

KOCHI METRO RAIL LTD.
PRE-BID QUERIES CLARIFICATIONS
TENDER NO. KMRL/PSG/14/01

ADDENDUM-3, PART-2

Sl. No.	<u>Volume Detail</u>	<u>Clause No.</u>	<u>Clause Detail</u>	<u>Query</u>	<u>Response from KMRL</u>
1	Vol I - Bidding procedure / Pricing Document	Section 3. qualification	4. EXPERIENCE 4.2(b) Experience of design and manufacturing of PSD/PSG door or gate driving mechanism	This is in relation to DDM(Door Driving Mechanism), design and manufacture, where our company has obtained the approval of the ordering organization (the employer) for drawings in previous existing project, and after which the product was manufactured and produced through sub-contractor. whether our company can receive acknowledgment for holding the manufacturing record which is required in the RFP.	Refer Addendum 3 for revised clause.
2	Vol II - General Specification / Technical Specification	2.1.3	"2.1.3 Table 2.1: Stations details 17 Ernakulam South 19267 Non I/L RB2 30.09.2015 18 GCDA (Kadavantra) 20151 Non I/L RB2 30.09.2015	According to 2 stations of table 2.1, operation date is 30.09.2015. Is it correct?	Refer Addendum-3 for revised date. (Date is corrected as 30.09.2016).
3	Vol II - General Specification / Technical Specification	2.2	"2.2 Key Characteristics (a) Trains will be of 3-car configuration and station platform length (67.5 M apx) for 3-car train of 65 M apx. (b) Each car will have 4 saloon doors per side."	We need train drawings about train length size, each train(cars) door size.	Refer Addendum-3, for revised data. Train drawings will be provided to the contractor during D/D stage.
4	Vol II - General Specification / Technical Specification	4.3.11	"4.3.11 Gate Control Unit (GCU) The serial link and hardwired link cabling shall be supplied and installed by Contractor up to and including terminations in the Building Management System (BMS) interface panel, the PSC, the PSL and from the PSC to the BMS interface panel."	Where is BMS (Building Management System) interface panel? We need schematic drawings for station.	5th Para of clause 4.3.12 indicates location of BMS interface panel. Station drawings will be issued to the contractor during DD stage.
5	Vol II - General Specification / Technical Specification	8.1.1	8.1.1 In general, the PSG installations shall be configured on a paired platform (level and/or system) basis, with a common Platform Screen Gates Central Interface Panel (PSC), and common motive power equipment. The central plant and equipment shall be housed in the PSG Equipment Room.	"Where is PSG Equipment Room? We need schematic drawings for Equipment Room location. We want to know the distance from platform to Equipment Room."	Drawings will be issued to the contractor once the station design is completed. However, the general description of typical station is as under: - Three level stations with road level entry - Concourse at first level (about 7m from ground level) - Platform level at second level (about 13m from ground level) The PSG equipment room as well as other equipment rooms such as Signaling room, station control room etc. shall be located at concourse level
6	Vol II - General Specification / Technical Specification	8.1.8	8.1.8 These separate interfaces, control (Signalling System) and monitoring (BMS), shall be replicated within the PSC. The PSC shall primarily act as an interface with the other system components and to marshal signals and consequently may have only limited logic control functions.	What is limited logic control functions?	Refer Addendum-3 for revised clause.

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7	Vol II - General Specification / Technical Specification	8.5.2.2	Each GCU shall comprise the following main elements: DC motor - The DC Motor used is of brushless type, service proven up to 3000000 opening and closing cycles. Each PSG has its own motor assembly which consists of a modular unit installed at the end of the driving device.	Is the only durability of DC motor 3,000,000 cycles? And shall we submit test report of DC motor?	Refer Addendum-3 for revised clause.
8	Vol II - General Specification / Technical Specification	8.5.10	"8.5.10 Software and Programming Unit (PU) 8.5.10.1 The Software Safety Integrity Level (SIL) shall be Level 4 (SIL4) and substantiated by the Contractor. The substantiation shall be based on the Risk Assessment in accordance with EN50129."	In case of Software SIL, The standard is EN50128. We think that the EN50129 is not correct.	Refer Addendum-3 for revised clause.
9	Vol II - General Specification / Technical Specification	6.8	"6.8 Application of Commercial Off The Shelf+Software (COTS) COTS shall not be applied to any operation software at level SIL2 and above."	In case of COTS, is the SIL0 or SIL1 okay?	The clause is very clear. COTS not to be applied to any operation at level SIL2 and above.
10	Vol II - General Specification / Technical Specification	6.14.1	6.14.1 Passenger and KMRL personnel safety shall be a prime consideration in the design and construction of the PSG System. Gate control and operating arrangements shall be designed to fail in, or to, a safe condition. The gate open command will not be generated by the Signalling System unless a train is at the platform and is positioned within the specified stopping tolerance ($\pm 500\text{mm}$)."	In case of Signaling System (CBTC) is failure, can the PSG system open and close all sliding doors automatically and independently by sensing train stop position, train door opening and closing status? Otherwise, only shall the PSG system open and close all sliding doors manually by Local Control Panel (PSL) ?	NO. Please follow tender conditions.
11	Vol I - Bidding procedure / Pricing Document	ITB - 11 (h)	The Tender should be accompanied by a nonrefundable Processing fee of Rs. 25,000 (Rupees Twenty Five Thousand Only) in the form of Banker's Cheque / Demand Draft, drawn in favour of Kochi Metro Rail Ltd.,	As per NIT Bid processing fees is Rs. 5000. Please confirm, how much bid processing fee we should consider?	Invalid, as these questions are pertaining to another tender (NIT). Refer Addendum-3.
12	Vol I - Bidding procedure / Pricing Document	ITB 19.1	A Bid Security for a sum of Indian Rupees Fourteen (14) million is required.	As per NIT, it is RS. 2,00,000, Please confirm, how much bid security we should consider?	
13	Vol I - Bidding procedure / Pricing Document	ITB - 11.2	In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.	Kindly confirm, 1) A firm, who has downloaded the tender document in their name, can submit the tender either as individual firm or in joint venture/JVA or consortium. 2) Companies with Consortium Agreement are eligible to participate in this tender. 3) Companies with a letter of intent to execute a Consortium Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Consortium Agreement are eligible for participate in this tender.	(1) Either - i.e. Individual or JV / consortium (2) Yes (3) The JVA format is provided in the Bidding Forms (and there is reference of the same in BDS) and that need to be submitted with the bid. BDS shall prevail over the ITB.

14	Vol I - Bidding procedure / Pricing Document	Bidding Form 4.2	Method Statement: Each Bidder shall set out details of the Method Statement for the Works to demonstrate how it will meet the Employer's objective and requirements. As a minimum, the Method Statement shall address the following: (a) Details of the arrangements and methods which the Bidder proposes to implement for the construction of the Works, in sufficient detail to demonstrate their adequacy to achieve the requirements of the Contract including completion within the Time for Completion stated in the Particular Conditions of Contract. (b) Outline of the arrangements of the Bidder to manage coordination of Site access. (c) Not Used (d) Not Used (e) Comments on logistics and traffic management [as may be appropriate]. (f) Outline of the arrangements and organisation of the Bidder to ensure compliance with the Works Requirements. (g) Outline of the arrangements of the Bidder to carry out	PSG products will be manufactured in factories and installation, testing & commissioning will be at site. Our Technical proposals with Installation, testing & commissioning, Work program etc are sufficient for describing of method statements. Hence, Construction of the works and traffic management plan is not required from PSG contractor, Please confirm.	Agreed. "As appropriate" is already mentioned
15	Vol II - General Specification / Technical Specification	10.7.1	Transfer of Technology shall be essential and shall include system assembly, manufacturing, installation, maintenance, software customisation and training of Employer's personnel as detailed in the GS and PS.	Kindly confirm, Transfer of Technology shall not be essential and include manufacturing of PSG system and software customisation for Employer's personnel.	Refer Addendum-3 for revised clause.
16	Vol II - General Specification / Technical Specification	Table 13.1	Table 13.1: Schedule of Key Dates Key Date Description Section R1 Section R2	Please provide detail of Section R1 and Section R2.	Refer chapter 2.
17	Vol II - General Specification / Technical Specification	TS 2.1.3 & TS 4.1.2	Mutton station has: as per clause 2.1.3 -3 platform & as per clause 4.1.2 - 2 platform	Please confirm how many platform are in Mutton Station?	Refer Addendum-3.
18	Vol II - General Specification / Technical Specification	TS 2.1.3	Please refer table 2.1	1. what "interlocking" means? 2. the remaining sections progressively till March 2017, but the revenue of R2a/ R2b is 30.06.2016 and 30.09.2015. Please clarify which one is correct?	1. Stations having points and crossings are termed as "interlocking". It does not have any implication for PSG system. 2. Date is corrected as 30.09.2016 (Refer Addendum-3)
19	Vol II - General Specification / Technical Specification	TS 3.2.1	All equipments and materials shall be fully tropicalized and suitable for use in the local semi arid climate and operating conditions.	please provide the local climate condition. (Incl. RH/Temp./solar intensity,UV...)	Refer to clause 1.2 of General Specification (Part 2, Section VII)
20	Vol II - General Specification / Technical Specification	TS 4.1.2	The train consist will be a 3-cars train with all passenger cars and. Each passenger train car will have 4 passenger doors per side. PSG shall be installed correspondingly to serve each passengers car doors.	please provide the train layout and the platform layout. Please clarify whether PSG only covers the train length or cover the whole platform?	These are design related matters and the contractor is required to interface with other relevant contractors in this regard. Please refer to Addendum-3.
21	Vol II - General Specification / Technical Specification	TS 4.3.12	PSG equipment room	please clarify if the earth busbar will be provided by E&M contractor for connecting each equipment cabinets.	Please refer chapter 14 (Interfaces)
22	General	General	Touch Voltage	please clarify what is maximum permissible accessible voltage between track and the station earth?	Refer EN 50122-1

23	Vol II - General Specification / Technical Specification	TS 4.3.15	The following cable containment run at high level will be provided by the E&M Contractors at each station for use by the Contractor: (a) Between the PSG Equipment Room and the Signalling Equipment Room (b) Between the PSG Equipment Room, and one platform end (c) Between the PSG Equipment Room and the Headwall Unit (d) Between the PSG Equipment Room and Station Controller's Room	please clarify whether the "cable containment" mean trunking of the cable?	Yes. Confirmed.
24	Vol II - General Specification / Technical Specification	TS 4.3.16	Boom lighting for platform and PSG illumination shall be supported from the PSG installation. All cabling and cable containment for this lighting shall be by the Contractor and shall terminate at a junction box at each platform end beyond the 2m isolated area. There shall be adequate provisions for backlighted LED display units for commercial advertisements in the PSG bottom panels.	please clarify whether the boom lighting under PSG supply scope.if yes please provide the illustration or instruction figure of setup location of backlighted LED display and boom lighting.	Refer Addendum-3 for revised clause.
25	Vol II - General Specification / Technical Specification	TS 4.1.6 (t)	It is possible that a potential difference may exist between the PSG and the vehicle. If a potential difference does exist it is the responsibility of the Contractor to ensure that this is maintained at a safe level and does not cause a touch voltage hazard between the PSG and the vehicle	according to the tender requirement, the PSD will be bonded to the running rails, so the PSD and train will be equipotential, please clarify why a potential difference may exist between the PSG and vehicle?	Refer Addendum-3.
26	Vol II - General Specification / Technical Specification	TS 6.1.4 & 6.9.3.1	Obstacle trapping limit: The design of these seals allows for obstruction detection of a 6mm diameter bar without the gates achieving a closed and locked status.	there are two requirements for the obstruction size. In general, the minimum obstacle size is 8mm thickness for PSG. Please confirm whether to change this.	The minimum obstacle size is 6mm thickness for PSG.
27	Vol II - General Specification / Technical Specification	TS 6.4.7	ø be subjected to a gentle re-closing forceø	pleaes clarify what is a "gentle re-closing force"? Can we refer the force in Table 6.1 ?	Yes
28	Vol II - General Specification / Technical Specification	TS 6.8.2.3	A correctly installed gate in its normal closed position shall deflect no more than 10 mm at any point on the frame installation when exposed to the maximum design loads or combination of loads. Out of this 10mm deflection, no more than 2mm deflection shall be contributed by the deflections of the side and bottom supports.	Considering the loads requirement in GS and TS,10mm deflection of PSG at any point on the frame is hard to achieve. We suggest to change the requirement to: "A correctly installed gate in its normal closed position shall deflect no more than 15 mm at the nearest position of train dynamic envelope when exposed to the maximum design loads or combination of loads. Out of this 15mm deflection, no more than 2mm deflection shall be contributed by the deflections of the side and bottom supports."	NO Change. Please follow tender conditions
29	Vol II - General Specification / Technical Specification	TS 6.9.1.2 & 6.9.2.2a	The PSG System shall be designed to limit any noise transmitted from the trackside to the platform to NC45 when measured 1m from the edge of any platform. The noise levels at 1 m from the platform edge on any platform resulting from operation of the PSG shall not exceed: · Target 70dB (A) fast response · Acceptance 73dB (A) fast response The above shall be achieved when all gates are operating on an empty platform with finishes.	please clarify which phases is correct for these two required measure value.	The clause very clear in terms of requirements. Please follow tender conditions.

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30	Vol II - General Specification / Technical Specification	TS 6.13	PSG open width 2100mm+500mm (subject to architectural layout)	Please confirm the clear opening width of PSG	Refer Addendum-3 for Revised clause.
31	Vol II - General Specification / Technical Specification	TS 8.5.4	Station Controller's Room Remote Alarm Terminal Box (SCA)	please clarify which status or alarm need to be sent to SCA	These are design related matters and contractor is required to propose and finalize with KMRL.
32	Vol II - General Specification / Technical Specification	TS 6.1.4 & 8.6.4	PSG frames material construction --- Stainless steel grade 304 Grade 4 satin finish or Aluminium 6063 T5 grade The PSG/EEG/MSG/FP mullion and transoms shall be of aluminium extrusion to achieve the required profile and reinforce with steel structure inside	There is some difference in the two areas. Please clarify the material of door frame, Stainless steel grade 304 Grade 4 satin finish or Aluminium 6063 T5 grade.	The clauses are very clear and specifies the requirement. Please follow the tender conditions.
33	Vol II - General Specification / Technical Specification	TS 8.6.15	Fire rated Plasterboard Fixed Partitions, Inner Walls and Linings	please clarify whether in the supply scope of PSG contractor. If yes please indicate the installation location detailly in the layout drawing.	Yes, it is contractor's scope (as already mentioned in the clause) Contractor to propose designs for approval
34	Vol II - General Specification / Technical Specification	TS 8.7.17	All visible stainless steel or aluminium shall be satin finish (grade 4) unless otherwise stated.	aluminium can't be treated with satin finish (grade 4). please confirm other treatment can be used for aluminium elements.	Refer Addendum-3 for revised clause.
35	Vol II - General Specification / Technical Specification	TS 8.8.4.3	The threshold guide shall interface with the lower edge of the gate to provide an approved self-cleaning guide arrangement to prevent a build up of dust/particulate. The guide shall provide the minimum obstruction to the opening and shall not act as a trip-hazard as passengers embark and disembark from trains across the threshold.	for PSG, it is unnecessary to have guide for sliding gate. Suggest to cancel the requirement of threshold guide interface.	Refer Addendum-3 for revised clause.
36	Vol II - General Specification / Technical Specification	TS 8.9.1.2	The Contractor is required to provide a redundant UPS supply of required capacity as a backup for their control equipment for during this changeover period.	please clarify if the PSG contractor just provide the control power UPS and do not need provide PSG drive power UPS.	Refer Addendum-3 for revised clause.
37	Vol II - General Specification / Technical Specification	TS 8.9.4.4	2.5 m wide Platform Insulation mat is provided by civil contractor under the Architectural finishes to the entire length of the Platform. The passenger beyond insulation mat may not feel any potential difference due to passenger internal body resistance unless they all are wet by water. In order to mitigate the issue, there are a few alternatives contractor need to include in their scope such as introducing OVPD (Over Voltage Protection Device) in several configurations, insulation painting of the floor surface beyond insulation mat.	please clarify if there is OVPD between running rail and station earth	Yes, at every station.
38	Addendum-3	General	1. The date for Pre-bid meeting would remain as 24th April 2014, as mentioned in the tender. 2. The last date for submission of bid would be four weeks from the date of issue of Pre-Bid clarifications by KMRL, instead of 22nd May 2014 mentioned in the tender.	We kindly request, The last date for submission of bid would be 8 (eight) weeks from the date of issue of Pre-Bid clarifications by KMRL, instead of 22nd May 2014 mentioned in the tender.	Refer Addendum-3 for revised date. The Bid submission date is 16th June 2014.

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39	Civil Drawings	General	General	Please provide the interface section drawing with civil structure. Please confirm, If civil platform drawings are not available to PSG contractor, then PSG contractor can assume all stations are straight.	Please refer Table 4.1 of Technical Specification Stations designs shall be provided to contractor at design stage
40	Power Supply	General	General	Please provide the power supply voltage , frequency and phase	Refer clause 8.9.1 of Tech Spec
41	more clarifications	General	General	We request, KMRL shall reply any further queries submitted by PSG contractor at least 3 week before tender submission.	Not Accepted. Please follow tender conditions
42	Vol II - General Specification / Technical Specification	Clause 3 of Section III, Part 1	Clause 3 of section III, Part 1	As an foreign PSD/PSG equipment supplier, we intend to form a JV/consortium to bid with an Indian local company who does not have the general construction experience required in clause 4.1. But for the sake of smooth operation of this project in India, we hope the local company can be the leader of the JV/consortium. Please kindly consider to change the requirement in Clause 4.1 be met from lead member to all parties combined.	Not Accepted. Please follow tender conditions
43	Vol I - Bidding procedure / Pricing Document	ITB 1.1	The name of the ICB is: Design, Manufacture, Supply, Installation, Testing and Commissioning of Platform Screen Gates (PSG) System The identification number of the ICB is: KMRL/PSG/14/01 The number and identification of lots (contracts) comprising this ICB is: [Specify if not applicable] Not Applicable	Split Contract into 2 contracts (a) offshore supplies as offshore contract on FOB basis and (b) onshore supplies & services including ocean freight and transit insurance as onshore contract for tax benefit. Generally under a single contract, the entire contract is treated as a composite contract by the tax authorities and a uniform tax is applied on the contract irrespective of having the offshore supplies portion in it. By separating the main contract into 2 separate contracts (to be signed by the same bidder/consortium under joint & several responsibilities), the offshore supply portion contract does not fall under the tax category as the pure offshore supplies contract is exempted from taxes in India. Only the local supplies & services portion contract will attract the tax implication.	Refer Addendum-3.
44	Vol III - Conditions of Contract	14.1 Payment	the Contract Price shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract	Separate Payment to the consortium partners under separate invoice raised by the consortium partners according to the work scope shared by each party. The invoice for the consortium member can be approved by the lead partner before submitting to KMRC for payment claim. For each invoice, separate TDS deduction should be made on consortium partner name where applicable with TDS certificate.	Accepted

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45	Vol III - Conditions of Contract	14.5	are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration	Import the equipments directly under the name of KMRL as consignee to avoid 3rd party sales tax. The imported equipments after customs clearance should be allowed to be stored in KMRL secure stores without any safe custody guarantee from the Contractor. The Contractor for the purpose of Installation of equipments at site, will get the requisite equipments issued from the KMRL stores (only Marine cum Erection Insurance Policy will be provided) and will be responsible for the same till the equipments are takenover by KMRL	Import in the name of KMRL shall be acceptable. Storing in KMRL stores may be not feasible.
46	Vol III - Conditions of Contract	14.1 Payment	the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation]	Project import registration by KMRL to be made available to the contractor in order to get the reduced custom duty benefit (uniform 5% basic custom duty on all import contents). We understand that this is an ICB project and hence there are certain exemptions available to the bidders related to excise / customs etc. provided that PAC (project authority certificate) is issued by KMRL. Please confirm	Refer Addendum-3.
47	Vol I - Bidding procedure / Pricing Document	19.8	The bid security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the bid security shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.	Please confirm that bid security by any of the consortium /JV partners is acceptable.	Not acceptable. Please follow tender conditions
48	Vol III - Conditions of Contract	14.1 Payment	the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation]	Re-imbursement of customs duty and other applicable taxes/duties on the basis of documentary evidences like Original Bill of Entry and TR6 challan etc. by KMRL instead of it being a part of the lump sum turnkey contract with responsibility of the contractor. If the reimbursement route is adopted by KMRL for custom duty then the cash flow impact can be controlled which will have an impact on cost increase directly.	Refer Addendum-3
49	Contract Detail Form	6.7	We commit ourselves to comply with and ensure that all of our subcontractors comply with international environmental and labour standards, consistent with laws and regulations applicable in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties,. Moreover, we shall implement environmental and social risks mitigation measures such as specified in the environmental and social management plan or, if appropriate, in the environmental and social impact assessment notice provided by the Contracting Authority.	Since the complete erection & commissioning work is carried out in India only therefore Indian labour laws shall be applicable. Please confirm	Refer Addendum-3

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50	Vol III - Conditions of Contract	14.2	5% (Five Percentage) of the Accepted Contract Amount payable in single installment in the currencies and proportions in which the Accepted Contract Amount is payable	Considering the large volume of Offshore / Onshore supplies in the contract, KMRL is requested to consider 10% of total contract value in respective currencies as an advance payment.	Refer Addendum-3
51	Vol I - Bidding procedure / Pricing Document	4 Experience, page-45	General Construction Experience: Experience under construction contracts in the role of prime contractor, JV member, subcontractor, or management contractor for at least the last 5 (five) years, starting 1st January 2009	Please clarify in detail 'Experience under construction contracts in the role of prime contractor'.	Please refer form EXP 4.2(a) of Part 1, Section IV Bidding Forms Please follow tender conditions
52	Vol II - General Specification / Technical Specification		The hardware and software of PSG control system parts related with critical or vital safety functions should use the failsafe concept, in compliance with the SIL4 according to EN 50126, EN 50128 and EN 50129 standards.	Remove the SIL4	Please follow tender conditions.
53	Vol II - General Specification / Technical Specification		The entire PSG installation at each platform will be electrically bonded to the traction return rails. The resistance measured between any position of PSG and bonding point location will be within 30 m .	It is not necessary to provide 30mOhm equipotential of the PSG installation since, the traction system will be 750 V DC Third Rail (bottom collection), there will be no fault current from the traction system	Please follow tender conditions.
54	Vol II - General Specification / Technical Specification	6.11	The PSG System shall be designed and constructed so as to maintain all metallic parts of the system exposed to passengers or KMRL personnel, equipotential to that of the body of the train. This shall be achieved by bonding the PSG System to the running rails and making the metalwork electrically continuous throughout the PSG System. The cable terminals for the bonding to the running rails shall be provided by the Contractor to the approval of the Employer's representative. The Contractor shall coordinate with relevant ace Contractors on the suitable locations of these connections.	If bonding cable does not connect to the running rail and the PSG facade metallic parts are covered with insulation material. In this case, there will be no touch voltage hazard between the PSG, train body and the station structure.	Refer Addendum-3
55	Vol II - General Specification / Technical Specification	5.4.1	The MCBF will be calculated using the following equations: $W_{CBF} = \frac{(W_{CBF} \cdot W_{CBF} \cdot W_{CBF} \cdot W_{CBF})}{W_{CBF} \cdot W_{CBF} \cdot W_{CBF} \cdot W_{CBF}}$	Need to provide the equation	Refer Addendum-3
56	Vol II - General Specification / Technical Specification	6.2.2	The galvanization of steel parts will be minimum 100 m thickness in accordance with relevant standards.	Normally, 70 m thickness can be met	Please follow tender conditions
57	Vol II - General Specification / Technical Specification	6.12.1	(b) Train Generated = +2.7kN/m2 / -0.83N/m2 Pressure Loading or wind loading to the local code requirement, whichever is higher.	300 Pa on PSG where the train run at 80km/hour	Please follow tender conditions
58	Vol II - General Specification / Technical Specification	4.3.16	Boom lighting for platform and PSG illumination will be supported from the PSG installation. All cabling and cable containment for this lighting will be by The Contractor and will terminate at a junction box at each platform end beyond the 2m isolated area.	Boom lighting should be provide by E&M instead of PSG	Refer Addendum-3
59	Vol II - General Specification / Technical Specification		The Contractor will provide a continuous boom lighting system located above the PSGs.	Boom lighting should be provide by E&M instead of PSG	Refer Addendum-3

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60	Vol II - General Specification / Technical Specification	8.9.5.3	The Contractor will provide luminaires of the boom light that normal lighting will provide an average of 150 lux measured at the floor level within 2.5 metres from the platform edge and 200 lux measured at the floor level below the light fittings at the platform edge at the gate way.	Boom lighting should be provide by E&M instead of PSG	Refer Addendum-3
61	Vol II - General Specification / Technical Specification	8.9.4.4	The passenger beyond insulation mat may not feel any potential difference due to passenger internal body resistance unless they all are wet by water. In order to mitigate the issue, there are a few alternatives contractor need to include in their scope such as introducing OVPD (Over Voltage Protection Device) in several configurations, insulation painting of the floor surface beyond insulation mat etc.	Should different configurations be provided by others?	Please follow tender conditions
62	Vol II - General Specification / Technical Specification	8.9.5.2	The boom will house twin fluorescent / LED tube luminaries.	Boom lighting should be provide by E&M instead of PSG	Refer Addendum-3
63	General		General	Consortium of Private Companies should be allowed to participate in the tender.	Please follow tender conditions
64	General		General	Bid Guarantee value as mentioned in the tender document is high and should be made 0.5% of the estimated contract price.	Please follow tender conditions
65	General		General	Since it is a long drawn contract and is expected to get completed in 2017 it should not be made as fixed price contract. Price Variation Clause should be applicable for the contract.	Please follow tender conditions
66	General		General	We are reviewing technical specification as provided in the bid document and would request you to provide us 2 week time to submit the same.	Not Accepted.
67	Vol II - General Specification / Technical Specification	8.5.2.2	Each GCU shall comprise the following main elements. The DC Motor used is of brushless type, service proven up to 3000000 opening and closing cycles. Each PSG has its own motor assembly which consists of a modular unit installed at the end of the driving device.	Durability of DC Motor 3,000,000 cycles which is very high generally it is less than 1,000,000 cycles. Please confirm and also let us know that Test Report would be consider as evidence of proveness.	Refer Addendum-3
68	Vol II - General Specification / Technical Specification	2.2, 8.5.22	Page 9 & 61 - 2.2 Key Characteristics (k) The durability of door movement part shall not be less than 1 million times to withstand a vertical load / weight from the sliding door open-and-close operation. 8.5.2.2 Each GCU shall comprise the following main elements: The DC Motor used is of brushless type, service proven up to 3000000 opening and closing cycles. Each PSG has its own motor assembly which consists of a modular unit installed at the end of the driving device.	Two requirements is not matching in this technical spec. Please confirm that DC Motor proven cycle requirement is less than 1,000,000 cycles.	Refer Addendum-3
69	Vol I - Bidding procedure / Pricing Document	section IV	page 66 point 10. g) Proof of safety report containing detailed analysis of software and hardware together with Proof of Assessment Report from and Independent Safety Assessor.	For the bidding document, shall we submit assessment report for safety proof?	Please follow tender conditions

KOCHI METRO RAIL LTD.
PRE-BID QUERIES CLARIFICATIONS
TENDER NO. KMRL/PSG/14/01

ADDENDUM-3, PART-2

70	Vol I - Bidding procedure / Pricing Document	ITB 15.1	Page 32 - ITB 19.1 A Bid Security for a sum of Indian Rupees Fourteen (14) million is required.	As it is International Competitive Bid so please accept Bid Security in equivalent USD/EURO	Not Accepted.
71	Vol I - Bidding procedure / Pricing Document	Section II	Page 32 ITB 15.1 (ii) For those inputs to the work that the Bidder expects to supply from within the Employer country (referred to Foreign Currency) , in EURO	Where ever payment in Foreign Currency is applicable same should be also be allowed to quote in USDollar also beside EURO	Refer Addendum-3
72	Vol I - Bidding procedure / Pricing Document	Section III, 2.2	Evaluation And Qualification Criteria/Clause 2.2 Multiple Contracts - Not Applicable	We request KMRL to separate contracts as 1. Offshore Supply on FOB basis 2. Onshore Supply and 3. Onshore Services. This will avoid unnecessary loading on account of taxation in case of Foreign Bidder. It may facilitate wider participation	Refer Addendum-3
73	Vol I - Bidding procedure / Pricing Document	A1	Part I : Pricing Document/Section MS-Cost Centre A /Page 40 of 59 Training of Employer's personnel (8 man-months) overseas in Contractor / Sub-Contractor's Works and MRTS. (Number of Trainees as per Employer's discretion)	Please note that 8 man months training is unusual and it may lead to unnecessary increase to Bid Price further please confirm that here MRTS means at KMRL site. Please also confirm that KMRL would bear all expenses towards Air Tickets, Boarding, Lodging, transportation and other expenses during stay of KMRL staff members for training.	Refer Addendum-3
74	Vol II - General Specification / Technical Specification	4.3.16	Page 20" - Boom Lighting Boom lighting for platform and PSG illumination shall be supported from the PSG installation. All cabling and cable containment for this lighting shall be by the Contractor and shall terminate at a junction box at each platform end beyond the 2m isolated area. There shall be adequate provisions for backlighted LED display units for commercial advertisements in the PSG bottom panels.	What is Boom Lighting? Is it light lamp on the PSG? We think boom lighting is no relation with PSG function. We need specification of boom lighting.	Refer Addendum-3