to have the Employer's consideration to add European Countries for the delivery address of these equipment. 2) Regardless the delivery address the Bidder requests clarification above 1), the Bidder understands these equipment will be delivered to the Contractor's manufacturing site without cost for the NS03 contractor. Please confirm if the Bidder's understanding is correct. 3) The Bidder is afraid KD6 is not achievable based on if on-board equipment is delivered to rolling stock manufacturer only at 37th	supply this equipment in Japan or European Countries at the Rolling Stock Contractor's premises or at alternative agreed location(s) The E&M System and Track Works Contractor will supply this equipment in Japan at the Rolling Stock Contractor's premises or at alternative agreed location(s) AD-1: for trainsets one to seven (1-7)	2)The Bidder's understanding is correct. 3) The Bidder's request is rejected.

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		months. The Bidder assumes, in order to achieve KD6, the Contractor has to complete FAT by 36th months. And with that the Bidder would like to request the Employer to revise AD-1 from 37 month to 28 months.	supplied under this contract 28 months	
29	Part 3 – Conditions of Contract and Contract Forms Section VIII – Particular Conditions PC11 ATTACHMENT 2 TIME FOR ACCESS TO THE SITE	The Bidder understands the North Depot of AD2 and the mainline from CIA to Clark of AD3 are physically connected by track. Please confirm if the Bidder's understanding is correct.	-NA-	The Bidder's understanding is correct.
30	Part 2 – Employer's Requirements Section V1. Employer's Requirements Scope of Works SOW2 1.4 Driver's Cab and Saloon Mock-Up	Please confirm cross reference	The Contractor shall provide a full size fully equipped driver's and saloon cab mock-up for evaluation of the cab design as specified	Clause 1.4 of Scope of Works (pg. SOW-2) is updated and please refer to annex B.

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			in Sub-Clause 1.5 1.2.7 of the ERT.	
31	Part 2 – Employer's Requirements Section V1. Employer's Requirements Scope of Works SOW3 1.10 Provision for Spare Parts and Special Tools Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG70 11.1 Details of Supply	The Bidder understand, the Contractor is required to provide special tools, diagnostic test equipment, test benches, jigs, etc in accordance with ERG - Appendix B: Split Responsibility on Rolling Stock and Other Works and ERT Sub-Clause 24, but not all for the operations and maintenance of the Rolling Stock. Please confirm if the Bidder' s understanding is correct.	-NA-	The Bidder's understanding is not correct. The Contractor is required to provide special tools, diagnostic test equipment, test benches, jigs, etc. that shall be necessary for the O&M of the rolling stocks which support the heavy maintenance, complying to ERT clause 24 and ERG Appendix B. Please note that design requirement mentioned in Appendix B are not exhaustive and the contractor shall finalize the lists during design implementation.
32	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG1	The Bidder understands this Limited Express Train will not run the whole part of South Line. Please clarify specific	-NA-	Bidder's understanding is correct. However, the Contractor's responsibility for interface coordination shall include interfacing with the following interface contractors and those who may be identified in the future such as local

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	1.1.1 Introduction Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG85 20.1 General	section of line the Bidder/Contractor has to consider for train running, also relevant interface parties.		authorities, statutory bodies, utility undertakings, private service providers, consultants or other contractors whether or not specifically mentioned in this Contract. This responsibility is not limited to a particular number of interface contractors. The employer unable to specify the demarcation line of interfaces for the bidder. The Contractor shall has to identify all interfaces requirement during project execution with reference to the employer requirement
33	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG47 8.7 Part 2 – Employer's Requirements Section V1. Employer's	The Bidder's understanding of "fault free running" (FFR) is notwithstanding that minor defects which do not affect the Employers use of the works will still need to be completed after TOC, as it is further defined under Appendix A, ERG-97	-NA-	Bidder's understanding is correct.

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	Requirements General Requirements ERG99 Table A.2 Abbreviations	"Definition of Taking Over: The point where the Works or any part thereof has passed all relevant tests and can be Taken-Over by the Employer in accordance with the GC and PC, notwithstanding the Works may have certain outstanding minor works to be completed, but nonetheless such shall not affect the Employer's beneficial use of the Works or part as intended by the Contract." And also, any fault caused by failure of the Employer's operation and/or maintenance, should not be considered as the period of Fault Free Run.		

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		Kindly confirm if the Bidder's understanding is correct.		
34	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG60 10.2.1.1 Primavera P6	Is it possible to use alternative software? The Bidder proposes to use MS Project instead.	-NA-	Bidder's proposal is rejected. Programming software to be used shall be Primavera P6 (Release 8.2 or later).
35	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG71 11.5 Consumable Spares Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirements ERT148	Please confirm these replenishments are required for the spares and consumable used during DNP in accordance with the Contractor's proposed maintenance work. And it is not the Contractor's obligation if any spare and/or consumables to be used due to the Employer's failure in operation. Otherwise, the Bidder is afraid this requirement may	-NA-	Bidder's understanding is not correct. The replenishments for spares and consumables used during DNP is in accordance to the given notice of no objection on the final lists submitted during the final design stage - sub clause 24.2.5

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	24.3 Spares Parts and Consumables Required During the Defects Notification Period	make unlimited responsibilities to the Contractor.		
36	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG77 14.6 Training Location	As it is huge cost difference between the training in Philippines or abroad if the Employer request the Contractor to shoulder all travel cost. With this the Bidder would ask consideration to apply Provisional Sum PS-03 for the additional cost on the training outside of Philippines.	Page BF48 Schedule 1.9: Provisional Sums PS-03 Provisional Sum in accordance with Sub-Clause 13.5 of the Conditions of Contract to cover the following items as a minimum: a) Any design change initiated by the Employer b) Additional software required to execute Works c) Any additional testing	Bidder's request is rejected. No further changes will be made to training location requirement and the provisional sum requirement.

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			d) Additional travel cost for training outside of Philippines	
37	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG77 14.6 Training Location	The Bidder would ask the Employer's consideration to shoulder costs for such travel arrangement as long as the training be conducted in Philippines.	-NA-	Bidder's request is rejected.
38	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG 82 18.1.1 Requirements Management tool ComplyPro	Is it possible to use an alternative tool? The Bidder proposes to use Doors (IBM) instead.	-NA-	Bidder's request is rejected.
39	Part 2 – Employer's Requirements Section V1. Employer's Requirements General Requirements ERG	Please clarify definition of check mark ("✓") on the column of North WKS and North LRS, and what does it intend if there is no check	-NA-	Table B.2: Split Responsibility in Special Tools for Rolling Stock and Depot Equipment will be updated and will be issued through another GBB.

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	107 Appendix B: Split Responsibility on Rolling Stock and Other Works	mark.		
40	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT2 1.2.58 Design requirements	The Bidder proposes to define the level of avoidance.	8) Avoid use of equipment that are deemed "black box" at higher level than LRU;	Bidder's request is rejected. No further changes will be made to clause 1.2.5 (8). The requirement shall be demonstrated during project execution.
41	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT6 1.5.1.1 Mockup	Full scale mockup for half vehicle (Bidder assumes this means half a car and not half trainset; please confirm) is involving high cost with limited value for Employer. The mockup will only be supplied at KD 2 after 31 months while KD 3 completion of FAT is after 36 months. Therefore,	In order to evaluate the effectiveness of the vehicle interior and its layout, the Contractor shall develop the interior design using a virtual 3D mockup of vehicle interior (drivers cab and passenger saloon)	Bidder's request is rejected. No further changes will be made to clause 1.5.1.1. The mockup does not serve only for evaluation purpose but for the public display as clause 1.5.1.3 (pg. ERT 6) The KD 2/3 will be updated and issued though another GBB.

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		eventual improvements resulting from Mock up evaluation can't be considered in the trainsets anymore. Bidder requests to use a virtual 3D mock up which will permit the review of interior arrangements and design by using VR glasses already during the design phase of the project Furthermore, a 3D mock-up allows design discussions without the need of being on location in person. This might become helpful as part of the Corona-strategy.		
42	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT7 1.6.1.8 Basic train formation	The requirement 6) define clearly how the traction concept should be: group drive per car. The Bidder proposes to have the flexibility to offer the best	6) …Running and Stopping Assistant system and PSD controller. At least as good alternative concepts that	Bidder's request is rejected. No further changes will be made to clause 1.6.1.8. The Contractor shall be able to propose the alternative to the Power and Auxiliary Electric System

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		solution adapted to the network and the specific requirements. Advantages e.g. for the maintainability will be the directly consequence.	respects the maximal axle loads are allowed.	Configuration for the Engineer review during the project execution. Clause 1.6.1.8 will be updated to correct the numbering, please refer to Annex B.
43	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT7 1.5 Mockup	As it is hard to estimate associated cost under this provision at the time of bidding, the Bidder would like to ask consideration to apply Provisional Sum amount for the implementation of this requirement. Please also confirm following the Bidder's understanding is correct; 1) Securing permission and expense for renting of mockup display place from landowner (or other party operating land use) are responsibility of the	Page BF48 Schedule 1.9: Provisional Sums PS-03 Provisional Sum in accordance with Sub-Clause 13.5 of the Conditions of Contract to cover the following items as a minimum: a) Any design change initiated by the Employer b) Additional software required to execute Works	Bidder's request is rejected. No further changes will be made on the provisional sum requirement.

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		Employer as the Bidder cannot estimate certain risk or cost at the time of bidding. 2) The Bidder can assume that mockup display place is well prepared with following condition and all preparation work and its associated cost (if necessary) are not the Contractor's responsibility; - Enough flat flooring condition - Enough tolerant for the loading of mockup - Having roof and wall for the protection from wind, rain and flood.	c) Any additional testing d) Additional travel cost for training outside of Philippines e) All relevant cost implementing requirement under ERT clause 1.5.1.3 and 1.5.1.4	
44	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement	The Bidder does not clearly understand for which scenario the maximal axle load should be applied.	... each Car subject to maximum axle design load of	Bidder's request is rejected. The axle load of a wheeled vehicle is the total weight bearing on the roadway for all wheels connected to a given axle

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	ERT10 1.10.1.2 Weight limits - Maximal axle load	From Bidder interpretation the maximal axle load corresponded to W2, but please clarify this point.	16,000 kg (W2 load condition).	whilst W0/1/2/3 loading refers to the weight added to a vehicle to simulate passenger load. No further changes will be made to clause 1.10.1.2
45	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 10 1.10.1.2 Weight limits - Standing passengers	The definition of the number of standing passengers /m2 has a big impact on the axle load. The Bidder assume that this value is 4p/m2. Kindly confirm.	The number of passenger /m2 shall correspond to 4p/m2.	Bidder's request is rejected. No further changes will be made to clause 1.10.1.2. The number of passenger /m2 shall be calculated by the awarded contractor during project execution.
46	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT11 1.11.1.1 Train performance	The performances are specified only for half-worn wheels and not for all wheel diameters. Please confirm.	-NA-	The clause called for requirement for the purpose of calculating and submitting train performance figures, train configuration and weight shall be as defined in Sub-Clauses 1.3 and 1.7, respectively. Performance requirement shall be achieved, under any conditions of wheel wear as stipulated under clause 1.11.2.1

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47	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT21 1.16.9.3 Installation and Maintenance Requirements of Electric Works	Electrical cables for auxiliary power system are separated per EMC category according to international standards. Therefore, please remove requirement under this sub-clause.	~~Electrical cables for propulsion system and auxiliary power system shall be twisted and run-in ducts made of aluminum alloy as the countermeasure for EMC.~~	Bidder's request is rejected.
48	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 27 1.18.2 Standards	The European commission regulations are strongly related to the infrastructure situation present in Europe and are not adapted for a use outside Europe. The Bidder will not follow these two regulations due to a not compatibility of the infrastructure in the Philippines (e.g. platform position).	The Bidder strongly recommend to cancel this required standard.	Bidder's request is rejected. Please read the clauses carefully: 1.18.2 This list is for guidance; the Contractor shall provide information on all standards used.
49	Part 2 – Employer's Requirements Section V1.	For which minimum curvature radius must the		Horizontal curve radius is as per clause 1.8.1 (Pg. ERT-8). Further interfaces

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	Employer's Requirements Technical Requirement ERT 29 1.21 Rolling stock gauge	gauging calculations be done?		shall comply with Appendix B of ERG (Pg. ERG-104)
50	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT170 Annex C Rolling stock gauge	Are there gauge widening for curved track to be applied to the "construction gauge"?	-NA-	Route data is as per clause 1.8. (Pg. ERT-8). Further interfaces shall comply with Appendix B of ERG (Pg. ERG-104)
51	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT31 2.2.3 Carbody - Carbody evenness	The evenness of an aluminum carbody is based on the DIN 25043 as well as ISO 13920 requirements. Depending on the construction profile (side wall, roof, underfloor, window, …), the evenness in longitudinal direction is ≤3 mm in 1 m span whereas this in traverse direction is ≤5 mm in 2 m span.	All body panels shall be free from wrinkles and other imperfections and shall be flat within 3 mm in any 1 m span in longitudinal direction.	Bidder's request is rejected. No changes will be made to the clause. The awarded bidder shall demonstrate compliance during project execution.

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52	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT138 21.10.6 Carbody - Exterior painting	In order to provide an excellent corrosion resistance, the aluminum carbody need to be painted. A two component (2C) PUR base coat added by a 2C PUR clear coat will be used for the painted exterior. Due to this system, cleaning of the exterior surfaces is a fast and trouble-free activity. Tolerance to a number of cleaning agents and graffiti removers has been tested and confirmed.	The exterior of the aluminum carbody shall be painted.	Bidder's request is rejected. No changes will be made to the clause. The awarded bidder shall demonstrate compliance during project execution.
53	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 32 2.3.3.1 Carbody - Airtight body structure	The Bidder interpretation is that only an airtight structure is required and not a pressure sealed trainset. Kindly confirm.	-NA-	Bidder interpretation is correct.

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54	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT43-44 4.1.1, 4.1.2 & 4.1.14 Automatic coupler - Coupler head	Please clarify which type of coupler head is required (e.g. AAR, Shibata, or Scharfenberg)? The Bidder would ask to accept a Scharfenberg coupler and the use of a modular adaptor in order to be able to cover different head types.	-NA-	There is no conflict between clause 4.1.1 & 4.1.2. 4.1.2 is requirement of coupling with **OTHERS** rail vehicles mentioned in 4.1.1. The type of coupler shall be identified during the project execution in accordance with the interface requirement set forth in this tender.
55	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT43 - 44 & ERT-168 4.1 Automatic coupler - Coupler height & Annex B	Which is the coupler height ATOR and the vertical tolerance range (±xx mm)? According to annex B, this value corresponded to 880 mm: Please confirm	-NA-	Indicative coupler height, measured from the center of the coupler to the top of rail, shall be within 880 mm as per Appendix B: Typical Limited Express Train Layout. The ranges and tolerances shall be designed by the Contractor with satisfaction of interfaces requirement set forth in this tender during project implementation.

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56	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 47 5.7.2 Passenger seats - Rotating function	The Bidder understands this requirement intends seats with a rotation base are required. Please confirm if the Bidder's understanding is correct	-NA-	Bidder's understanding is correct
57	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT31, ERT47& ERT133 21.1.4 Passenger seats - Foam material	From Bidder understanding, the use of PU foams for the seat is not authorized. Please confirm. In Europe PU foam are considered as compliant with the EN45545 regulations and is considered as state of art. The Bidder would kindly request the permission to use PU foam seats compliant to EN 45545.	-NA-	Bidder's request is rejected.
58	Part 2 – Employer's Requirements	The Bidder assumes that the most popular socket	-NA-	Bidder can assume type B is most popular type during tender. However, the

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	Section V1. Employer's Requirements Technical Requirement ERT48 5.7.5 Passenger seats - Electrical sockets	type present in the Philippines is Type B. Therefore, the seats are equipped with Type B sockets. Please confirm if the Bidder's proposition is correct.		final type of electrical sockets/USB port shall be finalized during final design.
59	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT48 5.8.1 & 5.8.2 Wheelchair spaces	The Bidder supposes that two wheelchair spaces per trainset and 6 priority seats per car are necessary. Can you confirm that? Is the Bidder authorized to place the wheelchair spaces in a middle car?	-NA-	The is no conflict between clause 5.8.1 & 5.8.2. As per ERT clause 5.8.2 the wheelchair space is 1/car and 6 priority seats/ car. The contractor shall propose the location of the wheelchair during the project implementation for Employer approval.
60	Part 2 – Employer's Requirements Section V1. Employer's Requirements	The four spaces for the vending machines are in addition to the baggage spaces or shall the vending machine be installed instead of the baggage	-NA-	The four spaces for the vending machines are addition to the baggage spaces.

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	Technical Requirement ERT49 5.10.3Luggage space - Vending machines	space?		
61	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT50 & ERT53 5.17.1 Driver's cab -Sightlines	No specific sightlines requirements: can the Bidder assume, that the sightlines are according to UIC 651? According to UIC 651, the driver must have an unrestricted view on the signals, positioned as represented in Appendix 2 of this questionnaire.	-NA-	The bidder can assume the sightlines are according to UIC651, however, the sightlines requirement shall be demonstrated during the project implementation i.e., design, testing & commissioning etc.
62	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT52 5.16.3 Driver's cab	The Bidder asks to obtain the cab layout drawings of the NSRP-S in order to be able to satisfy this requirement.	-NA-	The Contractor shall comply with the interface requirement set forth in this tender. The Cab layout drawings of the NSRP-S will be obtained through the interfacing with other contractor as per Appendix B: Split Responsibility on Rolling Stock and Other Works.
63	Part 2 – Employer's Requirements	Is there any specific requirement for the position of all front lights (horizontal	-NA-	The bidder can assume the requirement for the position of all front lights (horizontal form the car middle line and

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	Section V1. Employer's Requirements Technical Requirement ERT58 6.5 Exterior light - Front lights	form the car middle line and vertical)? Or can the Bidder make use the EN 15153:2017?		vertical are according to EN 15153:2017. However, the exterior light requirement shall be demonstrated during the project implementation i.e., design, testing & commissioning etc.
64	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT7 & ERT60 1.6.2.1 Passenger side entrance & 7.1.4 Door Typology	For a 900 mm clear opening, the Bidder recommends to use single leaf sliding plug doors with the following opening as well as closing times: 4 ± 0.5 s.	Passenger Doors: Bi-parting plug-in sliding or single leaf sliding plug Doors. The doors shall be the sliding pocket or single leaf sliding plug doors, constructed to prevent hands/finger pinning at the pocket section during operation.	Bidder's request is rejected. The bi-parting door is the requirement for the interface with the station platform door.
65	Part 2 – Employer's Requirements Section V1. Employer's Requirements	Are there specific PNS requirements concerning the maximal admissible gap between car and platform?	-NA-	The Contractor shall comply with the interface requirement set forth in this tender. The mentioned specific PNS requirements concerning the maximal

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	Technical Requirement ERT60 7.1.5 Passenger side entrance - Interface car - platform	(vertical and horizontal) Infrastructure: - Which are the platform positions? (Distance between track axis and platform edge? Height?) - Tolerances: tolerances for platform (+/- xx mm horizontally / vertically) and for the axis of the track.		admissible gap between car and platform will be obtained through the interfacing with other contractor as per Appendix B: Split Responsibility on Rolling Stock and Other Works.
66	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT61 & ERT64 7.1.4 Passenger door & 7.3.17 Opening/closing times	The Bidder supposes, that for passenger side doors the opening as well as closing time can maximal five seconds. A single leaf sliding plug doors has the following opening as well as closing times: 4 ± 0.5 s.	-NA-	Bidder's understanding is not correct. There is no conflict of requirement. 7.1.14 is the door open/close performance requirement whilst 7.3.17 is the requirement of the adjustable door open/closing time.

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67	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT63 7.3.7 Passenger door - Safety systems	The passenger side doors are electrically driven. Therefore, no pneumatically safety system is installed. Each door has different independent operating protective systems that prevent crushing: one of them is the door drive current monitoring	The saloon doors are equipped with the following safety systems: 1) … 2) ... 3) A door drive current monitoring system.	Clause 7.3.7 is revised and please refer to annex B.
68	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT73 9.3.1 Electric Brakes (Regenerative Brakes)	A rapid switch over from regenerative to mechanical braking at such very low speed will create non-manageable jerks. The Bidder proposes to switch over more slowly from ED- to EP (standstill) brakes. This is usually done between 8 and 3 km/h. Due to the very low speed, this change will have no influence on the wear and	Regenerative braking shall be supplied and shall be fully effective down to 5 km/h. Regeneration shall be inhibited when there is no catenary voltage present.	Bidder's request is rejected. Compliance to this requirement shall be demonstrated during the project execution.

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		tear of the EP-brakes and also not on the energy consumption.		
69	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT77 10.2.3 Pneumatic equipment - Air compressor	The Bidder proposes to allow the use of an oil free piston compressor. The reason is connected with the fact, that scroll type compressors are heavier and require more maintenance effort compared to piston compressors. Is the use of an oil free piston compressor authorized?	The air compressor shall be scroll or oil free piston type.	Clause 10.2.3 is updated and please refer to annex B. *The air compressor shall be scroll type or better reliable than; and the maximum discharge pressure of air compressor shall be more than 1MPa*.
70	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 81 & ERT 29 1.20.1 Propulsion system - General	The Bidder assume that the capacitors shall be exchanged after 12 years of operation.	Rolling stocks for MCRP, NSCR and NSRP-S shall be designed based on design life as shown below: 2) Propulsion System, Power	Bidder's request if rejected. Design life requirement shall be demonstrated during the design phase of the project.

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Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
			conversion element: over 20 years / filter capacitor: over 12 years	
71	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 84 11.2.3 & 11.2.4 Power Conversion Equipment	The Bidder proposes the use of forced cooled power conversion equipment, as also required in the clause 11.1.1 1) (ERT-79)	The PCE equipment shall be sufficiently forced cooled. The PCE enclosure shall be integrated ... The inverter power semiconductors shall be housed in watertight, dust proof enclosures meeting IP55 requirements and shall be forced cooled. The devices shall not be protected by fuses.	Bidder's request is rejected. Clause 11.1.1.1 stated that the DC to AC inverter packages (*Self cooling/force cooling Power Conversion Equipment*), each powering the four (4) traction motors in a vehicle. In addition, *The Contractor is allowed to propose alternative to the above requirement for Engineer review.*
72	Part 2 – Employer's Requirements	The Bidder proposes to modify the text in the clause 11.3.1 in order to be	Electrical wheel slide control shall apply to all braking modes,	Bidder's request is rejected.

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	Section V1. Employer's Requirements Technical Requirement ERT 85 11.3.1 Wheel Slip/Slide Control System 9.1.2	compliant with the requirement in clause 9.1.2.	excluding emergency brake. The propulsion system shall be equipped with a wheel slip/slide detection and control system to maximize the utilization of available wheel/rail adhesion under low adhesion conditions, to eliminate damage and unnecessary wear to wheel treads. Slip/slide on motor vehicle shall be detected on per the average velocity of four axle basis estimation and the protection shall be	The requirement compliance shall be demonstrated during project implementation stage.

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			provided on the four-axial.	
73	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirements ERT123 20.1 Inspection	The Bidder would like to reconfirm if number of trips (76 roundtrips) which is same as CPNS02 – 304 units of commuter car is correct.	-NA-	Confirmed.
74	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT136 21.8.1 Fire safety	The trainset will follow the EN 45545. The hazard level (HL) is, beside other parameters, influenced by the Operation Category (OC). For systems with tunnels not longer than 5km the category could be OC2 or OC4, depending on the side evacuation availability (Please refer Appendix 3 of this questionnaire). The Bidder assumes, that the trainset must be OC2.	-NA-	The bidder can assume that the trainset is categorized under OC2 according to EN45545; however, the requirement shall be demonstrated during the project implementation i.e., design, testing & commissioning etc. with satisfaction of interfaces design requirements as per Appendix B- ERG (Pg. ERG-104)

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		Please kindly confirm.		
75	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirements ERT142 22.6 Technical Support	The Bidder would like to confirm that the Contractor is not required to hand over air conditioning unit specified in ERT 22.6.6 to the Employer, because in usual case it is part of building facility.	-NA-	The Contractor is required to hand over the air conditioning unit to the Employer if the unit were previously provided by the Contractor as per ERT clause 22.6.7.
76	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirements ERT142 22.6.8 Cars for the Employer	The Bidder understands that these requirements intend the Contractor to provide required cars with driver to the Employer's personnel at full time basis. If the Bidder's understanding is correct, please confirm cost of diesel/gasoline is not part of the Contractor's responsibility as it is out of the Contractor's control.	-NA-	Bidder's understanding is not correct. Reference to Schedule 1.1 milestone no.109; it is including driver costs, maintenance, insurance, registration costs, fuel costs, and any associated costs from commencement until completion of the Works. Clause 22.6.8 is updated and please refer to Annex B.

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		The Bidder also ask clarification on the interpretation of "off-hire" mentioned on 22.6.8.3. The Bidder understands if the Contractor provide leased cars to the Employer's as required during implementation, these cars will not be handed over to the Employer when TOC issued. Please confirm if the Bidder's understanding is correct.		
77	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT 143 22.7.2.1 & 22.7.3.3 Guarantee Period	As per General Requirements clause 1.6 Warranty, ERG-4 the maximum Defects Notification Period is two (2) years from the date of issue Taking over Certificate. This clause ERT 22.7.2 is	Alternatively following revised wording (in line with CP NS-02) 1) The vehicle body structure (including under frame and	Bidder's request is rejected. In reference to GC 1.1.3.7 on the definition of Defect Notification Period, DNP is not the same as Guarantee Period. Guarantee Period requirement is the equipment design life which to be complied and evidence of manufacturer support within the guarantee period.

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		in contradiction with above As per our understanding the concept of extended Guarantee period is neither foreseen in the Particular Conditions (PC) nor in the General Conditions (GC). We would therefore kindly request to delete the clause 22.7.2 and 27.7.3 as the terms of Defects Notification Period are already defined elsewhere	support brackets) and bogie frame shall be guaranteed for not less than 10 years 2) The following equipment shall be guaranteed for an extended period of 5 (five) years: a) Major components of bogie system (bogie frame, axles, suspensions, Traction Motors, gearboxes, etc.), b) Painting: Corrosion Protection, (regarding technical protection function, excluding appearance for example gloss) and	

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			c) Glass. 3) The vehicle batteries shall be guaranteed for not less than three (3) years. 4) All other vehicle components and system shall be guaranteed for a period of two (2))	
78	Part 2 – Employer's Requirements Section V1. Employer's Requirements Technical Requirement ERT144 22.7.4 Fleet defects	In the definition of Fleet defects it is industry practice to define as follow: - failures shall have the same root cause - given small quantity of only 7 trainsets, 3% doesn't adequately define a fleet defect. We therefore kindly request to revise the clause as	22.7.4 Fleet Defects (Pattern Failures) 22.7.4.1 The occurrence of independent failures with the same root cause of the same warranted item that exceeds more than 10% percent, but at least three (3) of the total number of	The bidder's proposal is accepted. Clause 22.7.4 is updated and please refer to annex B. The occurrence of independent failures with the same root cause of the same warranted item that exceeds more than 10% percent, or at least three (3) of the total number of identical items supplied may be declared a fleet defect or pattern failure.

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		proposed	identical items supplied may be declared a fleet defect or pattern failure. 22.7.4.2 On this basis, the Contractor shall be required to develop and implement an encompassing corrective action program to eliminate the pattern failure	

Annex B

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
		Volume I Part 1 – Bidding Procedures
1	BDS-2 Item ITB 7.1	Revised second item of ITB 7.1 with the following: Responses to any request for clarification, if any, will be published on the web pages indicated below, provided that such request is received not later than fourteen (14) days prior to the deadline for submission of Bids. Web pages: www.ps-philgeps.gov.ph/home/ www.dotr.gov.ph www.pnr.gov.ph For any requests for clarifications, prospective Bidders shall submit them in writing using the template provided in Attachment-1 to this Bid Data Sheet, together with a cover letter signed by the Bidder's Authorized Representative. The prospective Bidders shall submit a hardcopy of the cover letter and clarification request to the Procurement Service or email electronic copies in PDF and Word format.

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
		Volume II Part 2 – Employer's Requirements
2	SOW-2 Item 1.4	Revised item 1.4 with the following: The Contractor shall provide a full size fully equipped driver's and saloon cab mock-up for evaluation of the cab design as specified in Sub-Clause 1.5 of the ERT.
3	ERG-42 Item 7.8.1	Revised item 7.8.1 with the following: The Contractor shall use Oracle Aconex as an Electronic Document Management System (EDMS), which is compatible with the Employer's EDMS, to coordinate and control the document flow (creation, processing, storage, retrieval and distribution) of electronic and paper documents in a secure and efficient manner.
4	ERT-7 Item 1.6.1.8	Corrected item 1.6.1.8 numbering and grammatical error: 1) Six (6) power conversion systems which can drive four (4) AC motors shall be equipped in suitable three (3) intermediate cars of trainsets. Two (2) auxiliary power supply systems with a primary inverter to serve the auxiliary loads shall be equipped in the proper place of trainsets. The positions where these devices shall be reviewed by the Engineers. Both leading cars shall be trailer car (not motor mounted) considering EMC and the mounted space for on-board ETCS, Running and Stopping Assistant system and PSD controller. 2) The Contractor shall able to propose the alternative to the Power and Auxiliary Electric System Configuration for the Engineer review. The simplified block diagram for reference is shown in Appendix A.

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
5	ERT-35 Item 2.9	Added new requirements as shown in item 2.9: 2.9 Stanchions, Handrails, Grab Handles, Door Screen 2.9.1 General 2.9.1.1 The interior will be equipped with sufficient stanchions and handrails to accommodate the safety of standee passengers. When normally loaded to W2 and onwards, capacity there shall be sufficient handholds for all passengers. 2.9.1.2 Stanchions and handrails shall be securely held at each end in fittings. Fittings shall be pressings or castings and the finish shall match that of the stanchions. All fittings shall provide a permanently tight and rattle proof fastening, and be free of burrs and sharp edges. All fastenings shall be concealed and proven to provide safety to the passengers. 2.9.2 Material 2.9.2.1 Stanchions and handrails shall be made from seamless, radial brush finish and satin finished stainless-steel tubing. 2.9.3 Grab Handles 2.9.3.1 Grab handles shall be provided for standee passenger. The grab handles shall be robust and use concealed fasteners. Colors and finishes shall match the stanchions and the passenger seat frame.

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
		2.9.4 Glass screens 2.9.4.1 Glass screens (windscreens or draught screens) shall be provided. Each screen shall incorporate a vertical curved stanchion and a clear laminated safety glass panel at least 6mm thick with polished edges.
6	ERT-63 Item 7.3.7 (3)	Revised item 7.3.7 (3) with the following: It is necessary to install a function to detect and manage the obstacles so that a sandwiched object or a person can easily escape. And this function shall be canceled after train speed exceed a certain speed or a certain time passes from doors close.
7	ERT-77 Item 10.2.3	Revised item 10.2.3 with the following: The air compressor shall be scroll type or better reliable than; and the maximum discharge pressure of air compressor shall be more than 1MPa.
8	ERT-143 Item 22.6.8.1	Revised item 22.6.8.1 with the following: 22.6.8.1 It shall be decided in liaison with the Contractor the best arrangement to ensure the following cars are available as a minimum until completion of the Works, including driver costs, maintenance, insurance, registration costs, fuel costs, and any associated costs from commencement until completion of the Works.

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
9	ERT-144 Item 22.7.4.1	Revised item 22.7.4.1 with the following: The occurrence of independent failures with the same root cause of the same warranted item that exceeds more than 10% percent, or at least three (3) of the total number of identical items supplied may be declared a fleet defect or pattern failure.

Annex B – Attachment 1

	Information, which will not be a part of the Contract, comprises the following: **Site Data** - Environmental Impact Statement - Environmental Management Plan - Environmental Monitoring Plan - Existing Utility Drawings **Site Reference Information** - Topographic Survey Report - Hydrological Report - Traffic Assessment Survey Report - Existing Structure of Historical Importance Report - Safety Rules and Manuals Published by Philippine National Railway (PNR) - available for inspection at the office of PNR with prior appointment
ITB 7.1	For **clarification purposes** only, and acting on behalf of the Employer, the Procuring Agent's address is: Attention: Joseph Conrad D Dueñas The Chairperson Bids and Awards Committee IV Address: Procurement Service RR Road, Cristobal Street, Paco, Manila Tel No. (+632) 8-2906300 (TL); 8-2906400 (TL) Email Address: bac4_cpns03@ps-philgeps.gov.ph
ITB 7.1	Responses to any request for clarification, if any, will be published on the web pages indicated below, provided that such request is received not later than fourteen (14) days prior to the deadline for submission of Bids. Web pages: www.ps-philgeps.gov.ph/home/ www.dotr.gov.ph www.pnr.gov.ph For any requests for clarifications, prospective Bidders shall submit them in writing using the template provided in Attachment-1 to this Bid Data Sheet, together with a cover letter signed by the Bidder's Authorized Representative. The prospective Bidders shall submit a hardcopy of the cover letter and clarification request to the Procurement Service or email electronic copies in PDF and Word format.

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Design reviews shall be conducted at each stage of the design process as specified. The Contractor shall start procurement, manufacturing, construction and installation after the outcome of the Engineer's review and the obtain the Notice of No Objection from the Employer.

1.4 Driver's Cab and Saloon Mock-Up

The Contractor shall provide a full size fully equipped driver's and saloon cab mock-up for evaluation of the cab design as specified in Sub-Clause ~~1.2.7~~1.5 of the ERT.

1.5 Train Operation Simulator Parts

The Contractor shall provide a Simulator parts as specified in Sub-Clause 29 of the ERT.

1.6 Manufacturing

The Contractor shall manufacture seven (7) 8-car trainsets, total of 56 vehicles. Manufacturing of the vehicles and equipment shall be carried out under accepted production and certified quality control processes to the JIS Q9001 or other equivalent standards approved by the Employer/Engineer.

1.7 Procurement of Materials, Components and Sub-Systems

The Contractor shall procure materials, components and sub-systems which are required for the Rolling Stock manufacturing. The materials to be used in the manufacturing shall be of high quality and comply with relevant international standards acceptable to the Employer/Engineer. All materials, components and sub-systems shall be procured from reputable suppliers which are ISO 9001 certified or working toward this certification.

1.8 Inspection, Testing and Commissioning

The Contractor shall test all vehicles to ensure compliance to the specified performances in the ERT. Tests are categorized into Factory Acceptance Test (FAT), Site Acceptance Test (SAT), Testing and Commissioning.

For the on-site testing and commissioning, the test shall follow IEC 61133.

FAT shall be conducted at the manufacturer's facility with SAT, Testing and Commissioning being conducted after delivery to the Site.

System Integration Test (SIT) shall be conducted by the Contractor together with Signaling, Telecommunications and other Contractors. The Contractor shall provide the necessary technical support to ensure the interface for each vehicle function satisfactorily as stipulated in this Contract.

1.9 Delivery of Rolling Stock to the Site

The Contractor shall deliver the completed Rolling Stock by whichever means necessary to the Site and depot as designated by the Employer/Engineer to meet the requirements of the Project delivery schedules and shall unload the Rolling Stock at the specified location agreed by the Employer/Engineer.
All cost associated with the Rolling Stock Delivery, all other deliverables under the contract and any equipment etc. shall be borne by the Contractor.

1.10 Provision for Spare Parts and Special Tools

Design reviews shall be conducted at each stage of the design process as specified. The Contractor shall start procurement, manufacturing, construction and installation after the outcome of the Engineer's review and the obtain the Notice of No Objection from the Employer.

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1.10 Provision for Spare Parts and Special Tools

7) Detail how object data from the CAD Model shall populate areas in the Configuration Model.

7.8 Electronic Document Management System (EDMS)

7.8.1 The Contractor shall use Oracle Aconex as an Electronic Document Management System (EDMS), which is compatible with the Employer's EDMS, to coordinate and control the document flow (creation, processing, storage, retrieval and distribution) of electronic and paper documents in a secure and efficient manner.

7.8.2 All the Contractor's documents shall be controlled via the EDMS system for the work under the Contract. The Contractor's EDMS shall remain in effect during the Contract and Defects Notification Period.

7.8.3 These requirements cover all types of documents including, but not limited to:

1) management plans, procedures, method statements;
2) quality documentation, norms, standards;
3) design documents;
4) design models;
5) as-built drawings;
6) operation and maintenance manuals;
7) engineering calculations;
8) reports - progress, construction, test & commissioning, technical and non- technical;
9) time, schedules and cost; and
10) certification.

7.8.4 The Contractor's EDMS shall:

1) provide a storage and backup infrastructure to prevent data loss and provide data recovery mechanisms;
2) provide a single, controlled source for each document;
3) provide an efficient search and retrieval of specific documents;
4) provide measures to control restricted access to programme documents and provide access to all documents to all team members;
5) identify document development and approval processes that promote quality and consistency;
6) provide clarity regarding which version of a deliverable is the latest version;
7) provide a clear record of deliverables;
8) enable quick and direct propagation of changes; and
9) provide an accurate and complete archive of documents to the Employer.

7.9 Electronic Document Management

7.9.1 The Contractor shall submit an Electronic Document Management procedure as part of the Quality Management Plan for review by the Engineer, detailing how the Contractor shall implement and maintain a web-based EDMS.

7.9.2 The EDMS shall give an overview of the strategy and shall include a permissions matrix

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7.9.2 The EDMS shall give an overview of the strategy and shall include a permissions matrix

distribution shall be as defined in IEC 61133 or any equivalent standard approved the Engineer.

1.6.1.6 Total gross axle load of leading car and middle car shall not exceed 16 Tonnes for loads as in section 8.5 of IEC61133

1.6.1.7 Provision for 10 car trainsets shall be provided for future upgrade.

1.6.1.8 Power and Auxiliary Electric System Configuration

~~6)~~1) Six (6) power conversion systems which can drive four (4) AC motors shall be equipped in suitable three (3) intermediate cars of trainsets. Two (2) auxiliary power supply systems with a primary inverter to serve the auxiliary loads shall be equipped in the proper place of trainsets. The positions where these ~~devices shall~~devices shall be reviewed by the Engineers. Both leading cars shall be trailer car (not motor mounted) considering EMC and the mounted space for on-board ETCS, Running and Stopping Assistant system and PSD controller.

~~7)~~2) The Contractor shall able to propose the alternative to the Power and Auxiliary Electric System Configuration for the Engineer review.

The simplified block diagram for reference is shown in Appendix A.

1.6.1.9 Under emergency conditions, one train in W2 (Clause 1.1) loading must be capable of operating with another train in W2 loading coupled to it for hauling or pushing.

1.6.2 Vehicle Physical Characteristics

1.6.2.1 The following physical characteristics indicate fundamental vehicle dimensions that should be given careful attention.

1.	Carbody Length (excluding coupler, overhang of leading car)	19,500 mm
2.	Overall length (excluding overhang of leading car)?	20,000 mm
3.	Train length (In case of 8 cars, excluding overhang of both leading cars)	160,000 mm
4.	Overall Width (excluding light on both sides of the vehicle)	2,950 mm
5.	Overall height from top of rail to roof (excluding air conditioning system on the roof)	3,655 mm
6.	Door arrangement shall comply with Sub-Clause 8.1 of this ERT	
7.	Floor height	1,130～1,150 mm
8.	Pantograph lock down height	Max. 4,150 mm
9.	Pantograph height working range	4,400 – 5,415 mm
10.	Wheel Diameter	780～860 mm
11.	Wheelbase	2,100 - 2700 mm
12.	Distance between Bogie center	13,800 mm
13.	Passenger Doors	Bi-parting plug-in sliding Doors
14.	Doorway entrance width	more than 900 mm (This is narrow, 1300 is usual which allows 2 streams of passengers to enter/exit)
15.	Gangway door width	more than 800 mm
16.	Doorway height	1,850 mm

distribution shall be as defined in IEC 61133 or any equivalent standard approved the Engineer.

1.6.1.6 Total gross axle load of leading car and middle car shall not exceed 16 Tonnes for loads as in section 8.5 of IEC61133

1.6.1.7 Provision for 10 car trainsets shall be provided for future upgrade.

1.6.1.8 Power and Auxiliary Electric System Configuration

1) Six (6) power conversion systems which can drive four (4) AC motors shall be equipped in suitable three (3) intermediate cars of trainsets. Two (2) auxiliary power supply systems with a primary inverter to serve the auxiliary loads shall be equipped in the proper place of trainsets. The positions where these devices shall be reviewed by the Engineers. Both leading cars shall be trailer car (not motor mounted) considering EMC and the mounted space for on-board ETCS, Running and Stopping Assistant system and PSD controller.

2) The Contractor shall able to propose the alternative to the Power and Auxiliary Electric System Configuration for the Engineer review.

The simplified block diagram for reference is shown in Appendix A.

1.6.1.9 Under emergency conditions, one train in W2 (Clause 1.1) loading must be capable of operating with another train in W2 loading coupled to it for hauling or pushing.

1.6.2 Vehicle Physical Characteristics

1.6.2.1 The following physical characteristics indicate fundamental vehicle dimensions that should be given careful attention.

1.	Carbody Length (excluding coupler, overhang of leading car)	19,500 mm
2.	Overall length (excluding overhang of leading car)?	20,000 mm
3.	Train length (In case of 8 cars, excluding overhang of both leading cars)	160,000 mm
4.	Overall Width (excluding light on both sides of the vehicle)	2,950 mm
5.	Overall height from top of rail to roof (excluding air conditioning system on the roof)	3,655 mm
6.	Door arrangement shall comply with Sub-Clause 8.1 of this ERT	
7.	Floor height	1,130～1,150 mm
8.	Pantograph lock down height	Max. 4,150 mm
9.	Pantograph height working range	4,400 – 5,415 mm
10.	Wheel Diameter	780～860 mm
11.	Wheelbase	2,100 - 2700 mm
12.	Distance between Bogie center	13,800 mm
13.	Passenger Doors	Bi-parting plug-in sliding Doors
14.	Doorway entrance width	more than 900 mm (This is narrow, 1300 is usual which allows 2 streams of passengers to enter/exit)
15.	Gangway door width	more than 800 mm
16.	Doorway height	1,850 mm

2.8.1.9 The Contractor shall confirm equipment arrangement of rolling stock in MCRP, NSCR and NSRP-S, and equipment arrangement shall be unified as possible, paying attention to mounted side, mounted positions (especially test valves, valves and cocks used in emergency), and so on. Equipment arrangement shall be designed not to affect maintainability and emergency operation even if special operations are adopted. Example, equipment arrangement shall be designed in consideration with symmetry, when reversed train formation operation will be adopted.

2.8.1.10 Equipment arrangement shall be reviewed by the Engineer.

2.8.2 Cabin and Saloon Access Handrails and Steps

2.8.2.1 The Contractor shall ensure that a set of steps with non-slip treads is provided under each driver's door; to warrant the Driver's safety when boarding and exiting the vehicle when not at platform level.

2.8.2.2 The Contractor shall ensure that easy access steps with non-slip treads and handrails fit for purpose will be provided at each passenger side entrance door on both sides, this will allow passengers to easily and safety exit the cars during evacuation circumstances when the car is not at platform level. Signage and instructions on how to alight from the train safely shall be provided for each passenger door.

2.8.2.3 The stiffness and strength of the handrails and their connections shall be designed and tested to ensure that they will withstand the rigors of use and the environment. They shall be designed and tested to withstand, without permanent deformation, a load of 1.3 kN applied at the midpoint of the span.

2.8.2.4 The stiffness and strength of the steps and their connections shall be designed and tested to allow use by a person exerting a force of 1.3 kN (load applied at angle of 45 degrees), without permanent deformation, and with the maximum deflection limited to 1 mm.

2.9 Stanchions, Handrails, Grab Handles, Door Screen

2.9.1 General

2.9.1.1 The interior will be equipped with sufficient stanchions and handrails to accommodate the safety of standee passengers. When normally loaded to W2 and onwards, capacity there shall be sufficient handholds for all passengers.

2.9.1.2 Stanchions and handrails shall be securely held at each end in fittings. Fittings shall be pressings or castings and the finish shall match that of the stanchions. All fittings shall provide a permanently tight and rattle proof fastening, and be free of burrs and sharp edges. All fastenings shall be concealed and proven to provide safety to the passengers.

2.9.2 Material

2.9.2.1 Stanchions and handrails shall be made from seamless, radial brush finish and satin finished stainless-steel tubing.

2.9.3 Grab Handles

2.9.3.1 Grab handles shall be provided for standee passenger. The grab handles shall be robust and use concealed fasteners. Colors and finishes shall match the stanchions and the passenger seat frame.

2.9.4 Glass screens

2.9.4.1 Glass screens (windscreens or draught screens) shall be provided. Each screen shall incorporate a vertical curved stanchion and a clear laminated safety glass panel at least 6mm thick with polished edges.

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then be interfaced to the TMS. Basically, status that obstacles that have less than 5mm thickness are sandwiched shall be also defined 'Closed'. But status that obstacles that have over 10mm thickness are sandwiched shall be not defined 'Closed'. For pneumatic type, re-open function only for 'Not closed door' shall be valid in this situation. Care shall be paid to equip diodes to appropriate positions so that mis-operation caused by energizing wires unintentionally, are not happened.

7.3.7 The saloon doors are equipped with the following safety system:

1) Inform passengers that the doors are being closed by sound and visual devices;

2) Authorize starting of the train only when all doors are closed

3) It is necessary to install a function to detect and manage the obstacles ~~temporarily weaken the air pressure~~ so that a sandwiched object or a person can easily escape. And this function shall be canceled after train speed exceed a certain speed or a certain time passes from doors close.

7.3.8 Detection of small objects, hands, clothes shall be detected by sensitive edge door devices. The obstruction detection shall be tested with a rigid 15 mm diameter object placed perpendicular to the door panels at any three (3) vertical locations along the leading edge of the doors (except the lowest 75 mm and the upper most 100 mm).

7.3.9 On detection of an obstruction the doors shall behave in the following manner (or similar):

1) If, during the first attempt to close, a door is obstructed, the door shall reopen by at least 100 mm for each leaf and remain open for 1 second before attempting to close again. The driver shall be notified of the door obstruction and its location by the TMS;

2) If, on the second attempt to close, the door is obstructed, the door shall reopen by at least 100 mm for each leaf before attempting to close again. There shall be the ability to manually push the door back further;

3) If, on the third attempt to close, the door is obstructed, the door shall open to full width and remain in this state until reset; and

4) To reset the door, the crew shall operate the door close control to restart the closing cycle.

7.3.10 In the event that the passenger door fails to close following the three attempts, further door movement shall cease on the offending passenger door and door will go to and remain in fully open position. Once such a passenger door has stopped movement, following this condition, further door closure shall require another activation of the corresponding "Door Close" command.

7.3.11 The push back feature shall be operative after the door leaves have been 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.

7.3.12 The door system shall continue to operate correctly within the car battery voltage supply in the specified range.

7.3.13 The above gaps and timings are notional and shall be capable of being adjusted after experience in service has been gained. The initial settings shall be determined from an investigatory trial undertaken using the door mock-up, or the door test rig.

7.3.14 Time delay of door motion shall be adjustable from 0 second to 3 second.

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7.3.14 Time delay of door motion shall be adjustable from 0 second to 3 second.

10 Pneumatic Equipment

10.1 General

10.1.1 The trains shall be supplied with the equipment and functions specified herein, such that a complete, fully integrated and fully functioning friction brake and pneumatic system is provided.

10.1.2 The number and capacity of complete pneumatic system, which shall consist of an air compressor assembly and all associated piping, reservoirs, fittings, etc., to provide a fully functional system capable of supplying all air requirements for the friction braking system, air suspension system,), horns, etc., shall be provided.

10.1.3 Compressed air shall be produced by the air compressor assembly described in Sub-Clause 10.2 of this ERT. Compressed air shall be sufficiently filtered and dried prior to entering the pneumatic lines. All feeds from the main supply line shall be protected by check valves, to prevent the rapid loss of air shall a rupture of leakage in the line occur. Flexible connections from the air compressor to the main supply line shall be likewise protected by check valves.

10.1.4 The pneumatic equipment, including the compressor shall have a maximum operating pressure of 1MPa (10bars). The compressor shall be adequately protected, including from over pressure.

10.1.5 The Contractor shall submit the air system design document including the number and capacity of air compressor unit and air tank capacity and function, etc., It shall be reviewed by the Engineer.. In the event of one compressor unit failure, the adjacent compressor shall be able to support the pressure level without degradation of the train operation performance.

10.2 Air Compressor Assembly

10.2.1 The train shall be equipped with require number of transit service-proven air compressor assembly, which shall consist of an air compressor unit directly driven by an electric motor, air filtration, air drier equipment, inter cooler, safety valves, etc.

10.2.2 The assembly shall be installed under the vehicle via resilient mounts, and care shall be taken to minimize the amount of noise and vibration transmitted into the carbody structure and to the wayside.

10.2.3 The air compressor shall be scroll type or better reliable than; and the maximum discharge pressure of air compressor shall be more than 1MPa ~~The air compressor shall be scroll type, and the maximum discharge pressure of air compressor shall be more than 1MPa.~~

10.2.4 The air compressor motor shall be powered from the 440 VAC, 60 Hz auxiliary power supply system.

10.2.5 Each compressor assembly shall be capable of supplying all of the air requirements for an 8-cars train-set in the event of failure of one compressor unit.

10.2.6 The capacity of air compressor shall have sufficient for the simultaneous operation of all pneumatic devices. Calculations for the capacity of air compressor shall be submitted for review by the Engineer.

10.2.7 All air compressors shall be started/stopped synchronously to average each compressor's operation ratio. For this control, train line or transmission of TMS may be utilized.

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22.5 **Systems Integration**

22.5.1 The Contractor shall submit a Systems Integration Plan for review and given statement of No Objection. This plan shall describe in detail the means by which the Contractor will ensure that all systems and subsystems are compatible with each other and will work together to satisfy the requirements of this ERT.

22.6 **Technical Support**

22.6.1 The Contractor shall make available experienced Maintenance Engineers & maintenance staff to provide assistance throughout all Defects Notification Periods. All works carried by the Contractor during the Defects Notification Period shall be carried out within the operating schedule maintenance periods. During the Defects Notification Periods, it is preferable that engineers & maintenance staffs should stay near the depot or place to work.

22.6.2 Assigned Maintenance Engineers and staff shall have good command of English language.

22.6.3 Access to the depot and to cars by the Contractor's staff shall be controlled by the Engineer. The Contractor shall adhere to all the Employer's working practices, including safety procedures of the Employer.

22.6.4 The Contractor shall provide operation and maintenance training to the Employer, as defined in Clause 14 of the ERG and Clause 25 of this ERT.

22.6.5 Where Defects Notification maintenance or additional work is required on the cars, the procedure and documentation for the work shall be applied strictly, regardless of whether the work is carried out by the Contractor and/or the Employer.

22.6.6 The Contractor shall provide an office space at the site, from the Commencement Date until the end of Defects Notification Period (DNP), for ten (10) engineers, and equipped with complete facilities. As a minimum, the office shall be equipped with the following essential furniture/equipment:

1) Tables and chairs for ten persons;
2) Secured locker cabinet (10 units);
3) Telephone line with international direct dial;
4) Fax machine and photocopy machine (latest model heavy duty);
5) Computer with internet connection (ten (10) sets, current model with printers and all peripherals);
6) Air conditioning; and
7) Meeting room with 1 conference table, 10 chairs, white board and bookshelves

22.6.7 All equipment stated above shall be handed over to the Employer after the completion of the depot.

22.6.8 Cars for the Employer

22.6.8.1 It shall be decided in liaison with the Contractor the best arrangement to ensure the following cars are available as a minimum until completion of the Works, including driver costs, maintenance, insurance, registration costs, fuel costs, and any associated costs from

commencement until completion of the Works.~~up to the point of issue of the TOC~~.

22.6.8.2 These cars may be purchased in accordance with existing laws, rules and regulations, or leased by the Contractor, or a combination of both arrangements, whichever is best suited for the particular situation subject to the Engineer's review.

22.6.8.3 Leased cars will go off-hire but any purchased cars shall be transferred to the Employer at this time.

22.6.8.4 For the Employer; 5 units – MPV or SUV, Diesel, automatic transmission.

22.6.8.5 Authorized drivers only shall be allowed to use the cars, which shall be well maintained to the appropriate standard.

22.7 Warranty/Guaranties

22.7.1 The Contractor shall warrant that the design, materials and workmanship incorporated and used in the production of each system and vehicle shall be free from defects and that system and its related components and apparatus comply with their corresponding specification and/or relevant data and drawings with consent of Engineer.

22.7.2 Guaranty Period

22.7.2.1 Unless otherwise specified, the guaranty period for the following components shall commence from the date of issue of Taking over Certificate, which shall be done after all action items has been closed out on the vehicle on which they are installed.

1) The vehicle body structure (including under frame and support brackets) and bogie frame shall be guaranteed for not less than 30 years
2) The following equipment shall be guaranteed for an extended period of 20 years:
    a) Major components of bogie system (bogie frame, axles, suspensions, Traction Motors, gearboxes, etc.),
    b) Painting: Corrosion Protection, and
    c) Glass.
3) The vehicle batteries shall be guaranteed for not less than three (5) years.
4) All other vehicle components and system shall be guaranteed for a period of five (5)) years.

22.7.3 Responsibility of the Contractor

22.7.3.1 Under this warranty/guaranty, the Contractor shall be responsible, at his own cost and expense (including cost of removal and installation), for the repair and/or replacement of each component or apparatus which, under normal use and maintenance becomes defective or inadequate in the performance of its function during the guaranty period, or during such period fails to comply with the ERT.

22.7.3.2 Should the removal or replacement of a failed component or apparatus cause removal or replacement of any other equipment or parts, such work and related cost shall be borne by the Contractor.

22.7.3.3 The warranty/guaranty covering any component or apparatus repaired or replaced by the Contractor shall be renewed for a period equal to the period of the original

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22.7.3.3 The warranty/guaranty covering any component or apparatus repaired or replaced by the Contractor shall be renewed for a period equal to the period of the original

warranty/guaranty effective as of the day when such repaired/replaced part is installed. If the failure is found to affect any other component or apparatus, the renewal of the warranty/guaranty shall also be extended to cover the components or apparatus so affected and shall start as of the date the interrelated components and apparatus function is restored.

22.7.4 Fleet Defects (Pattern Failures)

22.7.4.1 The occurrence of independent failures with the same root cause of the same warranted item that exceeds more than 10% percent, or at least three (3) of the total number of identical items supplied may be declared a fleet defect or pattern failure. ~~The occurrence of independent failures of the same warranted item that exceeds more than 3 percent of the total number of identical items supplied may be declared a fleet defect or pattern failure.~~

22.7.4.2 On this basis, the Contractor shall be required to develop and implement an encompassing corrective action program to eliminate the pattern failure.

22.7.5 Computerized Maintenance Management System

22.7.5.1 The Contractor shall support the Computerized Maintenance Management System (CMMS) development by the CP NS-01 Contractor.

22.7.5.2 The Contractor shall coordinate and agree with the CP NS-01 Contractor and provide the necessary required data for the CMMS.

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