

Pre-bid queries & responses

CMRL/PHASE-II/SYS/CP24/ASA09/2023

20-12-2023

<u>S.no.</u>	<u>Part</u>	<u>Section</u>	<u>Clause No.</u>	<u>Original bid condition</u>	<u>Bidder's query</u>	<u>Response</u>
1	Part 1	IV A	2	schedule of adjustment data, table A.B1,B2,B3	please double confirm the formulae and parameters in the table.	Tender condition shall prevail.
2	Part 2	IV A	6.1.4	The Employer will be acquiring the common cloud-based server for all contract packages of phase 2 and back charge the proportionate cost of the Server, Cloud services and the manage services of the cloud server to each contractor;3 no's user licenses cost for Primavera P6 Enterprise Project Portfolio Management Cloud Service;Min. 15 no's user licenses cost for Primavera P6 Enterprise Project Portfolio Management Web Services Cloud Service	for PSD supplier, what proportion will be back charged and what is the approximately cost? Please indicate the approximately cost for user licenses cost here mentioned.	Based on details of cloud-based project management enterprise software & no. of user licenses specified in tender, bidder may directly contact the software vendor/supplier to obtain the cost estimate.
3	Part 2	VI B	Appendix 2P-4B 5.5.1	PSD contractor has the responsibility to design the PSD/Fixed Panel/EED/DED/MSD layout in line with SOD requirements.	PSD layout interface: no rolling stock configuration drawings /layout provided, please provide the same.	The detailed drawings/layout can be obtained from the RS contractor as part of interface coordination after award of contract. Also, please refer Appendix 2N Schedule of Dimensions, Appendix 2P-1 & Clause No.6.5 of section VI-B part-II of the bid document for further details.
4	Part 2	VI B	4.12.1	b) Train Generated Pressure Loading from the train's movement, if any, plus a 10 % margin, applied in a continuous repetitive manner, imposing fatigue effects on the PSDs for Elevated platforms.	b)Pressure loading need to be defined, how much Pa?	The contractor shall design the PSD system to withstand the required pressure loading duly making simulation studies and suitable calculations, assumptions etc. Details can be reviewed during design stage.
5	Part 2	VI B	3.2.1.1.19	All software's required for project execution namely Requirement capturing software (DOORS), FRACAS, etc.	If DOORS(Requirement capturing software) to be provided by Chennai Metro?	Please refer Clause Nos.3.2.1.1 Section VI-B Part-2 of bid document for scope of supply
6	Part 2	VI B	5.17.1	Two Passenger Doorway of the PSD shall be provided with Push button, placed adjacent to the BSD doorway, integrated to PSD façade system.	The Push button requirement is contradictory of NFPA130 requirement, the Manuel release device should be considered.	Tender specification shall prevail
7	Part 2	VI B	6.7.3	The PSD System shall conform to IEC 60529 Ed. 2.0 b, to the following levels. a) IP 55 for Equipment cabinet on fixed drive panel, MCP, limit switches, summary lamp etc for HH-PSD. b) IP 52 for enclosures to be installed in equipment rooms.	Suggest to define the IP rate for motor, MCP, but not for Fixed driving panel, as it has the moving parts.	Tender specification shall prevail
8	Part 2	VI B	5.15.9	The summary lamp of the PSD shall be similar across various PSDs in Phase 2.	please provide the summary lamp of the PSD.	Detailed specification for the summary lamp shall be finalized during design stage
9	Part 2	VI B	5.16.2	3 car open(a combination of two buttons in series)	Does it mean two buttons to be pressed together when to open the PSD (in MCP local mode)?	Yes. Tender specification is self-explanatory
10	Part 2	VI B	6.6.5.1	To ensure a prolonged reliable life under arduous conditions, all electronic components shall be de-rated. The Contractor shall specify the de-rating he has used, e.g., percentage of manufacturer's normal voltage, current or power rating used in his design and the anticipated effect of this de-rating on the component 's life.	All the electronic components are calculated to be worked within rated value to ensure the service life. De-rated may not help to prolong the reliable life. Please consider to remove this requirement.	Tender specification shall prevail
11	Part 2	VI A	2.1.4	The Employer and the Engineer shall designate 3 nos. of each of their computers for installation, by the Contractor at the Contractor's cost, of software programmes that the Contractor intends to use for the design, programming, production of drawings, etc. All software shall be originals and licensed by the manufacturer and issued at the Contractor's cost.	Please clarify what software needed, because design software is very complicated and used by different design type engineers, can not be provided.	Clause No.2.1.4 Section VI-B Part-2 of bid document is self-explanatory. Tender specification shall prevail.

24	Part3	VIII (Part-A)	Table 1: Summary of Key dates/Stages:	KD-005 :600-940 KD-007 : 600-910 KD-012 : 800-1200	Due to the world wide semiconductor shortage, the delivery period is significantly extended. We would like to confirm if delivery of all the equipment shall be complete within stipulated range of period.	Complete delivery of PSD materials need to be ensured as per the timeline indicated in Table-1: Summary of Key dates/Stages. Please refer Addendum No.1 in this regard.																																													
25	Part 2	VI B	6.6.2.4	The threshold plate of PSD shall be made of Stainless steel of grade 316 or better.	In platform screen door, grade 304 is widely used and has sufficient durability and quality. Grade 316 has problem in accessibility and cost. We would like to conform if grade 304 is acceptable.	Tender specification shall prevail																																													
26	Part 1	V A	A. Eligible Nationality	(1) The Eligible Nationality of the supplier(s) for procurement of all goods and services (including consulting services) to be financed out of the proceeds of the Loan shall be the following: (a) Japan and India in the case of the prime contractor; and	This para to read as under - (1) The Eligible Nationality of the supplier(s) for procurement of all goods and services (including consulting services) to be financed out of the proceeds of the Loan shall be the following: (a) Japan, India or in the case of the prime contractor; OR (b) Any other Nation who have done at least 2 Similar Works in Indian Metro. This will invite more bidders and present better competitive bidding rates, saving significant amount to Exchequer.	Tender condition shall prevail																																													
27	Part 1	III	EQC 2.4.2 (c) Specific Experience	A. Design and development of the DCU software and the SCADA software as an OEM for Half height PSDs.	Para to be read as under: A. Design and development of the DCU software as an OEM for Half height PSDs and interfacing with SCADA OEM. PSD contractors don't require to design SCADA rather than just interface with SCADA (provided by other types of vendors). CMRL may kindly ascertain that the requirement of Design & Development of SCADA Software is not required in any PSD Tender issued by any other Metro Organisation including DMRC, GMRC, NMRC, KMRCL etc.	Tender specification shall prevail. The SCADA referred pertains specifically to the supervisory control of the PSD system & the centralized software for alarms, logs & status as described in the Particular Specifications of bid document.																																													
28	Part 1	III	EQC 1.1.1 Personnel	<table border="1"> <thead> <tr> <th>No. Position</th> <th>Total Work Exp.</th> <th>Exp.in Similar Works</th> </tr> </thead> <tbody> <tr> <td>1 Project Manager</td> <td>20</td> <td>10</td> </tr> <tr> <td>2 Deputy Project Manager</td> <td>15</td> <td>10</td> </tr> <tr> <td>3 Engineering Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>4 Interface Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>5 Project Quality Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>6 OHSE Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>7 T&C Manager</td> <td>15</td> <td>8</td> </tr> </tbody> </table>	No. Position	Total Work Exp.	Exp.in Similar Works	1 Project Manager	20	10	2 Deputy Project Manager	15	10	3 Engineering Manager	15	8	4 Interface Manager	15	8	5 Project Quality Manager	15	8	6 OHSE Manager	15	8	7 T&C Manager	15	8	<table border="1"> <thead> <tr> <th>No. Position</th> <th>Total Work Exp.</th> <th>Exp.in Similar Works</th> </tr> </thead> <tbody> <tr> <td>1 Project Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>2 Deputy Project Manager</td> <td>10</td> <td>5</td> </tr> <tr> <td>3 Interface Manager</td> <td>10</td> <td>5</td> </tr> <tr> <td>5 Project Quality Manager</td> <td>10</td> <td>5</td> </tr> <tr> <td>6 OHSE Manager</td> <td>10</td> <td>5</td> </tr> <tr> <td>7 T&C Manager</td> <td>10</td> <td>5</td> </tr> </tbody> </table> PSD Projects have started recently in India and there are very few Mangers with 8-10 years of Exp. and they are already engaged in ongoing projects. So from view of practical availability, this requirement shall be changed.	No. Position	Total Work Exp.	Exp.in Similar Works	1 Project Manager	15	8	2 Deputy Project Manager	10	5	3 Interface Manager	10	5	5 Project Quality Manager	10	5	6 OHSE Manager	10	5	7 T&C Manager	10	5	Please refer Addendum No.1 in this regard.
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29	Part 2	VI B	3.7.3.1	The Contractor shall arrange suitable location/land for constructing site office and storage facilities for contractor as well as for Employer's Engineer. No Land will be provided by the Employer to contractor for storage or site office construction.	The contractor shall arrange for suitable site office and storage facilities on the Land provided by Employer to Contractor. Since the project is for ITC of PSD system, civil construction shall be kept out of this contract. Bidder would like to request the CMRL to kindly consider the allocation of land for the contractor and would also like to know what will happen to Site Office or Engineer's office upon the completion of the project?	Tender condition shall prevail																																													
30	Part 2	VI A	GS/SITE ACCOMMO DATION FOR THE ENGINEER	The Contractor shall provide accommodation for the Engineer's staff at contractor's site office as given in Particular Specifications in accordance with the following schedule of offices	DELETE Since the project is for ITC of PSD system, civil construction shall be kept out of this contract. Bidder would like to request the CMRL to kindly consider the allocation of land for the contractor	Tender condition shall prevail																																													
31	Part 2	VI B	Appendices to PS, 1.5.8	The synchronization timings shall be validated in the CMRL test track to ensure similar behaviour for any combination of RS and PSD contractors.	Clarification Requested - Bidder would like to know where the testing track will be located? Is it led by the S&TC contractor? Will this testing track require PSD mock-up or not? If so, how many sets will be required?	Please refer modified sub-clause no.1.5.8 (Appendices to PS) of Addendum no.1 in this regard																																													

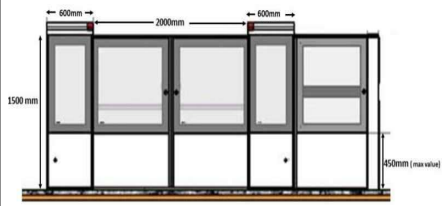
32	Part 2	VI A	GS/Mock ups, Prototypes and samples/14	The Contractor shall produce mock-ups, prototypes and samples as specified, if any, in the Section - VI B Particular Specifications, Part 2, Part 2.	Clarification Requested - please clarify if Mock up and Prototype are same thing and also indicate how many mock-up or prototype is required to be delivered to CMRL? As for the function test and acceleration test, the employer may kindly indicate the location of the testing place.	Please refer clause Nos. 11.4 & 11.6 of Section VI-B part-2 of bid document. Further testing details shall be elaborated post award of the contract.																																																																
33	Part 2	VI B	PS/5.8	Predictive Maintenance and Condition monitoring system	Clarification Requested - Bidder seek further details and request the employer to elaborate more on the requirement of such condition monitoring software.	Further details shall be elaborated during design stage																																																																
34	Part 2	VI B	PS/6.5	PSD Facade Arrangement - The PS has mentioned the contractor shall install the fixed panel besides the 3 car typical 12 PSD doorways.	Clarification Requested - Please be more specific on those extended platform, will the dummy FDP be required or it is only the FS will be installed on those extended platform?	Please refer Appendix 2P-4B Section VI-B Part-2 of bid document for the details																																																																
35	Part 2	VI B	14.5.2.1	Within 14 days of the installation of any software into the PSD system by the Contractor, the Contractor shall submit to the Engineer/Employer for retention by the Employer two backup copies of the Executable code, which shall include, without limitation:a) All design documentation relating to the software; and b) Any specified development tools required for maintenance of the software, including, but not limited to, editors, compilers and linkers.	Only the executable file of the product can be provided	Tender specification shall prevail																																																																
36	Part 2	VI B	5.5.1 & 5.5.2	All PSD system equipment/ electronic cards/Control units shall be provided with a reset function to allow the failed equipment to reset and restart remotely as well as locally. This facility shall be available in maintenance and diagnostics workstation at OCC	Currently, no other metros in India have asked for remote reset function. This item involves network security so we request you to kindly delete this requirement.	Tender specification shall prevail																																																																
37	Part 2	VI B	5.8.1 - 5.8.4	The PSD system shall be capable of monitoring the PSD systems to identify the requirement of predictive maintenance based on the condition of the equipment's and possible failures, especially service affecting, in advanceThe Alarms of the Predictive maintenance system shall be made available in the maintenance and Diagnostics system of PSD in the OCC/BOCC along with all supporting information (eg: Current of individual motors, temperature etc).	Does the predictive maintenance system only involve the prediction of a single station and does not require the summary of information from all stations and the display on the central control panel?	Predictive maintenance is applicable for the complete PSD system																																																																
38	Part 2	VI B	6.18.1 - 6.18.4	In regard to the space above the equipment cabinet of the fixed drive panel of a HH-PSD shall be designed as an advertisement space.	Is there any minimum space required to be kept for advertisement?	Details shall be finalised during design stage.																																																																
39	Part 1	III	EQC Para 1.1.1	<p>Criteria for key personnel The following criteria is specified for key personnel:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Position</th> <th>Total Work Experience (Min number of years)</th> <th>Experience in Similar Works (Minimum number of years)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Project Manager</td> <td>20</td> <td>10</td> </tr> <tr> <td>2</td> <td>Deputy Project Manager</td> <td>15</td> <td>10</td> </tr> <tr> <td>3</td> <td>Engineering Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>4</td> <td>Interface Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>5</td> <td>Project Quality Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>6</td> <td>OHSE Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>7</td> <td>T&C Manager</td> <td>15</td> <td>8</td> </tr> </tbody> </table>	No.	Position	Total Work Experience (Min number of years)	Experience in Similar Works (Minimum number of years)	1	Project Manager	20	10	2	Deputy Project Manager	15	10	3	Engineering Manager	15	8	4	Interface Manager	15	8	5	Project Quality Manager	15	8	6	OHSE Manager	15	8	7	T&C Manager	15	8	<p>There are a large number of PSD contracts coming up in different metro systems in India. It is very difficult to find persons with so much experience for each and every project, especially as PSD is a fairly new field in India and there are not many persons available with so much experience. We request that the criteria may be revised as under:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Position</th> <th>Total Work Experience (Min number of years)</th> <th>Experience in Similar Works (Minimum number of years)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Project Manager</td> <td>12</td> <td>10</td> </tr> <tr> <td>2</td> <td>Deputy Project Manager</td> <td>8</td> <td>5</td> </tr> <tr> <td>3</td> <td>Engineering Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>4</td> <td>Interface Manager</td> <td>5</td> <td>3</td> </tr> <tr> <td>5</td> <td>Project Quality Manager</td> <td>10</td> <td>5</td> </tr> <tr> <td>6</td> <td>OHSE Manager</td> <td>15</td> <td>8</td> </tr> <tr> <td>7</td> <td>T&C Manager</td> <td>8</td> <td>5</td> </tr> </tbody> </table>	No.	Position	Total Work Experience (Min number of years)	Experience in Similar Works (Minimum number of years)	1	Project Manager	12	10	2	Deputy Project Manager	8	5	3	Engineering Manager	15	8	4	Interface Manager	5	3	5	Project Quality Manager	10	5	6	OHSE Manager	15	8	7	T&C Manager	8	5	Please refer Addendum No.1 in this regard.
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40	Part 1	III	EQC 2.4.2 (a)	Experience in Platform Screen Doors contract in the role of Single entity without any specialist sub-contractor OR as a Specialist Sub-Contractor(iv) OR as a Member of the JV/Consortium(iv) without Specialist Sub-Contractor and must have substantially(iii) completed between 1st January 2013 and the bid submission deadline, A minimum number of; 1. One work involving Construction of Platform Screen door system in Metrorail /Monorail/ People Mover/ Railway project/ crores (ii) or above. Or 2. Two works involving Construction Platform of Screen door system in Metrorail /Monorail/ People Mover/ Railway project/ Light Rail; each of Value INR 58 crores(ii) or above. Or 3. Three works involving Construction of Platform Screen door system in Metrorail /Monorail/ People Mover/ Railway project/Light Rail; each of Value INR 46 crores(ii) or above.	It is requested to amend this clause with experience criteria for indigenous PSD "OEM having experience in implementing indigenous SIL2 certified PSD (with minimum 50% indigenous content) at minimum one platform in metro rail in India " for promoting make in India initiatives under Aatma Nirbhar Bharat Abhiyan.	Tender condition shall prevail
41	Part 1	General		"DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF PLATFORM SCREEN DOORS FOR CORRIDOR 3 (NEHRU NAGAR METRO TO SHOLINGANALLUR METRO) AND CORRIDOR 5 (ASSISSI NAGAR METRO TO KOYAMBEDU METRO (ONLY ELEVATED STATIONS) OF CMRL PHASE II"	The number of stations where PSD needs to be installed is not clearly mentioned in the tender document. Kindly specify the exact number of stations and platform in the corridor.	Please refer clause No.3.1.4 Section VI-B Part-2 of bid document
42	Part 2	VI B	2.2.14	Signalling system will be CBTC based moving block system with GoA 4- UTO mode of operation as the normal mode of working with bi-directional fully automated working facility	What will be support extended for signaling interface	Please refer Appendix 2P-2 Section VIB Part-2 of bid document for detailed information
43	Part 2	VI B	4.6.8	The DCU system, Open/Close commands shall comply to a minimum of SIL 2	It is not clear what is the safety integrity level of PSD system. Kindly conform if the PSD system shall achieve a safety integrity level (SIL) of 2 as is prevalent in contemporary metros. Further in earlier tender of ASA12A, DCU of SIL3 was mentioned . it is understood that it will also be used in same corridor 3&5. kindly specify two different requirement of DCU as SIL2 and SIL3 on the same corridor	Tender specification shall prevail
44	Part 2	VI A	11.1.1	The Contractor shall implement a formal RAM Plan in accordance with the Technical Specification and EN 50126 (Railway applications - The specification and demonstration of dependability, reliability, availability, maintainability and Safety (RAMS) as stipulated	Although EN50126 is specified, we currently supports IEC62278 only. Relevant section : VI-B 4.2.3.1.5 (page 311)	Please refer Clause No.4.2.3.1.5 Section VI-B Part 2 of bid document for further details
45	Part 2	VI A	12.9	RAMS Plan	Ditto	
46	Part 2	VI B	1.3	List of codes and standards This list is provided solely for the convenience of the tenderers. Standards referenced within this document shall be complied with and that are not identified in this list must still be complied with if referred in this document or its appendices or is used as an industry practice in similar projects globally or especially in India. The reference to any specifications shall be taken as the reference to the latest version or revision.	we complies with IEC standards only. EN 50126 → IEC62278 (2002) EN 50128 → IEC62279 (2015) EN50129 → IEC62425 (2007) Related section: 4.1.6 (page 309)	Tender specification shall prevail. Also, please refer Addendum No.1 issued for clause no.4.1.6 Section VI-B Part-2.
47	Part 2	VI B	4.1.2	All the sub systems, equipment's to be used for PSD system shall be of proven design and in use in transit systems. The contractor shall provide certificate from the user of the transit systems that the proposed sub-system/ equipment's are working satisfactorily and no unsafe failure has been reported.	We have applied SIL 2 certification for the panel of the platform door controller (DCU).	Tender specification shall prevail
48	Part 2	VI B	4.1.5	Special considerations shall be made by contractor to accommodate the climatic and environmental conditions of Chennai especially temperature, humidity, saline atmosphere, dust, and pollution levels, including localised data along the corridor. Hence the Contractor shall ensure that Components of PSD systems must be compliant but not limited to ISO 9227, ASTM B117, ISO 1461 & EN 12944-6.	The compliance status of the current design of our platform doors is unclear as information on the local infrastructure has not been received by us. If major structural changes need to be implemented, including the controllers, time will be needed.	Tender specification shall prevail
49	Part 2	VI B	4.1.6	The system shall meet or exceed the requirements of the CENELEC standard (EN50126-1, EN50126-2 EN50128, and EN50129) or equivalent for implementing reliability, availability, serviceability and safety of PSD equipment.	Currently, it does not comply with EN standards. IEC standard certification is scheduled to be obtained.	Please refer Addendum No.1 in this regard.
50	Part 2	VI B	4.1.7	The Reliability, Availability, Maintainability and Safety requirements shall be fully demonstrated by the Contractor as mentioned in the PS as well as in Appendix 2T.	To reply for this specification, the information related to other infrastructure equipment installed at locations other than this system is required.	Tender specification shall prevail
51	Part 2	VI B	4.3.5 4.3.6	4.3.5 The MCBF shall be calculated for the entire fleet of PSDs commissioned in each stage of operation. The resulting objectives of the reliability for the PSD are to be achieved respectively at the end of the stabilization period of 9 months (maximum value) from the revenue service and during the stabilization period. 4.3.6 The Mean Cycles Between Failures shall be more than 3,00,000 door set cycles/failure after the stabilization period.	It is unclear whether the average cycles between failures can exceed 300,000 door set cycles/failure after the stabilisation period.	Tender condition is self-explanatory
52	Part 2	VI B	4.5.5.2	The design of the system shall avoid as far as possible maintenance operations along the track. Consequently, the contractor shall avoid implementing along the track equipment that can fail or require regular maintenance/servicing.	If we consult in advance, will you be able to get it approved? (Obstacle sensors, etc. are mounted on the track side.)	Tender specification shall prevail and details/proposal can be reviewed during design stage

53	Part 2	VI B	4.5.6.1	All components, materials, software, and other support necessary for the repair and maintenance of all PSD systems shall be available for the entire life of at least 30 years from the date of construction or takeover of the section by the Employer (with overhaul and/or regular parts replacement). However, the exception is the central equipment (servers and workstations), which shall be available for at least 10 years from the date of construction or takeover of the section by the Employer. However, the monitor, keyboard and mouse must be available for at least 7 years.	Service life of our PSD is 20 years.	Tender specification shall prevail
54	Part 2	VI B	4.5.6.2	If necessary, refurbishment shall not be required at intervals of less than 15 years. Refurbishment, including replacement of rubber and gaskets within the PSD, shall be for a period of not less than 5 years. All other components such as control units, motors, other electronics, glass panels, structural members, etc. shall meet the full design life of the PSD.	The overhaul of current platform door equipment takes about 7 years, so it is difficult to achieve the required overhaul period of 15 years.	Tender specification shall prevail
55	Part 2	VI B	4.6.4	Safety performance requirements must be achieved with a calibration/inspection interval of at least one year.	The current regular inspection of platform door equipment is every 6 months, not 1 year.	Tender specification shall prevail
56	Part 2	VI B	4.6.8	The DCU system, Open/Close commands shall comply to a minimum of SIL 2. Open/Close commands shall comply to SIL 2. The All doors closed, and locked signal and Interlock override signals and its associated hardware as a whole shall comply to SIL 4. The Vital Signalling Interface shall be SIL 4.	It is difficult to design a device where some parts are SIL2 and some parts SIL4. The requirements indicate that the "fully closed" signal, "door locked" signal and "override" signal are to be output in SIL4, but we believe that this signal is supposed to be output from the DCU (SIL2). How we arbitrate these points.	Tender specification shall prevail
57	Part 2	VI B	5.3.4.6	All Doors Closed & Locked Signals: Confirms that all door sets are closed and mechanically locked, as determined by the All Doors Closed & Locked Safety Loop going through every door set of the façade.	Our PSDs shall be locked by pressing with the motor torque. The locking signal is output by judging whether the door is closed based on the position information of the door leaf. This improves availability by avoiding locking problems, and reduces the number of maintenance items.	Tender specification shall prevail
58	Part 2	VI B	4.7	Cyber Security	The DCU uses Ethernet, but we need to verify the extent to which this requirement must be considered. (as the content of the requirements standard is currently unknown)	Tender specification shall prevail
59	Part 2	VI B	4.9.2	The time taken to open the BSDs fully shall be 2.5 to 3.0 seconds and to close the doors fully shall be 3.0 to 3.5 seconds. The velocities and the panel mass shall be limited by dynamic safety considerations.	With current DCU capabilities, it is 2.5 seconds for an aperture width of 2000.	Tender specification shall prevail
60	Part 2	VI B	4.9.3	The limiting maximum velocity shall be 0.6 m/s for the door leaf open/close speed. The door speeds shall be variable. Final value shall be dependent on the Contractor's design for dynamic safety.	The maximum speed is specified, but the maximum speed changes depending on the mass of the door.	Tender specification shall prevail
61	Part 2	VI B	4.9.6	The maximum BSD door leaf kinetic energy at any point in the travel shall not exceed 10 Joules. During closing of BSDs, the limiting value of door movement kinetic energy for the last 100 mm of leaf travel shall be less than 1 Joule/leaf.	Based on the standard speed of 0.6m/s, the mass of the door is allowed up to 55kg. The speed of the door just before closing is 0.19m/s. If the kinetic energy of a 55 kg door is less than 1 joule, the motor rotation speed is 0.82 rpm at the output shaft. The rotation speed of the motor body (before deceleration) is 6.6 rpm. Control will be difficult unless the reduction ratio is increased from the current 8:1.	Tender specification shall prevail
62	Part 2	VI B	4.9.7	The actuation and control facilities of BSD shall have the obstacle detection function to detect the minimum size of 5 mm x 40 mm steel bar and a 19 mm diameter bar. (For the purpose of obstacle detection testing, the 5 mm length shall be placed in the direction of door travel and the 40 mm length shall be placed in the vertical direction.	In the case of door catching detection, it is unclear whether it can detect a 5mm rod or a φ19 round rod. It is affected by the hardness of the door rubber. A 5mm rod cannot be detected with door catcher.	Tender specification shall prevail
63	Part 2	VI B	4.12.1	All PSD structural elements shall have suitable characteristics and be properly designed to safely accommodate and withstand all design loads specified herein in addition to the PSD dead weight, operating loads and dynamic loads are specified herein. The design load is: a) Screen/door linear meter applied to crowd load = +3 KN/height At a height of 1.1 m from the FFL, uniformly across the entire platform + length from platform to train. - length from train to platform. b) The train-induced pressure load (if any) due to train movement and a 10% margin are applied continuously and repeatedly to have a fatigue effect on the elevated platform PSD. c) Wind pressure because on an elevated platform, low-pressure winds of up to 200 km/h blow in all directions. d) Impact load = impactor with a total mass of 45 kg at a height of 1219 mm impacting the screen door of the platform (see BS 6206). The applicable range of impact load is 100mm x 100mm.	Current platform door equipment must not collapse under a crowd load of 250 kg/m. It is not designed to operate normally under a load condition of 3kN. Regarding the load conditions, I would like them to adopt the Japanese specifications. It operates normally at 100kg/m and will not collapse at 250kg/m.	Tender specification shall prevail

64	Part 2	VI B	4.12.2	Contractors must also consider the effects of cyclic and repetitive loads. PSD installations related to crowd loads, impacts and train movement during the design life. Maximum allowable (perfectly elastic) deflection in the PSD Worst case frame member to which the glass is fixed under combined loading shall be 10mm from the rest position.	At present, the deflection value of the half-height type platform door equipment will not be less than 10 mm under crowd load conditions. (A deflection of about 100 mm occurs under a load of 250 km/m.)	Tender specification shall prevail. Also, please refer clause No.6.6.1.8 of section VI-B Part-2 of bid document.
65	Part 2	VI B	4.12.3	The BSD shall be capable of operating under the above load conditions. Loads caused by pressure from moving trains. BSD is to operate at full load with or without stopping trains in the platform.	Currently, the platform door equipment cannot be operated under the load condition of 3kN.	Tender specification shall prevail
66	Part 2	VI B	4.13.1	The safety of the Mechanical and Electrical System Equipment shall generally comply with NFPA 130 and BS EN standards.	We have not tested and certified by US standard NFPA130. We consider, for elevated station, this requirement is unnecessary.	Please refer Addendum No.1 in this regard.
67	Part 2	VI B	4.15.1	In order to prevent touch voltage of PSD, the PSD System shall be designed and constructed so as to maintain all metallic parts of the system exposed to passengers or Employer personnel, equipotential to that of the body of the train, the PSD structure and the station.	This is the European method. It equalizes the electric potential of the rail return line and the platform door (door pocket). This has never been done before. If this method is adopted, countermeasures such as drift current are necessary. Related section: 4.15.3.	Please refer Addendum No.1 issued for clause no.4.15.3 Section VI-B Part-2
68	Part 2	VI B	4.15.3	The relevant principles of EN 50122-2 and EN 50162 shall be adopted to minimize the occurrence and effect (including corrosion effect) of stray currents.	We have not tested drift current in line with EN50122-2 and 50162. Kindly refer 4.15.1.	Please refer Addendum No.1 in this regard.
69	Part 2	VI B	4.15.5	The size of any required bonds shall be determined in accordance with IEC 60364-5-54. Unless particular local conditions and regulations require an alternative approach, redundancy to avoid risk from single-point failure shall be provided in the form of two appropriately sized bonds, at a single location (but not sharing the same fixing point) on the platform barrier system installation. (This reduces the risk of loss of bonding due to undetected damage, but maintenance arrangements shall ensure that failure of a single bond is not overlooked.) Each bond shall have separate termination points at both the earth and PSD connections, i.e., the two bonds shall not share the same fixing point.	Our PSD have not adopted this method.	Tender specification shall prevail
70	Part 2	VI B	4.16.1	This section defines the minimum electromagnetic compatibility (EMC) requirements for all electronic and electrical equipment supplied under this Agreement. For 25 kV AC traction areas, the Contractor shall follow EN50121 (Parts 1 to 5) and Indian Railways RE Practice or above.	Regarding EMC, we do not have specifications that satisfy EN standards.	Please refer Addendum no.1 issued in this regard.
71	Part 2	VI B	5.5.1	All PSD system equipment's/ electronic cards/Control units shall be provided with a reset function to allow the failed equipment to reset and restart remotely as well as locally. This facility shall be available on	Remote reset is not supported. At least the system equipment in the equipment room needs to be started up using the reset button inside the product.	Tender specification shall prevail
72	Part 2	VI B	5.6.1	PSD system is required to include local and remote maintenance and real time diagnostic capabilities to detect and react to various equipment failure types. The remote diagnostic capabilities shall be available at OCC, BOCC, and to permit authorized personnel to interrogate the status of equipment's and provide active fault diagnosis and isolation. It shall be possible to remotely download the maintenance and diagnostic-related data.	It is only possible to remotely check the status of equipment failures for some electronic equipment. We are unable to notify you of the exact location of mechanical failures. Items that can be maintained remotely are not currently standard specifications.	Tender specification shall prevail
73	Part 2	VI B	5.8.1	The PSD system shall be capable of monitoring the PSD systems to identify the requirement of predictive maintenance based on the condition of the equipment's and possible failures, especially service affecting, in advance.	Preventive maintenance systems (functional modules) are not subject to SIL certification because they are not related to the safe operation of equipment.	Tender specification shall prevail
74	Part 2	VI B	5.8.2	The functional module shall monitor as a minimum <ul style="list-style-type: none"> • The failure of Motors (prediction of failures) • The abnormal resistance of the Door or the locking system because of degradation in alignment, mechanical resistance etc. • The degradation in the internal parameters of the drive mechanism • The condition (prediction of failures) of the rectifier bank. 	Our PSD is only capable of detecting signs of motor failure by measuring the motor current value, and monitoring and analysing the supply voltage.	Tender specification shall prevail
75	Part 2	VI B	5.8.3	Suitable parameters shall be identified by the contractor for reliable monitoring of the condition of system. Some of the parameters can be the pattern of current drawn by the individual motors in various stages of door opening closing, locking un-locking etc, temperature of the rectifiers etc.	Although it is not a mechanism to prepare parameters, it provides a detection data threshold value from motor current data.	Tender specification shall prevail
76	Part 2	VI B	5.9.1	The double-sided sliding door (BSD) can be opened from the track side using a handle. Doors shall be free to operate mechanically and shall be able to remain open to the extent they are opened by the passenger/operator without opening and closing forces mechanically or electrically applied to the door leaf by the system.	Currently, handles are not implemented on our Half-Height platform doors. We consider handles are for Full Height doors.	Tender specification shall prevail

77	Part 2	VI B	5.9.2	The BSD shall close and lock 30 seconds (configurable by the operator/maintenance) after the door is mechanically opened with all audio and visual indications that the door is closed. When all doors are successfully closed, the Closed and Locked states shall be reflected in the signals provided to the signaling system. Disturbance detection and other force/energy parameters during BSD closing shall be maintained in this case as well.	Currently, half-height platform doors in Japan are designed to use electrical locks (pushing force by motor) and do not have mechanical locks.	Tender specification shall prevail
78	Part 2	VI B	5.9.3	BSD shall provide Opening mechanically from the platform side using a special key, which meets the requirements for interfacing with Rolling stock. The behaviour of the door is assumed to be the same as that of opening mechanically from the track side.	Currently, half-height platform doors in Japan do not require locks.	Tender specification shall prevail
79	Part 2	VI B	5.9.4	The emergency exit door (EED) shall be able to be opened mechanically from the track side using a push bar.	Push bar type EED is not applied.	Tender specification shall prevail
80	Part 2	VI B	5.15.3	The summary lamp shall be highly durable, long-lasting LED based and shall have various segments/colours to denote various information.	Currently, it is not possible to support multiple emission colours. (Conveys the situation by the number of blinks)	Tender specification shall prevail
81	Part 2	VI B	5.16	Manual Control Panel (MCP)	There are quite a lot of buttons and indicator lights. It is necessary to confirm whether the current standards can handle them.	Tender specification shall prevail
82	Part 2	VI B	5.18.3	The response(s) of the door/gate in the event that an obstruction is detected shall be the same as permitted for train doors in EN 14752, 5.2.1.4.2.2.	We support IEC standard only.	Please refer Addendum No.1 in this regard. Also, PSD design should ensure door opening/closing behaviour to be consistent with Rolling stock door operation behaviour.
83	Part 2	VI B	5.18.6	The minimum reopening distance shall be adjustable from 0.1 m to full width. The time between closing attempts shall be adjustable.	As for the request to be able to change the waiting time for a temporary stop and to be able to change the width of the return after the door hits, it is not possible to freely set the width of the return or the waiting time. The method is to select from a set of registered putters. We don't want to change it to analogue because we believe it's useless.	Tender specification shall prevail
84	Part 2	VI B	5.18.7	The locking mechanism of MSD shall not engage in the presence of obstructions.	Objects below the minimum pinch detection value cannot be detected and will be locked. Judged as fully closed.	Tender specification shall prevail
85	Part 2	VI B	5.18.8	For obstructions smaller than the prescribed limit for detection (eg: Cloth), The design of the door leaf edge shall be in a manner to facilitate pulling out the obstruction easily from the edges of the door.	It depends on the condition of the door. We think it would be possible to pull it out with a door like a rubber roller, but we have no experience with it. If the door end rubber is soft, the standard for the minimum detectable object will be a large object size. Related section: 5.18.7.	Tender specification shall prevail
86	Part 2	VI B	5.18.9	The response of the BSDs as a part of the obstruction detection facility, shall be same for BSD closure, irrespective of the mode of opening of the BSD (using mechanical handle from track side or from LCKS or from signalling system)	We could not understand the requirements.	The behaviour of the BSDs as part of the obstruction detection feature should be independent of the door operation mode (Manual/Auto)
87	Part 2	VI B	6.3.1.1	All software shall be designed, developed, tested, verified and verified in accordance with CENELEC standards EN50126, EN50128, EN50129 and EN50159. If an equivalent international standard other than CENELEC is used, it shall meet the requirements set out in paragraph 6.3.3.2 (8) below.	The software does not conform to EN standards.	Please refer para No 6.3.3.2 (7) section VI-B Part-2 of the bid document.
88	Part 2	VI B	6.4.3.2	The system shall conform to CENELEC standard EN50126 for Reliability, Availability, Maintainability and Safety. The system shall in addition conform to CENELEC standard EN50129 for safety related electronics system for PSD and CENELEC standard EN50128 for software for railway control and protection system.	Our platform door systems do not conform to EN standards. There are plans to make the DCU itself compliant with IEC standards.	Please refer Addendum No.1 in this regard.
89	Part 2	VI B	6.4.3.4	Development Process of DCU systems shall be designed, manufactured and validated to Safety Integrity level 2 as defined in the CENELEC standard EN50126, EN50128 and EN50129 as per the requirements of SIL 2 certification.	Our platform door systems do not conform to EN standards. There are plans to make the DCU itself compliant with IEC standards.	Tender specification shall prevail. Also, please refer Addendum no.1 issued

90	Part 2	VI B	6.5.1	<p>The dimensions of the HPSD facade are as follows</p>  <p>HH-PSD facade: Instruction diagram to explain dimensions (cannot be scaled) • BSD shall be 1000mm wide per leaf. The height of the BSD door leaf shall be 1500mm from the finished floor. opaque area</p>	Our PSD have a gap of 170mm between the platform door and the floor. In Japan, we provide a gap of 100mm or more to prevent shoes/sandals.	Tender specification shall prevail
91	Part 2	VI B	6.6.1.2	The glass Glazing used shall achieve level 1-B-1 in accordance with the quantification tests given in EN 12600. The glass shall not fracture in a way that creates hazard to passengers. The glass shall only fail with Type B breakage as defined in EN 12600	Our PSD glass has not been tested to EN12600. (ISO compliance is possible)	Please refer Addendum No.1 in this regard.
92	Part 2	VI B	6.6.1.4	Materials used must be fire resistant in accordance with national regulations and European and national building codes including the Indian National Building Code NBC. Components must be defined and selected according to the requirements of EN 13501-1, 13501-2 and 13501-6. NFPA 130	Parts available in Japan do not meet the requirements of EN13501-1, 13501-2, 13501-6.	Please refer Addendum No.1 in this regard.
93	Part 2	VI B	6.6.1.8	The maximum deflection of glass panels of sizes used in PSD shall not exceed 20mm when subjected to the prescribed load limits. The glass shall be able to retain its original shape without permanent deformation. The glass shall be able to withstand cyclic loads acting on the glass over the life of the PSD. This should be demonstrated as part of prototype testing to appropriately create worst-case loading conditions.	Glass used in half-height platform doors can deform by more than 20mm under a load of 3kN. (approx. 100mm under load condition of 250kg/m)	Tender specification shall prevail
94	Part 2	VI B	6.6.2.1	The structural elements of the PSD must be carbon steel according to the standards stated in the specifications. Elements shall be designed and installed for a service life of at least 30 years, subject to maintenance specified by contract.	Service life of our PSD is 20 years.	Tender specification shall prevail
95	Part 2	VI B	6.6.2.8	All corrosion mitigation measures, materials selected, etc. must be submitted to NoNO engineers. All these measures and materials have been certified by a reputed specialist in this field against industry standards to ensure that they can meet a 30-year service life, suitable for use in the Chennai environment shall be tested and verified by a third party. This shall be carried out for each lot of procurement apart from testing for initial approval.	Service life of our PSD is 20 years.	Tender specification shall prevail
96	Part 2	VI B	6.6.4.1	For components that do not have a service life of 30 years (if they are not consumable spare parts), the contractor must state the component concerned, its expected service life and any additional support provided by the contractor to ensure that the system is fully operational for at least 30 years.	Service life of our PSD is 20 years.	Tender specification shall prevail
97	Part 2	VI B	6.6.5.6	Cable and wiring termination shall be appropriate to the function, current and voltage. The method of terminating cables and wire shall be by screw terminal, crimp, wire wrap or soldering. Pinch type screw terminals, where the screw is in direct contact with the conductor, shall not be used. Plain washers, spring washers, lug, nuts, and lock nuts, shall be used on cable terminations as appropriate. Where the wires are connected to the same terminal, each wire shall be identified and on the circuit diagram, wiring schedule etc., this wire shall also be denoted. There shall be a maximum number of 2 conductors per terminal. This is to enable individual wires to be identified without ambiguity.	Regarding the termination of the cable, we use WAGO terminals frequently as power terminals. We also would like to use WAGO.	Tender specification shall prevail. Further details can be reviewed in design stage
98	Part 2	VI B	6.7.3	PSD systems must comply with IEC 60529 Ed. 2.0 b, must meet the following levels: a) IP 55 for HH-PSD such as fixed drive panel equipment cabinets, MCPs, limit switches, summary lamps. b) IP 52 for enclosures installed in the equipment room.	Our PSDs complies IP X3 only.	Tender specification shall prevail
99	Part 2	VI B	6.10.1	The BSD must have a green handle to unlock and open the BSD from the truck side.	Currently, half-height platform doors in Japan are designed to use an electric lock (pushing force by a motor), and a mechanical lock is not implemented. Handles are also not implemented. New development is required to provide a platform doors equipped with a mechanical lock.	Tender specification shall prevail

100	Part 2	VI B	6.12.3	The noise levels at 1m from the platform edge on any platform resulting from operation of the BSDs shall not exceed 73 dB (A) fast response when all doors are operating on an empty platform with finishes.	It is unclear whether 73dB can be cleared. Generally speaking, arriving trains are noisy, so in Japan there is not such demand for noise reduction.	Tender specification shall prevail
101	Part 2	VI B	6.12.5	All PSD equipment shall be protected from damage or reliability degradation due to shock or vibration.	Even if the vibration test is performed, it is not evaluated because it does not give continuous vibration. Currently there are only actual results.	Tender specification shall prevail. Also, please refer clause no.6.12.6 section VI-B part-2 of bid document
102	Part 2	VI B	6.18.8	The enclosure shall be IP55.	Our PSDs complies IP X3 only.	Tender specification shall prevail
103	Part 2	VI B	13.4	Interactive Computer Based Training System (CBTS)	We do not have CBT system.	Tender specification shall prevail
104	Part 2	VI B	1.5.6	RS and PSD Contractors shall exchange the defective/isolated train door and PSD door information, through signalling system so that if a particular train door is defective/isolated, the corresponding PSD shall not open and vice versa. The function shall include both Audio and visual in their respective panels to facilitate passengers.	Our PSD do not have this function.	Tender specification shall prevail
105	Part 2	VI B	1.5.9	The design of the passenger door control system shall ensure that the train passenger doors open before the PSDs open and PSD doors close before closure of train passenger doors. The operation of the "Door Close" pushbutton/ door close command from UTO/ATO shall broadcast an audible warning in each saloon, signifying that both the PSD doors and passenger doors shall subsequently close.	In our case, the timing is opposite.	Tender specification shall prevail
106	Part 2	VI B	1.5.10	After the pre-set time, adjustable between 0 and 5 seconds, following the finish of the audible warning, the control system shall synchronously "Close and Latch" all the passenger doors and PSD on the corresponding side. The design of the passenger door control system shall ensure that the PSD doors close before the train passenger doors close.	In our case, the timing is opposite.	Tender specification shall prevail
107	Part 2	VI B	1.6.2	This integrated test bed shall be designed in a manner that it mimics the real-world test scenario.	This requirement is not clear for us.	Please refer para no 1.6 (integrated testing and commissioning for detailed information).
108	Part 2	VI B	1.6.6	Integrated testing of each train shall comply with the accepted international standards agreed between the Contractors and agreed with the CMRL.	What is this agreed and accepted international standards? Please clarify.	PSD contractor shall ensure compliance of all standards in accordance with requirements of section VI-B part-2 for PSD system
109	Part 2	VI B	1.6.7	Joint Integration testing specific to each train shall be done at the rolling stock factory, depot and main line of CMRL to ensure satisfactory performance of all train control, STC, telecom - TETRA and PSD interfaces.	We request trains come to the location of the device.	Tender specification shall prevail
110	Part 2	VI B	Page 445 No.3		Please clarify the control voltage.	Bidder's query & reference is unclear. Tender specification shall prevail
111	Part 2	VI B	Page 445 No.6		Please clarify the messages be proposed by the train manufacturer.	
112	Part 2	VI B	4.1.32	"All door closed and locked" signals from PSD system shall be read by the SIL 4 vital safety systems of Signalling and shall be processed for the starting of train from the platform.	The output signal is SIL4, but even if the signal directly output from the PSD system to the host device which is equivalent to SIL4, it is meaningless if the information being collected (data from DCU) is equivalent to SIL2. Same as from Section 4.1.33 onwards	Tender specification shall prevail
113	Part 2	VI B	4.1.38	The communication between signalling and PSD systems for Door Open and Door close shall be based on electrical signals exchange using potential free relays (with sufficient double cutting and redundancies) as proposed by the Signalling contractor. The Open and close commands shall comply to minimum SIL 3 requirements.	The commands sent to each PSD are equivalent to "SIL3" while interface need to be SIL4. This looks discrepant.	Tender specification shall prevail