

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
1	PART - I	SECTION 4 - BIDDING FORMS	Letter of Technical Bid	4--2	(b) We offer to design, manufacture, test, deliver, install, pre-commission, and commission in conformity with the Bidding Document the following Plant and Services: Design Verification, Detail Engineering, Supply, Installation, Testing and Commissioning of Environment Control System (ECS), Tunnel Ventilation System (TVS), Electrical and Mechanical System (E&M) and Building Management System (BMS) for two underground Metro Stations at Chhoti Chaupar and Badi Chaupar on East-West Corridor of Jaipur Metro Phase- 1B	Point (b) states " We offer to design, manufacture..... Kindly confirm that our scope is limited to "Design Verification, Detail Engineering, Supply, Installation, Testing and Commissioning of Environment Control System (ECS), Tunnel Ventilation System (TVS), Electrical and Mechanical System (E&M) and Building Management System (BMS) for two underground Metro Stations at Chhoti Chaupar and Badi Chaupar on East-West Corridor of Jaipur Metro Phase- 1B"	Follow bid conditions
2	PART - I	SECTION 4 - BIDDING FORMS	Letter of Price Bid	4--4	(d) The discounts offered and the methodology for their application are as follows: _____	We understand that discounts if any and their application methodology is to be mentioned in 'Letter of Price Bid' - clause (d). And the same discounts need not be mentioned Grand Summary (Schedule No. 5). Please confirm.	Schedule 5 is not applicable. Bidder to quote discount in letter of price bid only. Please follow addendum
3	PART - I	SECTION 4 - BIDDING FORMS	Letter of Price Bid	4--4	(a) We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB) 8. _____	The blank space in 'Letter of Price Bid' - clause (a) is to be filled with Addendum ref. no. / addendum No. / Addendum date. Please confirm.	Confirmed
4	PART - I	SECTION 4 - BIDDING FORMS	Letter of Price Bid	4--4	(g) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: 1	Citation under '1' is missing. Kindly confirm that in clause (g) details of tender fee are to be provided.	Please follow addendum.
5	PART - I	SECTION 4 - BIDDING FORMS	Retention BG Format	—	Retention BG Format	Format for Retention Money BG is missing in the tender document. Please provide.	For retention money BG, Format of Mob Advance Bank Guarantee to be used
6	PART - I	SECTION 4 - BIDDING FORMS	Bid Security Bank Guarantee	4 of 9	Bid Security / Bid Securing Declaration	Kindly confirm whether the Bid Security has to be from a Nationalized Bank or it can be from any other Scheduled Bank.	The bid security can be from Any Scheduled bank
7	PART - I	PART - 1 - SECTION 1 : INSTRUCTIONS TO BIDDERS	18.6 (b)	1 of 13	Bidders are required to indicate the source of labour and material indexes in the corresponding form in Section 4 - Bidding Forms	Kindly provide the details of the form in which the source of labour and material indexes has to be indicated.	Price adjustment will be done as per Appendix 2 Section 9. Therefore labour and material indexes are not required to be mentioned by the bidders
8	PART - I	PART - 1 - SECTION 1 : INSTRUCTIONS TO BIDDERS	Technical Proposal	4 of 21	Proposed Subcontractors and / or Manufacturers for Major Items of Plant and Services	Kindly inform about the maximum no. of subcontractors that can be listed for a single service. Also, request you to advise whether new sub contractors, not mentioned in bidding stage can be employed in post order stage.	Follow bid conditions (SCC Clause 11)

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
9	PART - I	PART - 1 - SECTION 2 : BID DATA SHEET	ITB 19.1	2 of 3	Foreign Currency	As per the tender we are allowed to quote in upto 3 Foreign Currencies apart from INR. Kindly confirm how to indicate subtotal amount in case of use of multiple currencies for different items in the BOQ. Please confirm bidder can indicate currencies as under in the subtotal : \$ _____ & ¥ _____ & £ _____	Please indicate the currency used in the BOQ
10	PART - I	PART - 1 - SECTION 2 : BID DATA SHEET	ITB 24.1	2 of 3	Submission and Opening of Bid	As lot of documentation is to be prepared, we request you to grant us an extension for submission of tender till August 26, 2016.	Any extension will be informed to bidders later.
11	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	Annexure IV		Manpower Deployment (Minimum requirement)	From Annexure IV, we understand that the manpower deployed will be for 8 working hours only. Kindly confirm the same or suggest otherwise.	Acceptable. The SCC Clause 25 shall be applicable during AMC also. Please follow addendum
12	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	1 of 61	Panel quantity is mentioned under following descriptions: Panel complete as per specifications, drawings, requirements & following details: Delivery of equipment to site Installation and Equipment testing System testing, Commissioning and hand over Interlocking Arrangement	Kindly confirm whether i) Rates are to be quoted (SITC) at the panel header / name. OR ii) Rates are to be quoted as per bifurcation mentioned at the end of panel description i.e supply, installation, testing and commissioning and interlocking. If rates are quoted in either of the above cases then rate column will have to be left blank in one of the above. Please confirm	Rates are to be quoted as per bifurcation only
13	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	2 of 61	i) Each incomer and outgoing feeder shall be provided with LED type status indication lamps suitable for 240 V, AC, as approved.	In BOQ where Power feeder is MCCB, indicating lamps are not mentioned, please confirm whether the same is to be considered.	Indication lamps shall be provided. Please quote accordingly
14	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	2 of 61	u) All Motor feeders, having separate Electronic over current relay (EOCR) , shall be provided with Reset push button & group by pass arrangement.	Kindly confirm whether EOCR is to be considered separately where O/L protection is part of MPCB/MCCB.	Follow BOQ
15	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	13 of 61	DB 330: 1.2.5) 14 Nos, DOL 0.5 kW single phase feeder for Motor Operated Valves	Kindly confirm whether only SP MCB to be provided or complete single phase DOL starter to be provided.	DOL starter to be provided
16	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	35 of 61	DB-140/240	Soft starter is not mentioned in the BOQ, please confirm whether soft starter is to be considered. If required the starter shall be in line design or Inside delta design.	Please follow addendum.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
17	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	14 of 61	DB-310 Air Cooled Scroll Chillers: 1) Automatic transfer switch with 2 Nos 400A, 4 pole 50kA, MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit, Earth fault.	Kindly confirm whether 1 nos. ATS and 2 nos. MCCB to be considered or only 2 nos. MCCB with Auto source transfer system to be considered. 2 No. 400A TP MCCB with Separate ATS is mentioned in SLD. Is it MCCB based ATS or not. Please confirm.	Follow BOQ
18	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	14 of 61	DB-310 Air Cooled Scroll Chillers: 1.3.03) 3 Nos. 250 A, 415V, 50KA, 3P MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit.(For Air Cooled Chiller-2 Nos. Working+ 1 No. Spare).	These feeders are with S/D starter as per SLD. Please confirm.	Follow BOQ
19	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	15 of 61	DB-310 Air Cooled Scroll Chillers: 1.3.05) 8 nos.(6 Nos. for MOV+2NOS. FOR SPARE) 0.5 kW single phase feeder for Motor Operated Valves	As per SLD 1 No. Spare is mentioned. 1 No. S/D spare starter feeder as mentioned in the SLD is missing in BOQ. Please confirm.	Follow BOQ
20	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	14 of 61	DB-310 Air Cooled Scroll Chillers: 1.3.03) 3 Nos. 250 A, 415V, 50KA, 3P MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit.(For Air Cooled Chiller-2 Nos. Working+ 1 No. Spare).	Kindly confirm whether MCCB shall be manual operated or Motor operated.	MCCB shall be motor operated
21	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	4 of 61	MAIN PLANT PANEL DB-170/270 1.1.01 A 1) 2 Nos. 2500A, 415 V, 50KA, 50 Hz TPN EDO type ACBs interlocked with bus coupler and complete with microprocessor based releases having SCADA compatibility and energy metering.	Kindly confirm TPN or FP (FP is mentioned in the SLD).	FP ACB as per specifications. Please follow Addendum
22	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	9 of 61	MAIN PLANT PANEL DB-170/270 1.1.08 a) 1 No. 3 Pole 25 Amps MPCB (with Under Voltage Protection and inbuilt Single Phasing Preventer) with 20-25 A Over - load release and having contacts for indications - On, Off, Trip.	Kindly confirm 25 Amps MPCB or 40A MPCB as mentioned in SLD.	Follow BOQ
23	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	10 of 61	MAIN PLANT PANEL DB-170/270 1.1.10) 4No. 100 A, 415V, 50KA, 3P MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit.(For DB-330, LDB-AB, SPDB-AB & 1NO. SPARE).	1 No. 100A Feeder for UPS-AB is missing.	Follow BOQ
24	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	21 of 61	Main Distribution Board (MDB), DB-130 & DB-230 1.4.06) 5 Sets (4W+1S) of Star - Delta Starter unit for VEF(4Working+1 Spare) of up to 11 kW and each shall be equipped with the followings but not limited to:	VEF-3 & 4 are missing in DB-230 as per SLD.	Follow BOQ
25	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	32 of 61	1.8.08 A a)1 No. 630 A, 415V, 50kA, 3P MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit and Earth Fault (With Adjustable time delay); having Zone Selective Interlocking and NO/NC contacts for operation and neutral sensor for earth fault protection.	630A TP ACB as per SLD. Please confirm requirement.	Follow BOQ
26	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	37 of 61	1.11.03.1) 2 Sets of Soft Starter for bidirectional (Forward and reverse rotation) TVF Motors up to 220KW and each shall be equipped with the followings but not limited to:	280KW as per SLD. Please confirm requirement.	Please follow addendum.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
27	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	37 of 61	1.11.03.1.a) 1 No. 3 Pole 630 A, 50kA at 415V, 3P Motor Duty MCCB with Magnetic Trip Unit (having only short circuit protection) and auxiliary Contacts.	1000A ACB as per SLD. Please confirm requirement.	Please follow addendum.
28	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels	38 of 61	1.11.03a.i)4 Sets of soft Starter Unit for bidirectional (Forward and reverse rotation) TBF Motors up to 75 KW and each shall be equipped with the followings but not limited to:	This item is missing in the SLD.	Please follow addendum.
29	PART - I	BOQ PART - 1 - PART-A : ECS ELECTRICAL WORKS	1. Switch Boards / Panels : Sr. No. 1.10	35 of 61	Providing, fixing, connecting, testing and commissioning of 15A single phase flush type socket outlet in recess/surface mounted complete as per specification.(For FCU)	Kindly confirm that bidder has to quote for Metal clad / PVC based industrial socket or Modular socket outlet.	Please follow addendum.
30	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	5 of 86	1.01 Main Distribution Board DB-100 B.a) 1 No. 2500A/2500A, 415V, 65KA, 3 Pole, Electrically operated Draw Out type, ACB complete with safety shutters, 240V AC shunt trip coil & closing coil and having microprocessor based releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against long time + short time + earth fault (all with adjustable time delays) + instantaneous (4) Zone Selective Interlocking Unit for Total Discrimination (5) Communication options to remotely read and set parameters for the protection functions, transmission of ammeter measurements (6) Signaling of the cause of tripping and alarms, maximeter reset etc (7) NO / NC contacts for interlocks and indications (8) 1 No. CT in the neutral to connect with the trip unit.(9) 1No.Lockable Emergency Push Button with contact	FP ACB as per SLD. Please confirm requirement.	Please follow addendum.
31	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	6 of 86	1.01 Main Distribution Board DB-100 E.1. a) 1 No. 2500A/2500A, 415V, 65KA, 3 Pole, Electrically operated Draw Out type, ACB complete with safety shutters, 240V AC shunt trip coil & closing coil and having microprocessor based releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against long time + short time + earth fault (all with adjustable time delays) + instantaneous (4) Zone Selective Interlocking Unit for Total Discrimination (5) Communication options to remotely read and set parameters for the protection functions, transmission of ammeter measurements (6) Signaling of the cause of tripping and alarms, maximeter reset etc (7) NO / NC contacts for interlocks and indications (8) 1 No. CT in the neutral to connect with the trip unit.	3 Nos. mentioned in the SLD. Please confirm requirement.	Please Follow BOQ

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
32	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	7 of 86	1.01 Main Distribution Board DB-100 E.2. a) 1 No. 630A/630A, 415V, 65KA, 3 Pole motorised MCCB with 240V AC shunt trip coil and having electronics releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against Overload (with base setting and fine adjustment), Short Circuit and earth fault (all with adjustable time delays) + Instantaneous (4) Communication options to remotely read parameters for the protection functions transmission of ammeter measurements, signaling of cause of tripping, maximeter reset etc. (5) NO / NC contacts for interlocks and indications (6) 1 No.CT in Neutral for earth fault protection	800A ACB mentioned in SLD. Please confirm requirement.	Please Follow BOQ
33	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	9 of 86	1.01 Main Distribution Board DB-100 E.6. e) Digital Ammeter with Inbuilt Selector Switch	Kindly confirm whether Ammeter or MFM is to be considered. Other outgoing feeders are with MFM.	Please follow addendum.
34	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	10 of 86	1.01 Main Distribution Board DB-100 E.7. a) 1 No. 250A/200A, 415V, 65KA, 3 Pole motorised MCCB with 240V AC shunt trip coil and having electronics releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against Overload (with base setting and fine adjustment), Short Circuit and earth fault (all with adjustable time delays) + Instantaneous (4) Communication options to remotely read parameters for the protection functions transmission of ammeter measurements, signaling of cause of tripping, maximeter reset etc. (5) NO / NC contacts for interlocks and indications (6) 1 No.CT in Neutral for earth fault protection	400/400A MCCB mentioned in SLD. Please confirm requirement.	Please Follow BOQ
35	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	12 of 86	1.02 Main Distribution Board DB-200 I.b. a) 1 No. 2500A/2500A, 415V, 65KA, 3 Pole, Electrically operated Draw Out type, ACB complete with safety shutters, 240V AC shunt trip coil & closing coil and having microprocessor based releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against long time + short time + earth fault (all with adjustable time delays) + instantaneous (4) Zone Selective Interlocking Unit for Total Discrimination (5) Communication options to remotely read and set parameters for the protection functions, transmission of ammeter measurements (6) Signaling of the cause of tripping and alarms, maximeter reset etc (7) NO / NC contacts for interlocks and indications (8) 1 No. CT in the neutral to connect with the trip unit.	FP ACB mentioned in SLD. Please confirm requirement.	Please follow addendum.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
36	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	13 of 86	1.02 Main Distribution Board DB-200 E.1.a) 1 No. 2500A/2500A, 415V, 65KA, 3 Pole, Electrically operated Draw Out type, ACB complete with safety shutters, 240V AC shunt trip coil & closing coil and having microprocessor based releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against long time + short time + earth fault (all with adjustable time delays) + instantaneous (4) Zone Selective Interlocking Unit for Total Discrimination (5) Communication options to remotely read and set parameters for the protection functions, transmission of ammeter measurements (6) Signaling of the cause of tripping and alarms, maximeter reset etc (7) NO / NC contacts for interlocks and indications (8) 1 No. CT in the neutral to connect with the trip unit.	3 No. FP ACB mentioned in SLD. Please confirm requirement.	Please Follow BOQ
37	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	13 of 86	1.02 Main Distribution Board DB-200 E.2.a) 1 No. 630A/630A, 415V, 65KA, 3 Pole motorised MCCB with 240V AC shunt trip coil and having electronics releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against Overload (with base setting and fine adjustment), Short Circuit and earth fault (all with adjustable time delays) + Instantaneous (4) Communication options to remotely read parameters for the protection functions transmission of ammeter measurements, signaling of cause of tripping, maximeter reset etc. (5) NO / NC contacts for interlocks and indications (6) 1 No. CT in Neutral for earth fault protection	800A ACB mentioned in SLD. Please confirm requirement.	Please Follow BOQ
38	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	15 of 86	1.02 Main Distribution Board DB-200 E.4.e) Digital Ammeter with Inbuilt Selector Switch	Kindly confirm whether Ammeter or MFM is to be considered. Other outgoing feeders are with MFM.	Please follow addendum.
39	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	16 of 86	1.02 Main Distribution Board DB-200 E.7.a) 1 No. 250A/200A, 415V, 65KA, 3 Pole motorised MCCB with 240V AC shunt trip coil and having electronics releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against Overload (with base setting and fine adjustment), Short Circuit and earth fault (all with adjustable time delays) + Instantaneous (4) Communication options to remotely read parameters for the protection functions transmission of ammeter measurements, signaling of cause of tripping, maximeter reset etc. (5) NO / NC contacts for interlocks and indications (6) 1 No. CT in Neutral for earth fault protection	400/400A MCCB mentioned in SLD. Please confirm requirement.	Please Follow BOQ
40	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	18 of 86	1.04 Small power distribution panels (DB-110 & DB-210) C.1) 25 Nos. Feeders with 100A/63A, 3 pole, 50kA, MCCB having Electronic Trip Unit with adjustable protection against Overload and adjustable protection against Short Circuit	100/100A-6No. 250/160A-23No. In SLD for DB-110 100/100A-3No. 250/160A-26No. In SLD for DB-210 Please confirm requirement.	Please Follow BOQ

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
41	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	17 of 86	1.04 Lighting distribution panels (DB-120 & DB-220) A.a) 1 No. 250 A/200 A, 415V, 65kA, 3P motorised MCCB having (1) Electronic Trip Unit with adjustable Overload, adjustable Short Circuit and adjustable Earth Fault (All with adjustable time delays) protection; (2) Provision for remote tripping of MCCB; (3) NO/NC contacts for operation and (4) 1 No.CT in Neutral for earth fault protection.	400/400A MCCB mentioned in the SLD. Please confirm requirement.	BOQ shall prevail. Please follow addendum
42	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	19 of 86	1.06 Escalator & lift panels (DB-150 & DB-250) A.a) 1 No. 1250A/1250A, 415V, 65kA, 4 Pole, Electrically operated Draw Out type, ACB complete with safety shutters, 240V AC shunt trip coil and having microprocessor based releases with (1) Communication capability (2) Provision for measurement of three phase current (3) Protection against long time + short time + earth fault (all with adjustable time delays) + instantaneous (4) Zone Selective Interlocking Unit for Total Discrimination (5) Communication options to remotely read and set parameters for the protection functions, transmission of ammeter measurements (6) Signaling of the cause of tripping and alarms, maximeter reset etc (7) NO / NC contacts for interlocks and indications (8) 1 No. CT in the neutral to connect with the trip unit.	3P ACB mentioned in the SLD. Please confirm requirement.	Please Follow BOQ
43	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	19 of 86	1.06 Escalator & lift panels (DB-150 & DB-250) C.2) 8 Nos. Feeder with 400A/250A, 3 pole, 50 kA, MCCB having Electronic Trip Unit with adjustable protection against Overload and adjustable protection against Short Circuit.	7 No. MCCB for DB-150 mentioned in the SLD. Please confirm requirement.	Please Follow BOQ
44	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	20 of 86	1.06 Escalator & lift panels (DB-150 & DB-250) C.3) 8 Nos. Feeders with 160 A/ 100 A, 3 pole, 50 kA, MCCB having Electronic Trip Unit with adjustable protection against Overload and adjustable protection against Short Circuit.	9 No. MCCB for DB-150 mentioned in the SLD. Please confirm requirement.	Please Follow BOQ
45	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	1. LV MAIN Switchboards, Sub-main Switchboards and local electrical panels	30 of 86	1.18 Local Motor Control Panel for Fire Fighting Pumps, DB - 260 C.3) 3 Sets of Star Delta Starter Unit (One Set for Sprinkler Jockey Pump, Hydrant Jockey Pump & one Set as spare) of 5.5 KW. Each Starter Unit shall be equipped with the followings:	4 No. Star Delta Starter Unit mentioned in the SLD. Please confirm requirement.	Please Follow BOQ
46	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	5. Indoor Lighting & Fans : Sr. No. 5.3 a & 5.3 b	64 of 86	9.0 meter hot dipped galvanised Octagonal with single overhang arm & with foundation bolts, base plate complete with foundation, entry and exit pipes, control JB with connector generally as shown on drawings and as per specifications. 9.0 meter hot dipped galvanised Octagonal with double overhang arm & with foundation bolts, base plate complete with foundation, entry and exit pipes, control JB with connector generally as shown on drawings and as per specifications.	Kindly confirm that single / Double overhang arm length shall be 1000 mm.	Shall be provided as per site requirement

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
47	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	5. Indoor Lighting & Fans : Sr. No. 5.4	65 of 86	Supply, installation, Testing and Commissioning 20 m high area lighting High Mast of Bajaj/Philips suitable for 06 nos 1 x 400 W luminaires complete with all standard accessories like winches, lantern carriage etc. including the cost of providing supplying and fixing. <u>6 nos 2 x 400 W HPSV flood light luminaires</u> with die cast / extruded Aluminium body, pre anodised Aluminium asymetric/symmetric reflector, IP 54 and above, heavy duty control gear housed in a weather proof housing of Philips/Bajaj or equivalent to cat no. RT 3/N/2x400 of philips equivalent and including cost of the 400 W lamps type SON-T plus of Philips, also including Lightning Arrestor and others accessories like phosphor Bronz Gear, double drum, stainless steel wire ropes, suitable MCB wires/cables as required with alongwith the following accessories as required as under:	Kindly confirm High mast shall be suitable for 6 nos 2 x 400 W or 1 x 400W HPSV flood light luminaires & also confirm quantity of luminaires for supplying and fixing.	Please follow addendum.
48	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	6. Protective, Clean Earth and Lightening Protection System : Sr. No. 6.8	70 of 86	Labour charges for making earth pit with 20 mm diameter, 3 meter long copper earth rod by driving directly in ground including termination with grid, as required, and as per technical specifications and as required.	Kindly confirm that copper earth rod shall be 25 mm dia since in Sr. No. 6.70.a Cu. Rod supply item size is 25 mm dia.	Please follow addendum.
49	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	6. Protective, Clean Earth and Lightening Protection System : Sr. No. 6.13	70 of 86	Supplying and laying of the . bimetallic connectors, testing links & other fixing accessories and clamping/ connection with earth terminations as per specifications & as required (as per specification or drawing.)	Requesting to provide size / details in order to quote.	Please follow bid conditions
50	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head-I : Silent DG sets : Sr. No. 1.1	1 of 7	Power cabling / Control wiring, its termination inside the DG set from alternator to the DG isolation panel if any will be on part of the DG set contractor (no separate measurements will be made.) Power Cables from the DG Isolation Panel to the DG Power Panel (in scope of E&M contractor) shall be supplied and laid by E&M contractor. Necessary interfacing for the same with E&M contractor shall be done by DG set contractor for evacuation of 100% of Output power. Nothing extra shall be payable for the same. However, control cabling from DG set and its load management cum synchronising Panel with DG Power panel shall be in the scope of DG set contractor	Kindly confirm, DG Control Panel (AMF panel) / Isolation panel is required along with the DG set or not, Please also confirm the location of the Panel, whether it has to be inside the canopy or outside the canopy.	Requirement confirmed. Location as per site requirement
51	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head-I : Silent DG sets : Sr. No. 1.1	1 of 7	Design, Manufacture & Supply of Silent DG set (Radiator cooled - cooling system designed for 50oC ambient) of following aggregate capacity / rating, comprising of Diesel Engines coupled to Alternator both mounted on common base frame suitable for 3-phase, 415 volts, 50 Hz, 1500 RPM, Standby Power rated output with other standard accessories i.e. Fuel tank (990 Litres) with necessary medium class M.S. fuel piping (25mm size) with necessary fittings from DG set to Fuel Tank, automotive Batteries with leads as per manufacturer recommendations. DG sets shall be suitable for auto starting & auto synchronising with auto load sharing and remote monitoring & control arrangement compatible with the existing electrical system as per particular specifications, complete as required. The DG set shall comply to latest CPCB Norms	Kindly confirm required DG set is Prime Continuous Duty or Stand by Duty. We assume requirement is for DG sets suitable for unlimited nos. of hrs. running in a year, hence it shall be Prime Duty DG Set, please confirm.	DG set is Standby Duty

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
52	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head-I : Silent DG sets : Sr. No. 1.1.a	1 of 7	1800 KVA (comprising of 2 DG sets. Minimum capacity of each DG set should be 900 kVA).	Rating of 900 KVA is not available with any Diesel Engine manufacturer; hence you are requested to kindly confirm suitable rating of DG set for essential DG output. (with reference to executed DMRC jobs it has been 1010 KVA prime rating)	Follow bid conditions
53	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head - IV Optional Item* : Sr. No. 12	6,7 of 7	Providing of Comprehensive maintenance services (Inclusive of all preventive maintenance spares and consumables, site visits, attending to breakdown calls etc. but excluding cost of breakdown spares) for "3-years" After Defect Liability period for different capacities of DG sets for the capacities of DG sets as specified below.	Kindly confirm the DG set running / operation hour per year / day / month so as to estimate for CAMC charges.	Follow bid conditions
54	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head - IV Optional Item* : Sr. No. 12	7 of 7	Note:- 1. In the above item, Rates quoted by the Firm should be for each DG set for 3-years maintenance. 2. The above item includes cost of providing skilled service personal for the maintenance, Tools and Plant etc. for preventive maintenance. (Diesel is are not to be included in the rates.) 3. Breakdown maintenance staff, Tools, and equipment etc. for carrying out the maintenance to the Employers satisfaction. 4. Contractor will be required to maintain a fully equipped"24- hour Complaint Centre" in Delhi and after receiving the Complaint the site should be attended by the maintenance staff within one hour	We request that Diesel and lube oil are not to be included in the rates. You are requested to specify required manpower deployment at site and duty hours so as to estimate for manpower.	Follow bid conditions
55	PART - I	BOQ PART - III Part-III (OPTIONAL) : DG	Sub Head - IV Optional Item* : Sr. No. 11 & 12	6 of 7	11. Operation & Maintenance of DG set before Revenue Operation Date. & 12. Comprehensive Maintenance of DG set after Defect Liability Period.	Requesting to provide list of Consumables & Mandatory Spares so as to include cost in Financial bid.	All consumable and mandatory spares are to be included in the quote price
56	PART - I	BOQ PART - 2 - PART A : ELECTRICAL WORKS	7 Uninterrupted Power Supply System : Sr. No. 7.1	70, 71 of 86	Supply, Installation, Testing and Commissioning of true parallel redundant 2 x 80 KVA online, UPS system suitable for providing power supply to emergency lighting and Computerised Control panel load of approved make, suitable for incoming 415 volts, 3 phase +10 % -20%, 50 Hz, supply and 3 phase 415 volts, output voltage, variation \pm 1%, including inbuilt isolation transformer, IGBT rectifier Modules /dual converter, static switch, inverter, filters, Bypass & static transfer switch for automatic switch over without giving any break of power, maintenance bypass switch, Micro processor/software controlled annunciation,protection (including against input phase reversal), and menu run diagnostic module,associated cabling and connections/terminations, erection including associated foundation/masonorey or RCC work for mounting on base channels etc. complete as per specifications and as required.	As per the Technical Specifications and General Block diagram Transformer is not required but in BOQ transformer requirement is mentioned . Kindly confirm the requirement of isolation transformer	Please follow BOQ
57	PART - I	BOQ PART - 1 - VENDOR LIST	Electrical Items (ECS / TVS) & E&M Items	7, 9 of 11	Panel vendor name respectively are as under: Tricolite, Adlec & M/s Neptune - Elsteel JV (Sri Lanka), Schneider Electric (Nashik), Siemens (Kalwa), L & T (Powai), M/sTricolite-Schneider, Adlec-Schneider, Sudhir- Schneider	Requesting to accept that bidder can consider any of the approved vendor from the given vendor list irrespective whether the panel is for ECS, TVS or E&M.	Contractor can propose any vendor meeting the bid requirements.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
58	PART - I	BOQ PART - 1 - VENDOR LIST	Electrical Items (ECS / TVS) & E&M Items	7, 11 of 11	Switchgear vendor name respectively are as under: Schneider & M/s Schneider Electric Co (Merlin Gerin), ABB, L&T	Requesting to accept that bidder can consider any of the approved vendor from the given vendor list irrespective whether the switchgear is for ECS, TVS or E&M.	Contractor can propose any vendor meeting the bid requirements.
59	PART - I	BOQ PART - 1 - VENDOR LIST	Electrical Items (ECS / TVS) & E&M Items	7, 9 of 11	Tray vendor name respectively are as under: MEM & M/s Equiptech, M/s Bhart Exports, M/s Anil Steel, M/s Bharati, M/s MEM, M/s Ratan Engineering	Requesting to accept that bidder can consider any of the approved vendor from the given vendor list irrespective whether the Cable Tray, Ladders, Floor Trunking, Cable Trunking and Raceways is for ECS, TVS or E&M.	Contractor can propose any vendor meeting the bid requirements.
60	PART - I	BOQ PART - 1 - VENDOR LIST	E&M Items	10 of 11	GI Conduit : M/s BEC Industries	Requesting to approve M/s RM CON, Steel Kraft. Please confirm.	Contractor can propose any vendor meeting the bid requirements.
61	PART - I	BOQ PART - 2 - PART-F SUPPLY OF SPARES	Appendix B2 - I & Appendix B2 - III	1, 2 of 15	Annexure-1	For both Consumable Spares & Commissioning And DLP Spares requirement is mentioned as per Annexure-1. In this case the bidder will have to cost for Annexure-1 : once for Consumable Spares & second for Commissioning And DLP Spares. Annexure 1 items are getting duplicated or costed twice. Kindly confirm.	To be quoted as per Appendix B2 Annexure-1 once only
62	PART - I	BOQ PART - 2 - PART-F SUPPLY OF SPARES	Appendix B2 - III	2 of 16	(vi) The Contractor shall include the price of this item in cost of DLP in their Financial bid. This will be part of Bid evaluation while assessing the L-1 bidder.	There is no separate item / provision in the BOQ as cost of DLP to put in our estimate. Please clarify in which item the cost has to be built in.	To be quoted in in Parf-F of Part-II of section-4 volume-2
63	PART - I	PART - 1 - SECTION 4 : SCOPE OF WORKS (ECS)			Factory Acceptance Test	We understand that the FAT certificates from the vendor / OEM shall be sufficient for the employer for verification. Kindly confirm if FAT has to be inspected at manufacturer's test facility by the employer. Kindly inform number of personnel who will be visiting Manufacturer's test facility for witnessing FAT.	Number of personnels shall be at the discretion of employer
64	PART - I	PART - 1 - SECTION 4 : SCOPE OF WORKS (ECS)	1.3 point 12	5 of 9	The contractor will be responsible for sealing with fire rated material of all openings left due to works under his contract	Kindly confirm that the quantity for the same has been considered in the BOQ under Part-H additional Misc Items sub part 9, Fire Sealing.	Confirmed
65	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	1,2,3,4	1-8 of 28	All ECS & TVS Equipments	Kindly confirm that the foundations to be laid for all ECS & TVS equipments shall be in the Civil Contractor's scope.	Masonry foundations (RCC/PCC) will be provided by civil
66	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	3.1.2	7 of 28	Supply, installation, testing..... at site	We propose to use END Suction-Single Suction Centrifugal pump for secondary chilled water pumps. Kindly accept the same	Follow bid conditions

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
67	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	8.1.1, 10.1	12,17 of 28	Underground Piping/Buried Piping	We understand that the excavation and trenching of the underground/buried piping and the civil works related to the cut-out for underground piping will be in civil contractors scope. Please confirm	Confirmed
68	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	23.1, k	27 of 28	SPF-5.5 cms	Please provide total pressure to provide fan selection.	Please follow addendum
69	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	23.2	27 of 28	Attenuators as per specifications	Please confirm size for the attenuators has been given in L X B X H.	Please follow addendum
70	PART - I	BOQ PART - 1 - PART-B : ECS WORKS	Appendix C1	6 of 14	The Annexure 1 : Minimum list of Consumable & DLP spare	The same annexure has been repeated twice. Please confirm as both of them are same, one of it should not be costed.	To be quoted as per Annexure-1 of Appendix C1 once only
71	PART - I	BOQ PART - 1 - PART-D : BMS WORKS FOR ECS AND E&M	8.01	8 of 17	1) CPU Module with on board Ethernet RS 485 port, . Integrated Remote I/O Bus Manager, 96 word Base memory, 12,000 I/O capacity, 64 process channels :4 nos. 2) CPU Module with Remote I/O Bus manager : 2 nos. 3) 256 KB memory Extension Capsule: 2 nos	Since the ECS BMS PLC equipment are quantified as a Lot item as per the segregation & quantification provided in the IO summary, the quantification in the BOM sub-items(4 nos of item 1, 2 nos of item 2, 2 nos of item 3) should not be provided. It should be the responsibility of ECS BMS vendor to provide sufficient number of modules to meet the technical specification and scope requirements. Kindly confirm the same	Please follow addendum
72	PART - I	BOQ PART - 1 - PART-D : BMS WORKS FOR ECS AND E&M	8.01	8 of 17	Redundancy Module	Kindly confirm if redundancy is required for ECS BMS PLCs as well. If yes, kindly confirm the level of redundancy(processor/power supply/communication)	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
73	PART - I	BOQ PART - 1 - PART-D : BMS WORKS FOR ECS AND E&M	10	10 of 17	Wiring Containment Systems	Requesting to provide BOQ giving the details of quantity of cables, cable trays, conduits etc..	Follow bid conditions

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
74	PART - I	BOQ PART - 1 - PART-C : TVS WORKS	5. Compressed Air System	8 of 10	Air Compressor Quantity is mentioned under following descriptions: Supply, installation, Testing & commissioning of, screw type air cooled compressed air package consisting of 2 nos. air compressors with safety devices and each having capacity of 0.79m3/Minute with working pressure of 13 bar and a air receiver of 500 litre capacity. Compressed shall be as per specifications, data sheet, drawings & as required. Each compressor shall have its own Air Tank & Refrigerated Air Dryer control panel, Air Dryer, Filters as per air flow diagram, specifications and data sheets enclosed. Price shall include hard drawn copper tubing, Ball Valves, Strainers Float Traps, Solenoid Valves, Pressure Regulating Valves, Electronic Drain Valves, Pressure Reducing Station, Moisture Separator and trap, solenoid boxes for BMS Control as per drawings, data sheets and	Kindly provide with the detailed BOQ (with quantities of the mentioned items) as well as the detailed drawings for the same.	Follow bid conditions. Schematic drawing for referemce is included in addendum.
75	PART - I	BOQ PART - 1 - PART-C : TVS WORKS	6. Fire Rated Galvanized Ducting	10 of 10	Fire Rated Galvanized Ducting is mentioned under the following descriptions: Fire rated Galvanized Iron ducting complete with supports as per specifications and drawings including all necessary civil work required for installation of complete TVS System in both the TVS Plant rooms in each station.	Kindly provide with the detailed BOQ (with quantities of the mentioned items) as well as the detailed drawings for the same.	Follow BOQ
76	PART - I	BOQ PART - 1 - PART-C : TVS WORKS	4. Tunnel Ventilation Nozzles	8 of 10	SITC of Nozzles to suite fans at platform level	Kindly provide with the drawings giving the details of the nozzle like the dimensions, the arrangement etc. Also, Kindly provide the technical specifications of the nozzles as they are missing from the tender document	Follow bid conditions for specifications (V02.3.10). Follow addendum for drawing.
77	PART - I	BOQ PART - 1 - PART-E : BMS WORKS FOR TVS	10	12 of 18	Wiring Containment Systems	Kindly provide BOQ giving the details of quantity of cables, cable trays, conduits etc..	Follow bid conditions
78	PART - I	BOQ PART - 1 - PART-E : BMS WORKS FOR TVS	10	1 of 18	Transducers and Actuators	Kindly provide BOQ giving the details of quantity of the transducers and actuators if required for BMS works for TVS.The same has been given for BMS works for ECS and E&M	Follow bid conditions
79	PART - I	SECTION 6 : E&M SPECIFICATION	Clause 12.1.1.2	157 of 259	Unless otherwise specified or approved, all motors shall be of the totally enclosed fan-cooled type with Class F insulation to BS 4999 and BS 2757/BS 60085 or IEC 60034-5, impregnated with non-hygroscopic oil-resistant insulating varnish. Motors for fire services pumps shall be of class F insulation and of IP 55 construction. Insulation materials shall be suitable for the climatic conditions available in Jaipur Particulars of all motors shall be submitted for approval	Kindly confirm the motors for Fire Pumps shall be UL listed or non UL listed.	Fire pumps shall be UL/FM approved. Non UL listed motors for fire pumps acceptable.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
80	PART - I	SECTION 6 : E&M SPECIFICATION	Clause E21.4 ; BOQ Sr. No. 17.4.2	226 of 259	Self- contained open circuit type compressed air Breathing apparatus set confirming to EN-137:1993 , standard complete with one spare cylinders,	BOQ and specs call for Breathing apparatus EN-137:1993 of standard. However we have checked with manufacturers that 1993 has been updated with 2006 standard. Kindly confirm.. Also please provide the approved make list for same.	Contractor can propose any vendor meeting the bid requirements.
81	PART - I	MISCELLANEOUS FIRE SERVICES EQUIPMENT	BOQ. Sr. No. 17.4.6		Thermal Imaging Camera - Qty- 4 nos.	The item is not shown in the drawings. Kindly confirm the location of camera and also please confirm the quantity.	Follow bid conditions
82	PART - I	CLEAN AGENT / CO2 GAS BASED PROTECTION SYSTEM	Clause E23. & BOQ Sr. No. 18.		Clean Agent Transformer Protection System- Fire trace tube system or equivalent with UL listed system	The BOQ and Technical specs call for Fire Trace make Polymer tube detection system. Request you to give generic specs. So that it will be a fair evaluation.	Contractor can propose any vendor meeting the bid requirements.
83	PART - I	CLEAN AGENT PANEL FLOODING SYSTEM- FIRE TRACE TUBE SYSTEM OR EQUIVALENT WITH UL LISTED SYSTEM	BOQ Sr. No. 18.2		Clean Agent Transformer Protection System- Fire trace tube system or equivalent with UL listed system	Kindly provide the Capacity of Cylinder, length of polymer tube, list of accessories and dimensions of transformer.	Transformer rating is 3150 KVA. Other details are to be estimated by the bidder
84	PART - I	FIRE ALARM AND DETECTION SYSTEM	Clause E 22 .BOQ Sr. No. 19		The fire alarm panel specification requires the system to be complied with BS only whereas for the rest of the devices UL compliant is allowed. UL Listed devices will only operate with same listing panel.	Kindly approve the UL Listed product for Main fire alarm panel also	Follow bid conditions
85	PART - I	PREAMBLE	1.2.4	5 of 9	1.2.4 Measurement and Payment	Kindly specify what will be payment terms for Lumpsum / LOT items.	The Lot items will be considered as SITC items
86	PART - I	PREAMBLE	1.2.4	5 of 9	1.2.4 Measurement and Payment 2) Supply 4) Installation & equipment testing	We understand that by " AS QUOTED" to be read as '100%'. Please confirm.	Yes
87	PART - I	BOQ PART - 1 - VENDOR LIST	2	5 of 11	The order of precedence of BOQ, Specification and data sheet- (1) BOQ (2) Specifications (3) Data sheet	Kindly confirm order of precedence for the following: Drawings / SLD. General Specification. General Conditions of Contract. Special Conditions of Contract. Technical Specification / Particular Specification. Instructions to Bidders. Bid Data Sheet. Evaluation and Qualification Criteria. Bidding Forms. Contract Forms. Etc	The order of precedence is given in Contract Agreement format. Please follow addendum.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
88	PART - II	SECTION 6 : E&M SPECIFICATION	2.5.b Outlet Boxes for Ceiling Fans	90 of 259	2.5.b - Outlet boxes for ceiling fans shall be fabricated from minimum 3mm thick MS sheet steel and galvanized. The boxes shall be hexagonal in shape of minimum 100 mm depth and 60mm sides. Each box shall be provided with a recessed fan hook in the form of one 'u' shaped 15 mm dia rod welded to the box and securely tied to the top reinforcement of the concrete slab for a length of minimum 150 mm on either side. 3mm thick Perspex/hylam sheet cover of matching colour shall be provided.	You are requested to accept fan boxes fabricated from minimum 1.6 thick MS sheet steel and galvanized; as 3 mm sheet steel is very difficult to bend (hexagonal) with respect to dimensions mentioned on die and is not readily available.	Follow bid conditions
89	PART - II	SECTION 6 : E&M SPECIFICATION	2.8.1. Switches	93 of 259	2.8.1. Switches : Brands namely Crabtree, MK Electric, CPL-obsession, MDS, Schneider, SSK, ABB shall be used.	Kindly confirm approved make shall be as per given in specification or as per makes given in the preamble.	Contractor can propose any vendor meeting the bid requirements.
90	PART - II	SECTION 6 : E&M SPECIFICATION	E01 Low Voltage Electrical Panels	51 of 259	12.1 The firm shall submit valid type test not more than 5 years old of the equipment conducted at accredited/authorised/reputed/nominated by DMRC laboratory. The type test shall be as per the governing specification.	Please confirm that the Contractor / Vendor has to provide valid type test certificate not more than 5 years old of the maximum kA rating of the panel to be supplied only and no type test shall be performed on the equipment supplied.	Follow bid conditions
91	PART - II	DG PS - SPECIFICATION	4.3.1.b	19 of 105	b) Operating Mode The set shall be used only for the standby purposes, supplying average load factor of 80 to 85% for periods of up to 24 hours continuously, followed by a rest period of minimum 30 minutes.	As per latest ISO 8528 the Avg. Load Factor 70 % and 10 % overload is not applicable. Kindly confirm requirement.	Follow bid conditions
92	PART - II	DG PS - SPECIFICATION	4.3.1.d	19 of 105	d) Ambient conditions Temperature: 0oC to 50oC, Maximum Humidity: 95% RH, Altitude: 300 M (Above mean Sea Level)	As per all manufacturer's standard 415 V rated Engine are designed at 50° C and Alternator is designed Amb. Temp. at 40°C & Class of Insulation 'H' & Temp rise limited to Class 'H'. Please confirm whether the above is acceptable or higher size Alternator is to be considered	Follow bid conditions
93	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	135 of 259	1.5 a) Input/ Output power supply panel	Input / Output power supply panel is already covered under subhead 1. Switch Boards / Panels. Hence, these panels shall not be the part of UPS System. Please confirm.	Confirmed
94	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	138 of 259	3.1.2.1 Automatic Supply Changeover System (For UG stations) Automatic Supply Changeover / Transfer System shall be provided in underground stations, with break-before-make switches. It shall switch the UPS to one of the two mains supply sources. When the selected mains supply source fails, the supply changeover unit shall automatically switch the rectifier / charger to the other mains supply source following a preset delay period.	Automatic Supply Changeover System is already covered under subhead 1. Switch Boards / Panels. Hence, these panels shall not be the part of UPS System. Please confirm.	Confirmed
95	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	139 of 259	3.1.2.6 Battery System For specifications and requirements, refer to the battery specifications DMES-E-0003	Battery specifications DMES-E-0003 is missing in the tender document. If applicable ; kindly provide.	Please follow addendum

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
96	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	149 of 259	6. System efficiency The efficiency of the proposed UPS shall be at least 90% and above from 25% load to full load. The life and efficiency is of prime importance. The manufacture may offer UPS with any new proven technology having advantage of life and energy efficiency without compromising on other parameters of specification	The UPS is with built in transformer; hence efficiency shall be at least 90% and above from 50% load to full load. Kindly confirm acceptance.	Follow bid conditions
97	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	139 of 259	3.1.2.2.4 The rectifier / charger shall have sufficient capacity to enable simultaneous supplying of full load to the inverter and recharging a fully discharged battery to 100% rated value within 10 hours.	Requesting to accept battery charging up to 90 % in 10 hours charging time. Please confirm.	Follow bid conditions
98	PART - II	SECTION 6 : E&M SPECIFICATION	E11 Uninterrupted Power Supply	155 of 259	11.1.4 Temperature monitoring equipment shall be incorporated in the UPS system to optimise the charger voltage as a function of battery room temperature, to generate alarm in case of room temperature exceeding the preset permissible temperature and to predict the battery backup time.	As there is no relation between temperature alarm and back up time. Requesting the clause to be modified.	Follow bid conditions
99	PART - II	DG PS - SPECIFICATION	3.2	2 of 7	Supply, installation, testing and commissioning of 75 mm thick Rockwool LRB mattress insulation (of 150 Kg/m3 density) over the exhaust pipes of following diameter including cladding with aluminium sheet of 24 SWG and covering from outside complete as required suitable for DG exhaust pipe temp. upto 450°C etc.	As per standard practice the exhaust piping is insulated with thermal insulation Rockwool 50 mm thick / 64Kg density and wrapped with 24 guage Al. sheet . Please confirm whether it is acceptable.	Follow bid conditions
100	PART - II	DG PS - SPECIFICATION	4.3.c & 4.2.b	19 of 105	c) Power Ratings : The engine and the alternator shall have an inherent capacity as per the Standby ratings as per the relevant standards. The DG sets are required to supply the full capacity as per the standby ratings as per ISO-8528 standards and BS 5514. & b) Operating Mode : The set shall be used only for the standby purposes, supplying average load factor of 80 to 85% for periods of up to 24 hours continuously, followed by a rest period of minimum 30 minutes.	As per ISO 8528/1, ISO 3046/1, BS 5514/1 , the following power rating is defined as under: 1) Prime power: Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation. 2) Standby (maximum): Power available at variable load in the event of a main power network failure up to a maximum of 500 hours per year. No overload is permitted. Please confirm the requirement.	Standby rating
101	PART - II	DG PS - SPECIFICATION	4.4.1	20 of 105	The installation of the Generator Sets shall be inside sound-proof enclosure to be installed in the open area. However in some places DG set may be required to be installed at the DG room, the acoustics in this case will be done for the DG room.	In addition to DG sound-proof enclosure DG room acoustic also appears in the BOQ. Please confirm requirement.	BOQ item will be operated if required.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
102	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.1.1	139-145 of 270	The Fan Characteristic shall also be such that for a 15% increase in total pressure over the specific value, the fan shall deliver not less than 85% of the specified air volume flow rate. The stability of the fan operation shall not be affected under such situation	In order to meet this criterion for BOQ item 23.1.a. (VEF 7cms, 750 Pa) & 23.1.f (Fire Rated VEF 6 cms) the airflow capacity needs to be increased to 7.4 cms & 6.1 cms respectively.	Follow bid conditions. Will be reviewed during vendor and technical approval
103	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.1.2	139-145 of 270	All axial fans with nominal rating above 7.5 kW shall have a minimum efficiency of 70%	The fans with nominal rating above 7.5 kW have minimum efficiency of 60% as specified by the approved vendor. Kindly confirm acceptance.	Follow bid conditions
104	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.3.2	139-145 of 270	Grease nipples shall be brought to the outside of the casing in the most accessible position and fitted with lubrication tube made of copper or other approved material.	Some of the fans given by the approved vendors are direct driven fans and do not have any bearing other than motor bearing which are totally sealed bearing, as per clause A19.1.13 this complies the tender requirement. <u>Please accept the same.</u>	Greasing nipples not required in totally sealed type bearings
105	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.3.2	139-145 of 270	Gasketed access doors shall be provided in each fan housing or connecting ductwork, suitable for access to adjust or replace blades.	For some of the fans provided by the approved vendor, access door cut-outs are not recommended, as it may weaken the strength of fan casing. We recommend provision to have access door in the ducting on the suction side of fan for the <u>maintenance & cleaning purpose.</u>	Follow bid conditions
106	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet	139-145 of 270	As per the Data Sheet for Axial Flow fans for ECS Noise (85 DB Maximum)	As per the approved vendor, the Noise level mentioned in the data sheet can't be achieved, and the noise level shall be as per the fan performance curves submitted and not exceed 100 DB. Kindly accept the same	Please follow addendum
107	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A19.1.15	139-145 of 270	The Power factor of motors shall not be less than 0.85 lagging at the operating condition.	The motor shall be with factor 0.85 for Motor KW 18.5 & above only. Please accept the same.	Follow bid conditions. Will be reviewed during vendor and technical approval
108	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A19.3.34	139-145 of 270	Unless otherwise specified, red-oxide zinc chromate primer with two finish coats of grey paint shall be painted.	Phenolic rust-proof base plus lacquer surface finish; Painting in blue colour for F class & Red colour for H class/ As per motor manufacturer.	Will be evaluated during vendor and technical approval
109	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.2.4	139-145 of 270	Propeller fan shall be...not less than 3mm thick steel mounting plate with stove epoxy grey finishes.	As per the approved vendor, thickness of mounting plate shall be 1.2 mm & finish as per manufacturing standard.	Please follow addendum
110	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A12.3.2.6	139-145 of 270	Propeller fans.....With tip speed not exceeding 17.5 m/s	As per the approved vendor, The tip speeds will vary between 19 m/s and 23.1 m/s for some fans. Kindly confirm acceptance.	Please follow addendum

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
111	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet	110 of 270	Type of Cooling Tower: Induced Draft, Cross Flow Type	Kindly confirm if Induced Draft, Counter Flow type is acceptable.	Please follow addendum
112	PART - II	PART - 2 - SCOPE OF WORKS-BMS	1.1	2 of 10	The Contractor shall also interface for control, monitoring, and supervision as required at the Operational Control Centre (OCC) for the existing chand pole U/G station of Jaipur Metro	The interface with the existing station at OCC shall be on open protocol like Modbus TCP/ OPC. Kindly confirm the same	The Chandpole station is having Open protocol.
113	PART - II	PART - 2 - SECTION 4 : BMS SPECIFICATIONS	BMS/1.00	1-91 of 91	The PLC System shall be a Fail Safe Control, Programmable Logic Controller (PLC) based with a Quadruple Modular Redundancy (QMR) system architecture.	The requirements are for a SIL2 certified PLC for TVS control system, however the internal architecture of the PLC shall be as per manufacturer's standards to meet the SIL2 standards whether its QMR or TMR or DMR.	Please follow addendum
114	PART - II	PART - 2 - SECTION 4 : BMS SPECIFICATIONS	BMS/3.00	1-91 of 91	BMS/3.00 Design and Performance Requirements	Kindly indicate the points to be monitored and controlled (per equipment).	As per I/O schedule
115	PART - II	PART - 2 - SECTION 4 : BMS SPECIFICATIONS	BMS/3.00	1-91 of 91	BMS/3.00 Design and Performance Requirements	Kindly provide with the Point List, the equipment Detail. Also kindly provide the floor size and size and location of panels.	Please refer drawings and I/O schedule
116	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V 06.4	76 of 78	The air dryer shall be capable of producing dry air at a dew point of -4 degree celcius of free air..... package	As per the approved vendor, the dew point that can be produced by refrigerated dryer is +3 deg C with tolerance of (+/- 1 deg C)	To be evaluated during vendor and technical approval
117	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	Data sheet for Air compressor	77 of 78	Discharge Conditions: Temperature: Not more than 45 deg C Volumetric Efficiency: 95%	As per the approved vendor the following discharge conditions shall be achievable: Temperature: Shall be 8 to 10 deg C above ambient Volumetric Efficiency: Shall be as per manufacturer's standards. Kindly confirm the acceptance of the same.	To be evaluated during vendor and technical approval
118	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01,V03	11-33 of 78	Reference Standards	As per the approved vendor, the reference standards used will be equivalent to those mentioned in the specifications. Kindly accept the same.	Follow bid conditions
119	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.2.3.1	11-33 of 78	Before providing the manufacturer.....of each item and applicable	As per the approved vendor: acceleration curves are not possible, test results cannot be plotted on semi-logarithmic graphs, fan noise levels have not been provided in the schedules. kindly provide the required	To be evaluated during vendor and technical approval

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
120	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.1.4	11-33 of 78	Motors shall be product of single manufacturer.....protective devices	As per the approved vendor, TVF & TBF will include motors from a single manufacturer while TEF will have motor from alternative manufacturer but as per the desired specifications. Please accept the same	Please follow addendum
121	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.3.3	11-33 of 78	Emergency fan motor units shall have efficiency.....flow rate	Some fans may have efficiency a little less than that required in the specifications. Kindly confirm acceptance.	Please follow addendum
122	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.3.8	11-33 of 78	Fans shall not operate in stalling.....direction)	Fans being operated in parallel must be started at the same time else this will lead to complications.	Follow bid conditions
123	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.4.6	11-33 of 78	Emergency fan-motor unit assembly supports.....come into contact	Fan/Motor supports will be of sufficient structural rigidity and design to meet their required purpose, thrust plates will not be required for smaller fan diameters.	Will be evaluated during vendor and technical approval
124	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.4.9	11-33 of 78	Bolts shall not be less as approved	All fixings will be of a size suitable for their purpose, not limited to 12mm minimum size, fixings will be of suitable corrosion resistant material. Kindly confirm acceptance.	Follow bid conditions
125	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01,V03	11-33 of 78	Motors shall be capable,reverse rotation	As per the approved vendor, some units may require upto 20 seconds to start. Kindly confirm acceptance.	Please follow addendum
126	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.6.11	11-33 of 78	The motor shall be single winding.....full load current	For IE2 or higher IE classes the starting current may be higher than 700%. Use of softstarter to reduce the starting current for the standard dutymode is recommended. The starting equipment should be sized accordingly.	Follow bid conditions
127	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	4.16.12	187 of 270	Soft Starter: (e) The soft starter shall be able to operate at design ambient temperatures from -10 to + 40 °C without derating, and between 40 and 60 ° C with suitable derating factor shall be considered.	Please confirm the design temperature rating for soft starter selection.	Design Temperature is 50 deg. C
128	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	4.8.3	174 of 270	4.8 INTERNAL AND CONTROL WIRING 4.8.3) LSZH and Fire Survival Cables shall be as specified in cable specification Section (BS 6724-multicore cable and BS 7211 for single core cable). All internal and control wiring shall be Low Smoke Zero Halogen (LSZH) copper conductor wires rated at 450/750 V complying with BS 7211 for this Specification. All control wiring within the Electrical Panels shall be with single core minimum 2.5 mm ² for CT and balance as per approved manufacturer design. Insulation shall have a glossy finish, be resistant to oil and be incapable of supporting combustion. Fire Survival wires shall be provided as per BOQ.	Please confirm whether all internal control wiring shall be of LSZH or FS wires. We request to accept control wire of 1.5A mm ² for Voltage circuit and 0.75 mm ² for BMS/PLC circuit.	All internal control wiring shall be of LSZH and for PLC internal wiring please refer clause BMS/5.01.22

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
129	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	4.9.3	176 of 270	4.9 TERMINAL BLOCKS 4.9.3 Terminal blocks for low voltage wiring shall be moulded from high-grade non-hygroscopic melamine, comprise bank of rail-mounted blocks with all live parts fully shrouded, screw- clamp, spring loaded insertion, solder-lug or stud type terminals as appropriate to the design and duty of the cables to be terminated. Pinch-type screws, where the screw is in direct contact with the conductor shall not be used.	Terminal blocks shall be moulded from high-grade non-hygroscopic melamine. Melamine being breakable material; please confirm if non-breakable material of Polyamide is acceptable.	Follow bid conditions
130	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V01.3.11.2	77 of 78	One motor of each nameplate.....visual bearing inspection	Routine test based on IEC-Regulations, measurement of the "Polar moment of inertia of the fan-motor unit, in meter-kilogram squared" is not possible routine test: will be done without load type test: will be done with load.	To be evaluated during vendor and technical approval
131	PART - II	BOQ PART - 2 - PART-C : TVS SPECIFICATIONS	V05.3.5.3.7	69 of 78	Furnish all bolts, nuts, washers, and lock washers of stainless steel AISI Type 316. Furnish Bolts that are consistent with the existing tunnel inserts	As per the approved vendor the bolts etc will be Dacromet or Geomat coated. Stainless Steel when fitted to zinc related products have an electromagnetic reaction which leads to binding and reduced life. Please accept the	Follow bid conditions
132	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet for AHU	25 of 270	Reference Code / Standard	As per the approved vendor, the AHU with Plug type fan is not Eurovent certified. the construction however remains the same as that of a eurovent certified AHU. Kindly accept the same.	Please follow addendum
133	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A.25 Chiller Plant Manager	263-269 of 270	Historian of Point Data shall be configurable as part of the point definition. Historian shall be provided for both snapshot and averages with intervals ranging from 5 Sec to 24hrs	As per approved vendor live trend viewer polls at 10 seconds intervals and can go up to 1 minute trend interval for data logs.	Please follow addendum
134	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A.25 Chiller Plant Manager	263-269 of 270	Trend and change of value data shall be stored within the engine and uploaded to a dedicated trend database or exported in a selectable data format via a provided data export utility.	From the specifications, we have understood that all trends are being stored in network engine (Tracer SC) and can be easily exported to required format in Tracer ES. With this understanding we confirm that we are complying.	Please follow addendum
135	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A.25 Chiller Plant Manager	263-269 of 270	Automatic Alarm routing through e-mail and SMS to user, Automatic Alarm Email/SMS option available	SMS feature is not available however the email option is available. In case of CPM, critical alarms etc shall be sent through email of the customer	Please follow addendum
136	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A.25 Chiller Plant Manager	263-269 of 270	Network Engine should have inbuilt display and keys to operate in absence of PC. Network Engine should have inbuilt IO points, functionally able to act as a DDC controller as well as a supervisory controller	The supervisory controller does not have inbuilt IO points and it cannot act as a DDC controller	Please follow addendum

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
137	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A.25 Chiller Plant Manager	263-269 of 270	Each Panel will be provided with a socket for a Portable Operator Terminal(POT) which can be connected via Bluetooth communication for easy access for testing and trouble shooting and no need to open the panel, and a port for network communications in max speed of 76 Kbps	the controllers are provided with the USB Port(Socket) to connect POT, Instead of Bluetooth, the portable operator terminal will be connected with the controllers through a cable.	Please follow addendum
138	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet for Chillers	33, 53 & 56 of 270	Vibration Isolators : Spring Type Vibration Isolators	Manufacturers recommend use of Rubber Pads for Vibration Isolators. Kindly accept the same.	Rubber pads are also acceptable based on manufacture recommendation
139	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet for Cooling Towers	110,111 of 270	Fan Type: Aerofoil Design, Statically and Dynamically Balanced	Approved vendor will only provide statically balanced fan only. Kindly accept the same	Please follow addendum
140	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet for Cooling Towers	110,111 of 270	Fan Blade / Hub: Cast Aluminium Alloy EN-8	Approved vendor will provide blades of cast aluminium alloy and hub of CI/aluminium plated. Kindly accept the same.	Please follow addendum
141	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data sheet for Cooling Towers	110,111 of 270	Fan Bearing: Heavy Duty..... collars	As per the approved vendors selection, there will be no bearing. Kindly accept the same	Please follow addendum
142	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A08.2.1	108 of 270	Quality Control	As the cooling towers are CTI approved after rigorous testing, performance tests will be done at site only. Kindly accept the same	Please follow addendum
143	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS		66 of 270	Witness testing of air cooled chillers in factory	As per approved manufacturer, the chiller shall be tested at full load conditions at 28 deg celcius ambient temperature. Part load testing is not possible for the same. Kindly confirm the same.	Follow bid conditions
144	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A03.3.4	44 of 270	Insulation	As there is a high chance of the insulation getting damaged during transit, we propose that the insulation be done at site. Kindly approve the same.	Acceptable. Insulation to be done by OEM only
145	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	Data Sheet for Chillers	55 of 270	Winding Temperature Sensor	Instead of winding temperature sensor, We propose to offer other other safeties like high current draw, low suction pressure, Hi discharge Pressure, oil temp. etc. Kindly approve the same	Please follow addendum

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
146	PART - II	PART - 2 - SECTION 4 : ECS SPECIFICATIONS	A03	34 of 270	Chilling water units - Centrifugal / Screw Compressors	We request you to kindly consider 6.3+ COP Magnetic Bearing Centrifugal Chillers for the project due to high operational efficiency and no losses associated due to Oil in the Magnetic Bearing Chillers	Follow bid conditions
147	PART - II	FIRE ALARM AND DETECTION SYSTEM	E22. 3.5.5		The sounder is required to operate on 4,2 and 1/4 watts only. Whereas our speakers will only operate from 2 watts to 1/4 watts	Kindly request to approve the wattage range between 2 watts to 1/4 watts only	Follow bid conditions
148	PART - II	FIRE ALARM AND DETECTION SYSTEM	E22.		Main FACP Cabinet shall be IP 54 Compliant	As per Vendor confirmation UL listed and UL does not provide any IP rating. Panel cabinets are tested by UL and only UL listed for Indoor application.	Follow bid conditions
149	PART - II	FIRE ALARM AND DETECTION SYSTEM	E22.		Panel Shall be equipped with BMS integration facility including all the hardware and software required	Shall the cost of BMS card be included in the configuration of panel or need just to keep a provision for BMS only ?	Follow bid conditions
150	PART - II	FIRE ALARM AND DETECTION SYSTEM	E22.		Batteries: The system shall work through battery power for 1 hour continuously under alarm condition	As per NFPA the system shall work consistently for half an hour only under alarm condition	Follow bid conditions
151	PART - II	FIRE ALARM AND DETECTION SYSTEM	E22.		Multisensor detector shall meet the UL standards and comply to the EN norms	Can only UL listing be approved ?	Follow bid conditions
152	PART - II	Approved Make List			Water Treatment Plant	As only single make is given, request you to approve Ion Exchange make WTP.	Contractor can propose any vendor meeting the bid requirements.
153	PART - II	Approved Make List			Fire Fighting & Plumbing Pumps	As only single make is given, request you to approve M & P (Willo) make Plumbing & Fire Fighting pumps.	Contractor can propose any vendor meeting the bid requirements.
154	PART - II	PIPE WORK FOR FIRE SYSTEM	BOQ. Sr. No. 13.1 & 13.2		Providing and fixing of heavy duty Galvanised Steel Pipe (conforming to Section E17 of M & W Specifications) with all fittings viz. flanges, bends, tees, elbows, reducers, as specified, including cutting, welding / making threaded joint and fixing to floor / wall with approved structural supports such as clamps, hangers etc. This further includes (1) Cutting holes / chases in brick or RCC walls / slabs and making good the same (2) Painting with two or more coats of synthetic enamel paint of approved shade as per pipe colour code over two coats of primer (3) Painting of legends with direction arrows complete as per specifications.	Kindly confirm whether Butt Welding / threaded joints are permitted for pipe joining.	Follow bid conditions

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
155	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E03.3.3 Cable Trays and Ladders & 3 Cables, Cable tray & Steel work	80 of 259 & 50,51 of 86	E03.3.3.1.d - All cable tray sizes 450mm and above shall be of heavy duty type with return flange. All cable tray below 450mm shall be with standard configuration. & 3.09.a Supply & installation of Prefabricated, perforated GI cable trays made of GI sheets continuously connected including horizontal and vertical bends, reducers, tees, coupling plate and nut bolts washers & all material required for installation i.e Tie Rods, GI angles, Channels, earth link etc, conforming to Technical Specifications, complete as required. (With Double Reverse flange - Heavy duty) & 3.09.b Supply & installation of Prefabricated, perforated GI cable trays made of GI sheets continuously connected including horizontal and vertical bends, reducers, tees, coupling plate and nut bolts washers & all material required for installation i.e Tie Rods, GI angles, Channels, earth link etc, conforming to Technical Specifications, complete as required. (Standard conventional Design)	Kindly confirm whether heavy duty type with return / reverse flange is to be considered as per specifications (E03.3.3.1.d) or as per BOQ description; since description in BOQ and specifications are contradictory.	Since both types are available in BOQ, item will be executed as per site requirement.
156	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E03.3.3 Cable Trays and Ladders & 3 Cables, Cable tray & Steel work	81, 82 of 259 & 50,51 of 86	E03.3.3.1.e - Tray thickness of Steel (mm) & Flanges of Tray (mm) as mentioned in the table. & 3.09.a Tray thickness of Steel (2 mm) & Flanges of Tray (50 mm) & 3.09.b Tray thickness of Steel (2 mm) & Flanges of Tray (50 mm)	Kindly confirm tray thickness and flang size shall be as per specifications (E03.3.3.1.e) or as per BOQ description; since description in BOQ and specifications are contradictory.	Follow the BOQ
157	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E03.3.3 Cable Trays and Ladders & 3 Cables, Cable tray & Steel work	82 of 259 & 51 of 86	E03.3.3.4.c - Cable ladders shall be manufactured from 2mm thick mild steel and hot-dip galvanized to BS 729 or IS 4759. The two side rails of the cable ladder shall be of minimum 40mm in height with returns at top flange to gain extra strength. The rung shall be spaced at approximately 250mm centres with sufficient width for various cable fixing methods including nylon tiles, saddles and perforated strips, cable clamps and cleats. & 3.10 Supply & installation of prefabricated, GI, ladder type cable tray conforming to Technical Specifications, continuously connected including horizontal & vertical bends reducers, tees, coupling plate, nut bolts washers etc. The side runners shall be 100 x 20 x 2.5 mm and centre rungs shall be of size 30 x 15 x 2.5 mm with centre to centre distance of 250 mm as required.	Kindly confirm thickness of cable tray shall be as per E03.3.3.4.c ie. 2.0 mm or as per BOQ 2.5 mm.	Follow the BOQ

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
158	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	2.8.1. Switches & 4 Wiring & Accessories	92 of 259 & 53, 54 of 86	2.8.1. Switches : For underground stations, switches shall be single pole and rated not less than 20A, for use on AC systems, including fluorescent or inductive loads. & 4.7a & 4.7 b : First point controlled by 10A switch\10A MCB	Kindly confirm rating of switch to be considered whether 20 A as minimum rating for all items under sub head 4 Wiring and accessories OR as per BOQ description.	Please follow addendum
159	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E03.3.4 Cable Trunking & 4 Wiring & Accessories	92 of 259 & 53, 54 of 86	E03.3.4.1.d sizes up to 100mm by 100mm shall be 1.6mm thick and from 150mm by 75mm up to 150mm by 150 mm shall be 1.8mm thick. & 4.15 & 4.16 : G.I. Cable trunking including pull boxes as required at site, 2 mm thick, as specified in Technical specifications	Kindly confirm tray thickness shall be as per specifications (E03.3.4.1.d) or as per BOQ description; since description in BOQ and specifications are contradictory.	Follow the BOQ
160	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E01 Low Voltage Electrical Panels & 1 LV Main Switchboards, Sub-Main Switchboards and local Electrical Panels & 9 Addition Deletion Work	10 of 259 & 2 & 72 of 86	3.2.20 The switchboard shall have sufficient space to house all electrical equipment allowing spare Space capacity of 10% for the future expansion if specifically asked in BOQ. & m. Space provision as specified in M & W Specifications for future expansion. & Adjustment rates for addition/deletion of compartmentalised switchgear in above panels/board of following rating including the supply, fabrication, extension, modification of the enclosure or in a separate enclosure, earthing, basbar, other sub-systems, accessories etc complete as required and as per specifications and as specified in item above	Kindly confirm whether spare space capacity of 10% for future expansion is required in panels. If space provision is to be done then we understand that any additions shall be done in the space provision (i.e 10% for future expansion). In such an event the contractor shall not be liable to augment further space / expand panel. Please confirm.	Spare space provision to be taken as per bid condition. Any addition of feeders as per adjustment item will be done seperately.
161	PART - II & PART - I	SECTION 6 : E&M SPECIFICATION & BOQ PART - 2 - PART A : ELECTRICAL WORKS	E01 Low Voltage Electrical Panels & 2 Distribution Boards & 9 Addition Deletion Work	11 of 259 & 2 & 72 of 86	3.2.20 The switchboard shall have sufficient space to house all electrical equipment allowing spare Space capacity of 10% for the future expansion if specifically asked in BOQ. & All distribution-boards shall be provided with 20% future space provision as required. & Adjustment rates for addition/deletion of compartmentalised switchgear in above panels/board of following rating including the supply, fabrication, extension, modification of the enclosure or in a separate enclosure, earthing, basbar, other sub-systems, accessories etc complete as required and as per specifications and as specified in item above	Kindly confirm whether spare space capacity of 10% or 20% for future expansion is required in DB. If space provision is to be done; then we understand that any additions shall be done in the space provision (i.e 10% / 20% for future expansion). In such an event the contractor shall not be liable to augment further space / expand DB. Please confirm.	Follow bid conditions
162	PART - III	PART - 3 - SECTION 7 : GENERAL CONDITIONS OF CONTRACT	—	7 of 1	These General Conditions of Contract (GCC) are based on the Model Form of International Contract for Process Plant Construction published by the Engineering Advancement Association of Japan (ENAA).	Kindly confirm whether ENAA is a substitution of FIDIC.	Follow bid conditions

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
163	PART - III	PART - 3 - SECTION 7 : GENERAL CONDITIONS OF CONTRACT	Clause 34	7 of 41	(a) Cargo Insurance During Transport (b) Installation All Risks Insurance (c) Third Party Liability Insurance	Kindly confirm whether one single policy covering all risks is acceptable.	The nature of Insurance cover are such that it has to be specifically covered as per the requirements. Hence, it should be <u>Separate policies</u>
164	PART - III	PART - 3 - SECTION 7 : GENERAL CONDITIONS OF CONTRACT	Clause 34	7 of 41	(d) Automobile Liability Insurance	Kindly confirm whether Automobile Liability Insurance is mandatory.	Yes
165	PART - III	PART - 3 - SECTION 7 : GENERAL CONDITIONS OF CONTRACT	Clause 34	8 of 41	(f) Employer's Liability	Kindly clarify 'Employer's Liability' and confirm what are the risks to be covered.	The policy to cover liability for the death of or bodily injuries or occupational diseases sustained by the employee during the work
166	PART - III	PART - 3 - SECTION 7 : GENERAL CONDITIONS OF CONTRACT	Clause 34	8 of 41	(g) Other Insurances	Kindly provide the definition of other insurance required. As a contractor we have to submit all the insurances within 4 weeks from the date of commencement, in that case, contractor's subcontractors name is not possible to incorporate in the insurances policies at the time taking insurances; since the finalisation of contractor who will work for the project will <u>take time</u>	Follow bid conditions The subcontractor's name shall be endorsed in the insurance policies before mobilization at the site.
167	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	Additional Clause : Indemnity Bond	8 of 26	The contractor shall submit an Indemnity Bond in the format given in Annexure-II against payments made for Plant and Equipment delivered to Jaipur.	Please confirm whether Indemnity Bond will be applicable for all the supply of Material OR only for Plant & Equipment. <u>Kindly confirm validity of Indemnity Bond.</u>	Follow bid conditions Validity of Bond shall be upto date of handover to JMRC
168	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	Additional Clause : Professional Indemnity Insurance (PII)	8 of 29	Professional Indemnity Insurance (PII)	We understand that this is a BOQ based tender and the contractor has no scope of design work and therefore submission of any Professional Indemnity insurance shall not be <u>applicable to the contractor.</u>	The PII is required to be submitted for the DG portion of the bid.
169	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	Sub Clause 7.3	8 of 3	The contractor shall submit a scedule of..... and also the unit price with escalation/de-escalation clause	Kindly provide the details as to where the escalation/de-escalation clause needs to be stated	Rate of escalation per year over the base year is to be indicated in the Annexure-5 of Appendix C1 and Annexure-5 of Appendix B2.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
170	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	Annexure-IV	8 of 30	Additional Clause 53	Kindly provide details of Environment Management Plan specifically pertaining to contract	Clauses of Environmental Management Plan (EMP) related to this contract shall be applicable
171	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	38	8 of 26	Digitised Data All Drawings, Proposal, Manuals, Design, Correspondence, Final Bid (Contract) documents and submittals etc. should be submitted in digitized form along with the Hard Copy. Price if any to be included in the quoted price.	We understand that the bidder has to submit soft copy (CD with contents in PDF format) of the technical and financial bid only (without soft copy of tender documents and addendum / corrigendum if any) along with the hard copy. Please confirm.	Agreed
172	PART - III	SECTION 7	26.2	7 of 34	If the Contractor fails to attain Completion of the Facilities or any part thereof within the Time for Completion or any extension thereof under GCC Clause 40, the Contractor shall pay to the Employer liquidated damages in the amount specified in the SCC as a percentage rate of the Contract Price or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed the amount specified as "Maximum" in the SCC as a percentage rate of the Contract Price. Once the "Maximum" is reached, the Employer may consider termination of the Contract, pursuant to GCC Subclause 42.2.2.	We understand that Contractor shall pay to the Employer liquidated damages in the amount specified in the SCC if the Key Dates / Milestones are not met. In case the contractor achieves further milestone / key dates / overall completion the amount paid as liquidated damages shall be returned to the contractor in subsequent RA bill. Please confirm.	Follow bid conditions
173	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	8.1	4 of 8	Time for Commencement and Completion The Contractor shall commence work on the Facilities within 7 days from the date of issue of Letter of Acceptance (LOA).	We request that the commencement of work on the Facilities should be within 30 days from the date of issue of Letter of Acceptance (LOA). Please confirm.	Follow bid conditions
174	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.A	8 of 6	A. Custom Duty and Excise Duty	For availing the ED & Customs Duty exemptions, a Certificate from Project Implementing Authority (Customer) with detailed listing of products alongwith qty and manufacturer's name needs to be obtained. Kindly confirm whether rate & value to be included.	Yes

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
175	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.A	8 of 6	A. Custom Duty and Excise Duty	Kindly clarify on CENVAT Credit whether manufacturer can avail reversal of input credit or the same is exempted as a select project.	The benefits available under the related notifications has to be examined by the Bidder. The Contract Price is inclusive of all taxes and duties. The employer is only responsible to provide necessary documents and verification as may be required under the said exemptions/notifications. Now, it is the duty of the Bidder to examine the said notifications and benefits available to them.
176	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.A	8 of 6	A. Custom Duty and Excise Duty	Please clarify in case of non-exemption of any particular item, what will be treatment of ED & Customs Duty Cost .	The benefits available under the related notifications has to be examined by the Bidder. The Contract Price is inclusive of all taxes and duties. The employer is only responsible to provide necessary documents and verification as may be required under the said exemptions/notifications. Now, it is the duty of the Bidder to examine the said notifications and benefits available to them.
177	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.B	8 of 7	B. VAT, Rajasthan Entry Tax	Tender prescribes for exemption from payment of works contract tax pursuant to Rajasthan VAT notification F12(100)FD/Tax/10-79 dated 6.10.2010. While the contractor is exempted from payment of WCT, Kindly confirm whether our sub-contractors are also exempted from payment of WCT who will be working on JMRC Project.	The tax exemption is available in the said Notification from payment of tax payable by any registered dealer on transfer of property in goods involved in execution of works contracts related to Metro Rail Project in Jaipur City.

Pre-bid Query No.	PART	SECTION	CLAUSE No. / Sub Head / BOQ Sr. No.	PAGE No.	DESCRIPTION	QUERY	JMRC REPLY
178	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.B	8 of 7	B. VAT, Rajasthan Entry Tax	Tender prescribes for exemption from payment of VAT for selected goods while purchasing from registered dealers in Rajasthan vide notification F12(100)FD/Tax/10-78 dated 6.10.2010. What about other goods which are not notified but to be used in the project.	The items not notified but to be used in the project are to be borne by the bidder.
179	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	11.1.C	8 of 7	C. Bid Evaluation (Service tax)	Kindly confirm whether we can go in for an identification scheme for service tax.	Service tax is the liability of the Bidder, we have only referred the notification that the exemption has been withdrawn and abatement is available. The bidder may opt any scheme and to bear all service tax liabilities also as may be applicable to the Contract.
180	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	Additional Clause : BOCW (Building and Other Construction Works) Cess	8 of 29	BOCW (Building and Other Construction Works) Cess	Kindly confirm what will be the deduction % & whether JMRC will deposit under their Registration.	Rate of BOCE cess is presently 1%. The same is to be deducted and deposited by JMRC
181	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	26.2	8 of 15	26.2 Completion Time Guarantee Liquidated damage shall be recovered @0.01% of the contract value per one week delay of the individual KD (Key Dates). However the total liquidated damage is subjected to 10% of the contract value.	We request that the LD ceiling limit to be 5% of contract value only; which shall be inclusive of any sums payable by the Employer to Designated Contractors on account of delay and penalty.	Follow bid conditions
182	PART - III	PART - 3 - SECTION 8 : SPECIAL CONDITIONS OF CONTRACT	26.2	8 of 15	26.2 Completion Time Guarantee The liquidated damages are recovered by the Employer from the Contractor for delay and not as penalty.	The tender is silent on Penalty with respect to completion time. We understand that only Liquidated Damages for Delay as per clause 26.2 are applicable and there shall be no penalty recovered from the contractor.	Penalty will be imposed on case to case basis.
183	PART - III	SECTION 9	Advance Payment Security	9 of 18	Advance Payment Security	The BG formats are open ended. Request to put a stipulated date of expiry.	validity up to the contract period

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
184	Section 4	Bidding Forms				Bid Security	Bank guarantee format for Bid Security do not mention bid expiry date . Please mention bid expiry date in bank guarantee format.	The Validity of the bid security shall be 208 days from the date of bid submission.
185	Part 3, Section 7	GCC	9.3			Approvals for Station Building	"The Contractor shall acquire and pay for all permits, approvals, and / or licenses from all local, state, or national government authorities or public service undertakings in the country where the Site is located." Obtaining approvals pertaining to our services will be in our scope. Rest local statutory approvals for Station building plan etc. is to be obtained by JMRC.	Agreed
186	Part 3, Section 7	SCC	32			Quantity Variation	Quantity Variation in an individual item/Group of items up to an extent of 25 % of original contract value is quite unreasonable. We request you to retain variation in quantity of an item/group of item up to 25% of the original tender quantity as per SCC clause 28 (GCC subclause 39) . Kindly confirm.	Follow bid conditions
187	Part 3, Section 8	SCC	3			Consumable spare during DLP	"The Contractor shall carry sufficient inventories to ensure an ex stock supply of consumable spares for the Plant." Daily operational consumable like Salt, Chemical, grease are to be provided by JMRC.	Follow bid conditions
188	Part 3, Section 8	SCC	21			Completion of Facilities	"Upon the completion of construction, the Contractor shall fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition as recorded by the Contractor in consonance with its obligation in Clause 21.1." Above is in civil contractor's scope. Kindly confirm.	Agreed
189	Part 3, Section 8	SCC	36			Deployment of Personnel by the employer	Contractor shall provide Sitting space, Table chair, and computer to the employer sponsored personnel and number of such personnel shall be restricted to two numbers.	Follow bid conditions
190	Part 3, Section 8	SCC	42			Entry with full preparation as per SHE	General lighting, ventilation, tea and coffee, toilet facility etc shall be provided by civil contractor. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6
191	Part 3, Section 8	SCC	51			Professional Indemnity Insurance	This insurance has to be taken by the designing agency for design and build contracts and it is not applicable for this scope of work. Please confirm.	The PII is required to be submitted for the DG portion of the bid.
192	Part 3, Section 8	SCC	General			Interface Requirement	Equipment foundations, RCC, PCC and structural foundations for ECS, TVS, E&M & DG works etc. are to be provided by civil contractor. Please confirm.	Masonry foundations (RCC/PCC) will be provided by civil
193	Part 3, Section 8	SCC	General			Interface Requirement	1) Cranes shall be provided by civil contractor for material movement and lowering purpose free of cost. 2) Clear delivery route with backfilling, temporary platforms for lowering shall be provided by civil contractor. 3) Construction power shall also be provided by civil contractor at mutually agreeable reasonable cost.	Please refer Interface Management Document in Volume-II of Section-6
194	Part 3, Section 8	SCC	General			Interface Requirement	Hand over of all the area and rooms shall be complete in all respect as per contract conditions including screeding, painting etc. Kindly confirm	The work may be required to be done in shared access

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
195	Section 8	SCC	Annexure I			VAT Notifications	As per the notification of VAT on page 109 (after SCC) - it is given as "Jaipur Metro Project awarded by Delhi Metro Rail Corporation". We presume Delhi Metro Rail Corporation will issue VAT exemption certificate.	Refer to Notifications dated F12 (100)-2010-73, 74 and 75 dated 08.12.2011.
196	Section 8	SCC	Subclause 30.1			Limitation of Liability	We request to limit it to 10% of contract value.	Follow bid conditions
197	Section 8	SCC	Subclause 45.1			Disputes and Arbitration	Arbitration procedures shall be as provided by "The Arbitration and Conciliation Act -1996" as mentioned in tender documents. However selection of arbitrators will be decided by both parties and will not be from the panel.	Follow bid conditions
198	Section 9	Contract Forms	Appendix 2			Price adjustment	We request to include ducting and piping also in the list of item for which price variation formula is given because these items are quite prone to fluctuations and impact financially.	Follow bid conditions
199	Section 9	Contract Forms	Appendix 4			Key dates	We agree for overall completion period of 110 weeks specified in the tender however we request you to make changes in the key dates KD 3 to KD 7 as under: KD3 - 56 to 66 weeks KD 4 - 72 to 80 weeks KD 5 - 82 to 90 weeks KD 6 - 80 to 96 weeks KD 7 - 90 to 100 weeks	Please follow addendum.
200	General	General				Office and Stores space	JMRC shall provide 5000 sq.m. space for office and material storage. Please confirm.	Adequate space shall be provided.
201	Section 6	Volume 1	15.6			Site facilities for Employer	The mentioned facilities shall be part of civil contractor's scope. Please confirm. We shall be providing seating space for 2 persons in our project office and 2 JEs at station site office	Please follow addendum.
Environment Control System (ECS), Tunnel Ventilation System (TVS), SCADA and Building Management System (BMS)								
202	Part 2, Section 6, Volume 2	General Scope of work for ECS, TVS, BMS and TVS SCADA Work	2.2			Test on Completion	Please mention duration of test run.	Follow bid conditions. Duration as per performance requirements
203	Part 2, Section 6, Volume 2	General Scope of work for ECS, TVS, BMS and TVS SCADA Work	3.3			Representative of manufacturer	"The Contractor shall ensure that a qualified Representative of the manufacturer is available on-Site for the duration of the On-Site Works during normal working hours and installation period and on-call to arrive on Site within 30 minutes at all other times." OEMs/ their authorised representatives will certify the correctness of installation of their respective equipment station wise. They shall not be available continuously during installation. Same practice is being followed for the ongoing phase 3 projects of DMRC and we request you to accept the same.	Agreed.

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
204	Part 2, Section 6, Volume 2	Scope of Work - ECS	1.3.12			Fire Sealant	"The contractor will be responsible for sealing with fire rated material of all openings left due to Works Under this contract." Fire sealing has to be done by civil contractor. Kindly confirm.	Please follow bid conditions
205	Part 2, Section 6, Volume 2	Scope of Work - ECS	1.3.13			Hook	"Provision of hook in the roof to facilitate lifting of the equipments for installation. These hooks are to be left for future use by the maintenance branch." Hooks to be provided by civil contractor	Civil contractor will provide the hooks if timely information is given to them by the bidder. Otherwise bidder shall provide hooks
206	Part 2, Section 6, Volume 2	Scope of Work - ECS	1.4			Range of higher capacity	"The contract price shall add any necessary equipment, equipment of higher capacities and higher ratings for the systems and sub-systems necessary for the complete, safe, reliable and operable Environment Control System providing all clarifications and justifications for the same." Please provide range of higher capacity and rating.	The contract price shall be valid for BOQ capacity of within 10% range.
207	Part 2, Section 6, Volume 2	Scope of Work - ECS	4.3.X			Security of Premises	"Access will be provided to the staff of the Contractor for carrying out their works and bringing materials and Equipment's at the site. However the security of material and Equipment's brought at the site, by the Contractor is Contractor's responsibility." Security of premises have to be in civil contractors scope. Kindly confirm.	Please refer Interface Management Document in Volume-II of Section-6
208	Part 2, Section 6, Volume 2	Scope of Work - TVS	1.1.1			Range of higher capacity	"The contract price shall add any necessary equipment, equipment of higher capacities and higher ratings for the systems and sub-systems necessary for the complete, safe, reliable and operable Environment Control System providing all clarifications and justifications for the same. No Separate Payment will be made for the same." Please provide range of higher capacity and rating.	The contract price shall be valid for BOQ capacity of within 10% range.
209	Part 2, Section 6, Volume 2	Scope of Work - TVS	1.2.1.5			Critical Air Velocity	"The Contractor shall verify the critical air velocity required to prevent back layering using his own calculations, as per calculation procedure." Have to be calculated and verified by DDC	Agreed

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
210	Part 2, Section 6, Volume 2	ECS-Specification	A00.23.1.1			Third party commissioning	<p>"An approved Commissioning Specialist shall undertake the entire commissioning and performance testing of ECS installation. The Contractor shall at all times be responsible for the supervision of the Commissioning Specialist's work and shall ensure satisfactory completion of commissioning and recording results."</p> <p>A specialist team having expertise in carrying out commissioning and performance testing of ECS equipment and which is part of contractor's setup because of their long experience in this field but who are not involved in the erection activities shall be acceptable as an approved agency.</p>	Agreed, subject to approval from Engineer in charge
211	Part 2, Section 6, Volume 2	ECS-Specification	A03.3.5.2			Chiller - Evaporator	<p>"End water boxes shall be designed to provide adequate space for water movement such that there is no erosion of the tube ends. In general, this requires the water box end to be domed rather than flat. End box covers shall be removable, and allow easy access for cleaning the tubes. "</p> <p>Chilled water circuit does not warrant evaporator tube cleaning. Removal type cover required</p>	Follow bid conditions
212	Part 2, Section 6, Volume 2	ECS-Specification	A03.3.8			Chiller -Control Cable	<p>"All control cables of the Chiller should be provided in the metal conduits."</p> <p>Control cables will be provided in trunk.</p>	Acceptable as per manufacturer standard
213	Part 2, Section 6, Volume 2	ECS-Specification	A05.3			Pump Efficiency	<p>"The impeller shall single entry shrouded design. The pump efficiency shall be 80% minimum for Primary secondary and condenser water pumps."</p> <p>Efficiency will vary from 70 % to 80 %.</p>	Please follow addendum.
214	Part 2, Section 6, Volume 2	ECS-Specification	A06.3.6.6			Rating of Fire dampers	<p>" All materials used for the construction of the MSFD/MFD shall be so selected and all components and accessories of the dampers shall be so designed that the dampers will be fully operational in accordance with the performance requirements specified when fully exposed in an air stream temperature of 250°C for not less than two hour. "</p> <p>We request you to accept fire damper with rating of withstanding 250°C for 1 hour.</p>	Follow bid conditions
215	Part 2, Section 6, Volume 2	ECS-Specification	A06.3.8.18			Ducting	<p>"Provide at least 75 mm clearance from ductwork to walls, ceiling and obstructions where a high standard of cleanliness shall be maintained. "</p> <p>As per site conditions gap will be maintained.</p>	Will be reviewed during drawings approval.
216	Part 2, Section 6, Volume 2	ECS-Specification	A06.3.4.3			Pressure Testing	<p>The duct construction shall be confirming to C class as per fire rated duct manufacturer's recommendation however the leakage testing shall be carried out as per operating pressure classification B class as per DW 143 or SMACNA duct leakage standard. Please confirm.</p>	Please follow addendum.

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
217	Part 2, Section 6, Volume 3	ECS-Specification	A06.3.4.4			Fire Stopping Material	Can we use fire stopping mortar of other brands beside flamebar.	Follow bid conditions
218	Part 2, Section 6, Volume 4	ECS-Specification	A06.3.4.5			Mineralwool Insulation	Can we design Fire Insulation Criteria for 2 hours rating with 1029°C for Fire Outside and 400°C (Max Smoke Temp) for Fire Inside Criteria INSTEAD of Fire Inside and Fire Outside at 1029°C	Follow bid conditions
219	Part 2, Section 6, Volume 5	ECS-Specification	General			Support and Angle strength	Supports And Angles Strength 15N/mm2 for 2 hours is Incorrect and should be 15N/mm2 for 1 hour and 10N/mm2 for 2 hours (Refer ASFP Guideline Page 29). The Support arrangement of Smacna / DW 144 is not adequate	Please follow addendum.
220	Part 2, Section 6, Volume 6	ECS-Specification	General			Fire Insulation	Flamebar System has Fire Performance Certificate with 105kg/cum instead of 120 kg/cum, Can JMRC accept this Density	Follow bid conditions
221	Part 2, Section 6, Volume 6	ECS-Specification	A10			Pipeline fittings	All the flanges for valves, equipment etc. for ECS and E&M shall be as per BS 10 table E. please confirm.	Please follow addendum.
222	Part 2, Section 4, Volume 2	BOQ	Part B - ECS Works, 17.2 f			Chemical	Chemical for second year of DLP shall be provided by JMRC. Kindly confirm.	Chemical during DLP shall be provided by contractor. Please follow addendum
223	Part-II Section 6 Vol III	Tender Drawing				Nozzle Drawing	Please provide nozzle drawing	Please follow addendum.
224	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.4.7			TVF Installation	"Contractor shall provide a 6-mm thick silicone gasket between all adjacent companion flanges; width of gasket shall be same as flange width. " As it has to be fire painted we request to kindly accept the same thickness and width of gasket as provided by Fire paint manufacturer , since it has to be certified by Fire paint after installation.	Please follow addendum.
225	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.2.1			Fan Motor	Fan motor component shall be cable of with standing sudden temperature changes as a result of fire between the extreme of zero and plus 250 degree C or vice versa in a time frame of 20 Sec	Follow bid conditions
226	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.3.4			Fan Motor	"Fans shall capable of of reversing to full speed from either direction of airflow and rotation during an emergency with 20 sec after 10 second delay between power interruption and the energising of motor for reversed rotation , without failure of any part of the unit." 10 second delay is not sufficient . We request the that it should as per motor manufacturer standard.	Please follow addendum.
227	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.19.2			FAN Installation	"The fan installation shall be done in the presence of the Fan Manufacturer's Field service representative" Structural Drawing and installation procedure will be as per manufacture recommendation . After installation fan manufacturer will certify the installation .	Agreed, subject to approval from Engineer in charge

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
228	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.20.2			Field Test	<p>"Field test shall be performed under the technical guidance and supervision of the fan manufacturer's representative . The fan manufacturer's field service representative shall provide the field test instrumentation and perform test.Thefan manufacture's field service representative shall measure and record the vibration amplitude ,power consumption ,no load , starting and full load voltages , starting and full load currents and acceleration time"</p> <p>These test will perform at contractor end and the field test report will be shared with manufacturer. kindly Confirm</p>	Follow bid conditions
229	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.3.7			Pressure Variation	<p>"Pressure variations of plus or minus 300 Pa induced by external causes shall not result in movement of the fan operating point along the fan operating curve into the region of unstable operation."</p> <p>Variation of plus or minus 300 Pa is not applicable for the TEF Fans.</p>	Please follow addendum. Variation of plus minus 200 Pa is acceptable for TEF.
230	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.7.4			Bearing Lubrication	<p>"Grease lines shall be brought from each bearing to accessible fittings, external to the fan housing, at the ground floor level of the fan room. The lines shall be fabricated of stainless steel, copper or other corrosion resistant alloy, seamless metallic tubing. The tubing shall not be crushed or scored during installation and the lines shall have neither kinks nor sharp bends. Lines penetrating the housing shall be rigidly secured to the housings to prevent vibration of the lines and be provided with grommets. Grease supply lines shall terminate in straight lubrication fittings. Grease fittings shall only allow the proper amount of grease to each bearing. The bearing lubricant shall be capable of providing the lubrication properties specified by the bearing manufacturer under conditions of operation for twoone hour with the lubricant at a temperature of 250 degrees C."</p> <p>For TEF Fans motors with bearing sealed for life are provided by all manufacturer and gauge port will not be applicable. Please confirm.</p>	Follow bid conditions
231	Part 2, Section 6, Volume 2	TVS-Specification	Data Sheet			Motor type	<p>"TEFC induction motor , EEF -1 , Continuous duty"</p> <p>Kindly accept IE2 efficient Motor also.</p>	Agreed
232	Part 2, Section 6, Volume 2	TVS-Specification	V03.3.1.7			TV Attenuator	<p>"The infill shall be of inorganic mineral of glass fibre of at least 48kg/cum."</p> <p>Kindly accept 40 kg/cum also</p>	Follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
233	Part 2, Section 6, Volume 2	TVS-Specification	V01.3.4.1			Impeller hub and Blades	Equivalent material standards to be agreed prior to order. Pitch angle of blades is defined by the angle of blade tip cross section and line parallel to direction of rotation, the hub does NOT have index marks, instead a pitch angle setting template will be supplied for each fan. Equivalent Standard : DIN EN 1706:2013-12 Aluminium and aluminium alloys - Castings - Chemical composition and mechanical properties	Follow bid conditions
234	Part 2, Section 6, Volume 3	TVS-Specification	V01.3.11.2.			Motor Testing	Routine test based on IEC-Regulations, measurement of the "Polar moment of inertia of the fan-motor unit, in meter-kilogram squared" is not possible routine test: will be done without load type test: will be done with load	To be evaluated during vendor and technical approval
235	Part 2, Section 6, Volume 4	TVS-Specification	V01.3.16.4.			Stress-Strain data	"Triaxial Strain gauges shall be applied to two blades per impeller and to the hub of the unloaded impeller of each fan. To accurately measure strains and stresses developed in each rotor, one strain gauge at the midpoint and one strain gauge at the tip of blades on each side shall be applied on minimum of two blades. In addition, one strain gauge shall be applied on impeller hub for each strain gauged blade. The strains developed during performance testing shall be continuously measured and monitored." Stress calculations shall be offered as evidence that impeller stresses do not exceed material yield strength	To be evaluated during vendor and technical approval
236	Part 2, Section 6, Volume 2	TVS-Specification	V03.3.1.7			TVD Spec	"Damper blade shaft shall be fabricated of stainless steel type 304 . Blade shaft shall be full length construction and shall be not less than 20mm in diameter or square" Kindly accept stub shaft of 20mm diameter	Follow bid conditions
237	Part 2, Section 6, Volume 2	TVS-Specification	V02.3.2.13			TVD Spec	"Mounting members for wall mounted dampers . All Mounting members needed to install each wall mounted damper in its respective opening shall be finished and installed by contractor . All mounting member shall be galvanised steel angles all side size 80mm*80mm*8mm." Since these has to be fixed in civil opening therefore angles is not required . These damper will fixed directly on wall with help of GI fastners .	Follow bid conditions
238	Part 2, Section 6, Volume 3	TVS-Specification	V02.3.6.1			TVD Spec	"Screen mounted on damper module frame shall be one inch mesh no 10 USS gauge galvanised steel wire." Kindly accept 3.5 mm Indian make GI wire mesh also	Please follow addendum.
239	Part 2, Section 6, Volume 3	TVS-Specification	V04			TVS Duct work	Please confirm if TVS ductwork is to be provided with : 1) fire paint 2) rockwool insulation without foil 100 mm-120 kg/m3 3) Aluminium cladding with 0.56b mm thick sheet Also confirm if the same is to be applied over TEF and Cones.	Yes to be provided on TVF and TEF both

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
240	Part-II Section 6 Vol I	Scope of Works-BMS	1.1			Scope and Purpose	The Contractor shall also interface for control, monitoring, and supervision as required at the Operational Control Centre (OCC) for the existing chand pole U/G station of Jaipur Metro. The interface with the existing station at OCC shall be on open protocol like Modbus TCP/ OPC. Kindly confirm the same	The Chandpole station is having Open protocol.
241	Part-II Section 6 Vol I	Scope of Work TVS SCADA	1.1			Scope and Purpose	The OCC work from Chandpole to Badi Chauper station is under the scope of this contract. Please confirm that existing station(chandpole station) has all the provision to interface like CPU's, Modules, Sub Modules, Power Supplies, Local Control Panels, Servers, Work Stations, modems, Gateways, RTUs, Printers, Local Area Network (LAN), Ethernet Hubs and Switches, Ventilation Control Panel (VCP), Cable containment and wiring systems, and other components as required whether or not specified necessary to deliver the requirements of this Specification to fully integrate the control, monitoring, and supervision of Tunnel Ventilation System from OCC	Confirmed
242	Part-II Section 6 Vol I	Scope of Work TVS SCADA	1.1			Scope and Purpose	Communication channel between station to OCC and station will be provided by others. Please confirm that all the hardware and software to make the network functional is being considered in others scope and they will issue IP based on ECS,TVS & E&M BMS requirement.	Only Communication channel between OCC and station will be provided by Others. Any hardware like Routers, switches, gateways and software is in scope of this bid.
243	Part-II Section 6 Vol I	Scope of Work TVS SCADA	1.2			Work Included in the Services	Control and Monitoring (Point-1) The Contractor shall provide necessary hardware, software, data, etc., so that the control and monitoring functions for the TVS can be performed from OCC and stations and control and monitoring functions for ECS and E&M system from OCC. Please confirm the following. 1) TVS equipment is to be monitored and control from OCC & Station. 2) TVS Mode operation from OCC and Station. 3) ECS Mode operation from OCC and Station. 4) ECS and E&M equipment control and monitoring from OCC only or to be controlled and monitored at station level only.	1) Confirmed 2) Confirmed 3) At station is confirmed and decision of OCC will be given later 4) At station is confirmed and decision of OCC will be given later
244	Part-II Section 6 Vol I	Scope of Work TVS SCADA	1.2			Work Included in the Services	Control and Monitoring (Point-6) To initiate operation of the TVS to provide adequate ventilation in the tunnels during traffic block period (non-revenue period). Please confirm do we have to consider tunnel cooling in night.	Follow bid conditions
245	Part-II Section 6 Vol I	Scope of Work TVS SCADA	7			TVS System Back-up	Manual operation of the individual TVFs and TEFs from the LCP. Please confirm mode operation from LCP or control of individual equipments.	Both are required

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
246	Part-II Section 6 Vol I	Scope of Work TVS SCADA	1.1			Scope and Purpose	The Works to be executed under the Contract include the detailed design, development, manufacture, verification, delivery to site, installation, testing, commissioning (including integrated testing and commissioning) and technical support for a complete Integrated Supervisory Control System (ISCS) to fully integrate the control, monitoring, and supervision of Tunnel Ventilation System from OCC as well from station level. The Equipment, CPU's, Modules, Sub Modules, Power Supplies, Local Control Panels, Servers, Work Stations, modems, Gateways, RTUs, Printers, Local Area Network (LAN), Ethernet Hubs and Switches, Ventilation Control Panel (VCP), Cable containment and wiring systems, and other components as required whether or not specified necessary to deliver the requirements of this Specification to fully integrate the control, monitoring, and supervision of Tunnel Ventilation System from OCC in future and at present from Station Control Room as well as for control, monitoring, and supervision as required at the Operational Control Centre (OCC) in future and at present from Station Control Room for the ECS and other E&M systems. The TVS contractor shall interface with the requirements of control, monitoring, and supervision as required at the Operational Control Centre (OCC) for the ECS and E&M systems.	Confirmed
247	Part-II Section 6 Vol I	Scope of Work TVS SCADA	5			Control and Monitoring at Operation Control Centre (OCC)	To provide individual or group start/stop and indicate status of TVS equipment. Kindly confirm whether individual control is needed at OCC as we have to size the SCADA and RTU accordingly.	Individual control is not required from OCC
248	Part-II Section 6 Vol I	Scope of Work TVS SCADA	5			Control and Monitoring at Operation Control Centre (OCC)	To provide Daily Report, Weekly Report, Monthly Report of total energy consumption and Operating Hours Report of all TVS equipment. Kindly confirm the scope of energy consumption.	To provide Daily Report, Weekly Report, Monthly Report of total energy consumption and Operating Hours Report of ECS, E&M and TVS equipment.
249	Part-II Section 6 Vol I	Scope of Work TVS SCADA	8			Local Sequential Controller (LSC)	To monitor the activation of the push buttons or switches on the VCP, SCP and LCP and execute priority control. SCP will be the part of LCP, therefore SCP monitoring is not required. Kindly confirm.	confirmed
250	Part-II Section 6 Vol I	BMS Specification	BMS/ 1.00			TVS PLC Design - Control and Monitoring	The PLC System shall be a Fail Safe Control, Programmable Logic Controller (PLC) based with a Quadruple Modular Redundancy (QMR) system architecture. The requirements are for a SIL2 certified PLC for TVS control system, however the internal architecture of the PLC shall be as per manufacturer's standards to meet the SIL2 standards whether its QMR or TMR or DMR.	Please follow addendum
251	Part-II Section 6 Vol I	BMS Specification	BMS/ 5.00			TVS PLC Design - Control and Monitoring	Since no separate specification are provided for ECS PLC, it is understood that same specification are applicable for ECS PLC.	Confirmed
252	Part-II Section 6 Vol I	BMS Specification	BMS/ 2.01.23			Quality Control of Equipment, Components and Material	EMC Conformance and certification. Kindly confirm as it is applicable to PLC not to other devices.	Follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
253	Part-II Section 6 Vol I	BMS Specification	BMS/ 2.01.24			Computer simulation	<p>Where applicable, the designs shall be substantiated through computerised simulation of calculations, Data verification and validation programs using standard simulation programs, internationally accredited or indigenously developed, supported with quality verification and acceptability and shall provide input data, results and program description.</p> <p>he contractor shall furnish free of charge software packages whose use is envisaged. All the software shall have an in-built data validation program so as to identify/rectify parameters/variables selection or typographical error with future ability to upgrade. All the testing will be performed on actual systems installed at site and no seperate simulation will be provided. Kindly accept.</p>	Accepted
254	Part-II Section 6 Vol I	TVS SCADA Specification	4.8.1.10			RTU Function	<p>The individual internal RTU memory shall be sized to hold, in addition to all the necessary programs, the logged input data and controls output for a period of normal operation covering a minimum of 24 hours in the event of communication failure.</p> <p>Operation of RTUs or any other aspect of the N-P SCADA system shall not be adversely affected as memory utilisation increases to the maximum, the design value of which shall be stated in the Design Specification (DS), prepared by the Contractor and approved by the Employer's Representative.</p> <p>Kindly clarify your requirement, as RTU is non SIL product which comes with memory backup and if JMRC wants a SIL certified PLC then we can not provide memory backup for the same. And also clarify whether you require redundancy in RTU.</p>	Redundant RTUs are required
255	Part-II Section 6 Vol I	TVS SCADA Specification	4.20.2			Historical Data Management	<p>Historical data shall be able to be manipulated as if it were current data, namely be usable in calculations and on tabular, trend, graphic, spread sheet and bar chart displays. Data stored on multiple bulk storage media cartridges shall be able to be analysed, with the system providing prompts for cartridge changes.</p> <p>Kindly clarify the requirement as historical data stored in data base can not be manipulated.</p>	Please follow addendum
256	Part-II Section 6 Vol I	TVS SCADA Specification	5.1.3			Ergonomic Study	<p>In particular the design and positioning of the mimic displays within the OCC shall be such that the information of interest to each operator is visible from their normal position. Larger characters shall be used for legends, which require to be read from further than the first position from the mimic display.</p> <p>As per BOQ we do not have to provide Mimic display at OCC. Kindly confirm the requirement.</p>	confirmed
257	Part-II Section 6 Vol I	TVS SCADA Specification	7.2			Soak Test	Kindly clarify the requirement of Soak Test.	Plesae follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
258	Part-II Section 6 Vol I	ECS Specification. Section A15	4.16.12			Soft Starter	The soft starter shall be able to operate at design ambient temperatures from -10 to + 40 °C without derating, and between 40 and 60 ° C with suitable derating factor shall be considered. What will be design temperature on which rating of soft starter will be selected.	Design temperature are as per IEC 60947.
259	Part-II Section 6 Vol I	ECS Specification. Section A15	4.8.3			Internal Control Wiring.	LSZH and Fire Survival Cables shall be as specified in cable specification Section (BS 6724-multicore cable and BS 7211 for single core cable). All internal and control wiring shall be Low Smoke Zero Halogen (LSZH) copper conductor wires rated at 450/750 V complying with BS 7211 for this Specification. All control wiring within the Electrical Panels shall be with single core minimum 2.5 mm2 for CT and balance as per approved manufacturer design. Insulation shall have a glossy finish, be resistant to oil and be incapable of supporting combustion. Fire Survival wires shall be provided as per BOQ. Whether all internal control wiring shall be of LSZH or FS wires also will be used. Vendor recommend to use control wire of 1.5A mm2 for Voltage circuit and 0.75 MM SQ for BMS/PLC circuit. Kindly confirm.	All internal control wiring shall be of LSZH and for PLC internal wiring please refer clause BMS/5.01.22
260	Part-II Section 6 Vol I	ECS Specification. Section A25	2			Workstation and Energy Management Software	The specifications mentioned herein are applicable for the energy management system which is to be provided in the station BMS and OCC for central monitoring. No Separate workstation for CPM is required at station level, BMS vendor has to show all the CPM data at SCR and at OCC including energy management software. Kindly Confirm.	confirmed. Bidders need to consider all the software and hardware requirements for the same
261	Part-I Section 4 Vol-II	Part I - Part D BOQ for ECS BMS Works	8.01			BMS PLC Equipment	A by-pass switch/s shall be provided to completely by-pass the PLC in the event of a total failure of the PLC and associates equipment to enable the normal operation of the equipment controlled by the PLC. Kindly confirm the requirement as it is not a feature of PLC.	The by-pass selector switch is to be provided at the MCC panels
262	Part-I Section 4 Vol-II	Part I - Part D BOQ for ECS BMS Works	8.01			BMS PLC Equipment	CPU Module with on board Ethernet RS 485 port, . Integrated Remote I/O Bus Manager, 96 word Base memory, 12,000 I/O capacity, 64 process channels :4 nos CPU Module with Remote I/O Bus manager : 2 nos Since the ECS BMS PLC equipment are quantified as a Lot item as per the segregation & quantification provided in the IO summary, the quantification in the BOM sub-items(4 nos of item 1, 2 nos of item 2, 2 nos of item 3) should not be provided. It should be the responsibility of ECS BMS vendor to provide sufficient number of modules to meet the technical specification and scope requirements. Kindly confirm the same.	Please follow addendum
263	Part-I Section 4 Vol-II	Part I - Part D BOQ for ECS BMS Works	8.01			BMS PLC Equipment	Redundancy Module. Kindly confirm if redundancy is required for ECS BMS PLCs as well. If yes, kindly confirm the level of redundancy(processor/power supply/communication)	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
264	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.0 (i)			General Note B.O.Q	Each incomer and outgoing feeder shall be provided with LED type status indication lamps suitable for 240 V, AC, as approved. In BOQ of Power feeder MCCB, same is not shown, confirm whether to be considered.	Indication lamps shall be provided. Please quote accordingly
265	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.0 (u)			General Note B.O.Q	All Motor feeders, having separate Electronic over current relay (EOCR) , shall be provided with Reset push button & group by pass arrangement. Wherever required it is written in BOQ but where O/L protection is part of MPCB/MCCB then is it required separately.	Follow BOQ
266	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.1.01.A			Main Plant Panel DB-170/270	2 Nos. 2500A, 415 V, 50KA, 50 Hz TPN EDO type ACBs interlocked with bus coupler and complete with microprocessor based releases having SCADA compatibility and energy metering. In B.O.Q, 2 No. of incomer are shown while as per drawings 3 Nos of incomer. Kindly confirm the quantity of incomer.	Please follow addendum
267	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.2.05			Sub-Distribution Boards, DB-330 as per Specifications , as per tender drawings Complete and as per the following details.	14 Nos, DOL 0.5 kW single phase feeder for Motor Operated Valves. Only SP MCB to be provided or complete single phase DOL starter to be provided.Kindly confirm.	DOL starter to be provided
268	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.3.01 (1)			DB-310 Air Cooled Scroll Chiller	Automatic transfer switch with 2 Nos 400A, 4 pole 50kA, MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit, Earth fault. Whether One ATS and two Nos separate MCCB to be provided or only Two MCCB with Auto source transfer system to be provided.Kindly confirm.	Follow BOQ
269	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.3.03			DB-310 Air Cooled Scroll Chiller	3 Nos. 250 A, 415V, 50KA, 3P MCCB having Electronic Trip Unit with adjustable protection against Overload, adjustable protection against Short Circuit.(For Air Cooled Chiller-2 Nos. Working+ 1 No. Spare). MCCB shall be manual operated or Motor operated.Kindly Confirm.	MCCB shall be motor operated
270	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.4.03			Main Distribution Board (MDB), DB-130 & DB-230 .	5 Sets of Star - Delta Starter unit for AHU Motors up to 45 kW , 1 no spare and each shall be equipped with the followings but not limited to. We understand 5 Sets of Star - Delta Starter (4 Working + 1 Spare).Kindly confirm.	Confirmed
271	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.4.09			Main Distribution Board (MDB), DB-130 & DB-230 .	28 Sets of DOL Starter unit of 0.50 kW and each shall be equipped with the followings but not limited to: To be interlocked in panel with different fan motors etc. Quantity of MFD and MOD shall be as per tender drawing.Kindly confirm.	Follow the BOQ

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
272	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.5.03			Sub-Distribution Board DB-131 & DB-231	16 Sets of DOL Starter Unit (for 13 nos. Single Phase Damper & PF motors & 3 nos. spare) of 0.5 KW and each shall be equipped with the followings but not limited to. Quantity of MFD and MOD shall be as per tender drawing. Kindly confirm.	Follow the BOQ
273	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	1.11.03			Main Distribution Board DB-140/ DB-240	2 Sets of Soft Starter for bidirectional (Forward and reverse rotation) TVF Motors up to 220KW and each shall be equipped with the followings but not limited to. Confirm whether soft starter provided will be used in line design or Inside delta design.	Inline design to be adopted
274	Part-I Section 4 Vol-II	Part I - Part A BOQ for ECS Electrical Works	3.06			Panel Internal Clean Agent Flooding System	Novac will be used as clean agent. Kindly confirm.	Clean agent to be used
275	Part-II Section 6 Vol III	Tender Drawing	JP-CRD-ECS-TVS-SC-1901			LHDS System	As per B.O.Q LHDS is not part of contract. Kindly confirm.	LHDS system is not in the scope of this bid
276	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.0 (i)			General Note B.O.Q	Each incomer and outgoing feeder shall be provided with LED type status indication lamps suitable for 240 V, AC, as approved. In BOQ of Power feeder MCCB, same is not shown, confirm whether to be considered. Also confirm what status required (ON/Off/Trip).	Indication lamps shall be provided as required. Please quote accordingly
277	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.0 (m)			General Note B.O.Q	Space provision as specified in M & W Specifications for future expansion. How much spare space required.	Follow bid conditions
278	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.0 (y)			General Note B.O.Q	All Motor feeders, having separate Thermal Over - load relay, shall be provided with Reset push button. In case where Inbuilt O/L relay in MPCB/MCCB, is it required separately also.	Please follow BOQ
279	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.0 (aa)			General Note B.O.Q	Surge Protection Device (SPD) shall be provided in all panels. Not mentioned in BOQ, whether to be considered in all panels	SPD is to be provided in all the panels
Electrical and Mechanical System (E&M)								

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
280	Part-II Section 6 Vol II	E & M Technical Specification. Section E01	4.8.3			Internal and Control Wiring.	<p>LSZH and Fire Survival Cables shall be as specified in cable specification. Section (BS 6724-multicore cable and BS 7211 for single core cable). All internal and control wiring shall be Low Smoke Zero Halogen (LSZH) copper conductor wires rated at 450/750 V complying with BS 7211 for this Specification. All control wiring within the Electrical Panels shall be with single core minimum 2.5 mm2 for CT and balance as per approved manufacturer design. Insulation shall have a glossy finish, be resistant to oil and be incapable of supporting combustion. Fire Survival wires shall be provided as per BOQ.</p> <p>Whether all internal control wiring shall be of LSZH or FS wires also will be used.</p> <p>We recommend to use control wire of 1.5A mm2 for Voltage circuit and 0.75 MM SQ for BMS/PLC circuit.</p>	Internal wiring shall be LSZH, for size follow bid conditions
281	Part-II Section 6 Vol II	E & M Technical Specification. Section E01	4.8.3			Internal and Control Wiring.	<p>Terminal Block.</p> <p>All terminal blocks asked with Melamine Material. Since Melamine is breakable material so can we use non-breakable material of Polyamide.</p>	Follow bid conditions
282	Part-II Section 6 Vol II	E & M Technical Specification. Section E01	4.22.1			Distribution Boards	<p>DBs shall be provided with suitable size of surge protection.</p> <p>Not mentioned in BOQ, whether to be considered in all panels.</p>	SPD is to be provided
283	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.01			Main Distribution Board-100 & 200	<p>In DB-100/200, 3200A outgoing ACB asked with 70KA/1Sec breaking capacity where as other outgoing ACB asked for 65KA/1sec.</p> <p>Since other outgoing ACB are with 65KA/1sec breaking capacity so request to accept 3200A ACB with 65KA/1sec also.</p>	Please follow BOQ
284	Part-I Section 4 Vol-II	Part II - Part A BOQ for Electrical Works	1.10			Auto Transfer Switch for UPS-100 & UPS-200.	<p>Breaking capacity of MCCB and busbar is not mentioned in ATS for UPS-100 & UPS-200, ATS for Lifts ATS.</p> <p>Please specify fault level of MCCB and busbar in ATS for UPS-100 & UPS-200, ATS for Lifts ATS.</p>	Please follow addendum
285	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / B - ASS-1 to ASS-2 (Tie Breaker connecting DB-100 to DB-200)			BOQ mentions TP Tie Breaker. SLD indicates 4P ACB tie breaker. Please clarify.	Please follow addendum

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
286	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / B - ASS-1 to ASS-2 (Tie Breaker connecting DB-100 to DB-200)			In Sr. No. 1.01 / B / a - (8) 1 No. CT in the neutral to connect with the trip-unit while in Sr. No. 1.01 / B / f - 3 Nos CT 2500/5A 15VA for the 3 phases. Please clarify number of CTs.	Please follow addendum
287	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / E - Outgoing Feeders			Sr. No. E-1 : 2 Nos. of 2500A ACB outgoing; SLD shows 3 Nos. Please clarify.	Please follow BOQ
288	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / E - Outgoing Feeders			Sr. No. E-2 : 1 No. of 630A TP MCCB for Capacitor panel (CAP-100b) Whereas SLD says 800A MCCB. Please clarify.	Please follow BOQ
289	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / E - Outgoing Feeders			Sr. No. E-7 : 2 Nos. of 250/200A TP MCCB for DB-120 WHEREAS SLD says 2 Nos of 400A TP MCCB. Please clarify.	Please follow BOQ
290	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.01 / E - Outgoing Feeders			Sr. No. E-1 to E-7 : 1 No. CT in the neutral to connect with trip unit whereas in BOQ item no. (f) 3No CT are listed. Please clarify.	Please follow BOQ.
291	Section IV	Volume 2	JP-TD-EL-11BC-1003 - MAIN SINGLE LINE DIAGRAM	BOQ Part-II - E&M Works - Part-A - For Electrical Works : Sr No. 1.20 - Local Motor Control Panels for sewage pumps (DB-111 & DB-211)			SLD is not provided for DB-211. Please provide.	Please follow SLD of DB-111 which is similar to the DB-211
292	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	13 PIPE WORK FOR FIRE SYSTEM			E17. 3.4.5 Mechanical Grooved Joints	Using ASME/ANSI B16.3 - 1998 - Malleable Iron Threaded Fittings below 50mm size and 65mm and above ASME/ANSI B16.9 - 2001 - Factory-Made Butt-welding Fittings	Follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
293	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E17. 3.10.2 At Site after Installation			E17. 3.10.2 Seismic Design Consideration	Brief about Seismic zone category	Seismic Zone category -III may be considered for Jaipur
294	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E17. 3.10.2 At Site after Installation			E17. 3.10.2 Seismic Design Consideration	Need to considered Seismic support for underground and above ground execution work.	Follow bid conditions
295	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. PIPING ANCILLARIES			E18. 1.4 All valves shall comply with British Standards or equivalent standards	We request you to allow us and approval of equivalent India Standards for all valve. Butter Fly Valve : IS 13095 PN16 (1991) Globe / Gate / Check Valve : Non return valves as per IS: 778 (PN 16) CastIronDoubleFlanged'Y'typeStrainers : IS 12785 (1994)	Will be reviewed during vendor and technical approval
296	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.13 Pipe Sleeves			E18. 3.13.1 Provide galvanized steel pipe sleeves where pipes pass through walls, floors or as indicated on the Drawings	Core cutting for all pipe passing , Vertical/ Horizontal is excluded from our scope	Confirmed
297	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.13 Pipe Sleeves			E18. 3.13.3 Provide galvanized steel pipe sleeves where pipes pass through walls, floors or as indicated on the Drawings	Core cutting for all pipe passing , Vertical/ Horizontal is excluded from our scope	Confirmed
298	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.16 Pump Test Assembly			E18. 3.16.1 On the main fire sprinkler and hydrant headers near pump sets a 150 mm dia bypass valve located in an accessible location shall be provided. Along with a rate of flow Rota meter calibrated in Lpm and able to read 200 % of the rated pump capacity. The delivery shall be connected to the fire tank	Flow meter Missing in furnished BOQ	Follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
299	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.17 Vortex Inhibitors			E18. 3.17.1 Vortex inhibitor shall be FOC/LPC approved type with PN 16 flanges to BS EN 1092-1: Section 3.1.It shall be suitable for operation under positive head conditions. Internal diameter shall be same as the internal diameter of pump suction pipes.	Vortex Inhibitors Missing in furnished BOQ	Follow bid conditions
300	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.19 Flow Switches			Flow switches shall be provided on sectional mains and branch lines of sprinkler system, with each fire hydrant valve and hose reel connections as indicated on the drawings or required and directed by Engineer. The logic of the flow switches shall indicate the following	Will provide only NO/NC contact on flow switch. Requesting you for Interface and cabling between third party keep in FDA contractor scope	Follow bid conditions
301	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.19 Flow Switches			All the cables from the flow switches shall be led to a junction box located on each floor.	Will provide only NO/NC contact on flow switch. Requesting you for Interface and cabling between third party keep in FDA contractor scope	Follow bid conditions
302	Section 6 Part 2	Material and Workmanship (M&W) / E&M Technical Specifications	E18. 3.19 Flow Switches			Lead from the junction box to local control panel to indicate the status of each flow switch which identifies a particular area of the floor;	Scope not clear..Local control Panel in how's Scope.	Follow bid conditions
303	Section 6 Part 2				16 FIRE SPRINKLER SYSTEM 16.4 : Providing and fixing 150 mm diameter Motorized Butterfly valve complete as required		Motorized valves are not recommended for Spray System. Advice and furnish logic on operation of Spray System	Follow bid conditions

Pre-bid Query No.	Section	Volume	Clause	Drawing No.	BOQ Item No.	Subject	Queries	JMRC REPLY
304	Section 6 Part 2		Appendix A1 Items (E&M)E&M Items			Vendor Approval 7 Sprinkler head (Fire services) : M/s Grinnell Manufacturing Ltd.M/s Tyco	Request you to give an additional approved make. Mentioned Both approved make are from Single OEM.	Contractor can propose any vendor meeting the bid requirements.
305	Section 6 Part 2		Appendix A1 Items (E&M)E&M Items			Vendor Approval □	Request you to don't restricted with single make. At least Three make requested in to be approval list.	Contractor can propose any vendor meeting the bid requirements.
306	Section 6 Part 2					E15. WATER TREATMENT PLANT	Kindly furnish us inlet water parameter and outlet water parameter to be quaranted	Follow bid conditions
307	Section 6 Part 2				11.2 Softner Unit	11 WATER TREATMENT PLANT Providing and fixing of mild steel (rubber Lined) pressure vessel confirming to IS:2825 dual media filter complete in all respects as		Question not clear
308	Section 6 Part 2				11.1 Dual Media Filter	11 WATER TREATMENT PLANT 1) Capacity = 10 Cum / hr 6) OBR (13 Hrs) 200 cum	Kindly confirm about requirement..Pump Capacity is 10Cum/Hr den for 13 hrs it will be deliver only 130Cum.	Please follow addendum
309	Section 6 Part 2				10 Pumps for water supply / Sewage Seepage / Water	10.1 Supply,Installation,Testing and Commissioning of following Hydro pneumatically operated pump	Kindly confirm MOC of Suction and Delivery as well as fitting to be used with respect of instrumental Isolation valves & Filter	Follow bid conditions

Pre-bid Query No.	VOLUME REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE BRIEF DESCRIPTION	CLARIFICATIONS SOUGHT	JMRC Replies
310	Section - 3 Financial Resources & Section - 4 Bidding Forms	Clause 2.3.3 & Form Fin-3	7 & 31 Respectively	Financial Resources	Please confirm if the firm or Joint Venture is able to qualify the criteria & requirement of financial resource through Working Capital then Credit Line substantiated by a letter from the bank & other financial resources is not required. Pls Confirm.	Please refer Form FIN-3. Total available financial resources will be evaluated
311	Section - 3 Financial Resources & Section - 4 Bidding Forms	Clause 2.3.3 & Form Fin-4	7 & 32 Respectively	Financial Requirement - Current Contract Commitments	Providing information on current contract commitments for contract under extension may not be feasible as the completion date of contract cannot be envisaged. In view of this, such contract shall not be considered for referred clause vide Form Fin-4. Please confirm.	Please follow Bid conditions
312					Further to above, if project under extension are to be considered under current contract commitments, contract extended completion date shall be assumed by contractor for the purpose of calculation based on current project condition and anticipated completion time. Please confirm.	Please follow Bid conditions
313	Section-3 Evaluation & Qualification Criteria	2.4.1 & 2.4.2	8 & 9	Bidders Experience	Please confirm whether work considered under criteria 2.4.1 shall be considered for evaluation under criteria 2.4.2 or criteria 2.4.2 can be qualified based on multiple/single projects different from 2.4.1.	YES
314	Section-3 Evaluation & Qualification Criteria	2.4.2	9	Experience in Key Activities	As per Form Exp-2 required to be filled for qualification under clause 2.4.2 of section-3, value of works have to be mentioned. However, we understand that there in specific requirement of value of works under this clause.	Please follow Bid conditions
315	Section-3 Evaluation & Qualification Criteria	2.4.2	9	Experience in Key Activities - TVS	Regarding TVS works, please confirm is there any qualifying criteria in terms of value of TVS works or Length of Tunnel in km for TVS works as per referred clause.	Please follow Bid conditions
316				General Obligations	The employer shall provide overall security of the Site and personnel, record of the personnel moving at the site, security of the equipments kept at site for execution should also be provided by the employer. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6
317				General Obligations	The employer shall provide the site / area of works and necessary approvals and the same shall be paid to the contractor in accordance with the contract.	Please follow Bid conditions
318				General Obligations	Electricity, water, etc for testing and commissioning shall be provided by the Employer. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6

319	General			General Obligations	Electricity & water supply shall be provided by contractor for his manpower. Electricity, water, etc for testing and commissioning shall be provided by the Employer. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6
320		General Obligations	The employer shall provide overall security of the Site and personnel, record of the personnel moving at the site, security of the equipments kept at site for execution should also be provided by the employer. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6		
321		General Obligations	Diversion of any services and facilities required for the purpose of work shall not be the scope of work of the contractor. Please confirm.	Please follow Bid conditions		
322		General Obligations	Access Key Date shall be provided at the time of tendering stage by the Employer. Please confirm.	The access dates will be provided after award of the works		
323		General Obligations	We request you to provide covered and secured space for site office approximately 1000 sq mtr, material stores approx 10000 sq mtr and labour camp approximately 2000 sq mtr at all the stations. The electrical, water and sanitary connection points for office, stores, and site shall also be provided by the client free of cost. Please confirm	Adequate space for contractor's office and store shall be provided by JMRC		
324	Section-7(GCC)	9.3 & 10.3	10 & 11	Permits, Approvals & License	Contradiction between clause 9.3 & 10.3 with regards to payments of permits for acquiring permits, approvals & license. Please clarify. However we propose that the employer shall be responsible to making payments towards permits, whereas contractor shall provide assistance.	Please follow Bid conditions
325	Section-7(GCC)	10	9	Employers Responsibility	The employer shall provide within the site, staging, storage and unloading areas for the use of designated contractors / other system-wide contractors. Same shall be provided to contractor by Employer. Please amend / confirm.	Adequate space for contractor's office and store shall be provided by JMRC
326	General			Access Routes	Access route to site shall be provided to contractor by the Employer. In case of special requirement the same should also be provided. Please confirm.	Acceptable. Any arrangement for material shifting are in the scope of the bidder
327	Section-7(GCC)	22.7	28	Site Clearance	The contractor shall be responsible clearance of site for their own works, however general house keeping shall be responsibility of system wide contractor. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6
328	Section-7(GCC)	22.8	28	Safety of Works	The contractor shall provide safety for their own works i.e. light, guard, watchmen, etc but overall safety of works shall be provided by the Employer free of cost. Please confirm.	Please follow Bid conditions

329	Section-7(GCC)	22.8	28	Lighting	The contractor shall provide task lighting for their own works but general lighting shall be provided by the system wide contractor or the Employer. Please confirm.	Please refer Interface Management Document in Volume-II of Section-6
330	General			Extension of Time	In case of extension of time is granted by the employer for reasons not attributable to contractor and letter issued by the employer to the contractor to extend the actual completion date, all expenses with respect to extension of BG charges for bank guarantees, insurance charges for insurance policies etc shall be born by the employer. Also escalation and overrun cost to be paid. Please confirm.	Please follow Bid conditions
331	General			Liquidated Damages for Delay	LD to be imposed in case last Key Date delayed subject to non-provision of EOT and not for intermediate Key Date. Please confirm.	Please follow Bid conditions
332	General			Taking over certificate	Performance Bank Guarantee shall be released by the employer after issuance of Taking Over Certificate proportionately. Also Insurance Policy shall be reduced accordingly and after ROD Theft, damages and security shall not covered by the contractor.	Please follow Bid conditions
333	General			Completion of Outstanding works and remedying defects	DLP of complete system shall be commenced from the date of first take over certificate / ROD in case of part take over. Please confirm. Manpower, tools and tackles, spares for routine maintenance and operation of the system during DLP shall not be in our scope of work. However, breakdown maintenance and supervision required during DLP shall be carried out by contractor. Any type of consumables, oil, lubricants etc required for the system in normal operation during DLP shall be provided by Employer. Manpower required for the operation of the system shall be provided by the Employer. Please confirm the above.	Please follow bid conditions

334	General			Performance Certificate	Performance Certificate shall be issued to the Contractor upon completion of Defect Liability Period. If not issued by the Employer, the reasons must be provided by the Employer 90 days in advance so as to take necessary action. However, part Performance certificate to be issued in case of part DLP completion and proportionate PBG to be released in part . Please confirm.	Please follow Bid conditions
335	General			The contractor price, inclusions / exclusions	Contractor understand that all the taxes and duties like Central Excise Duty, Custom Duty, Central Sales Tax, Service Tax, Octroi, Levies, Cess, etc are to be included in the rates of the priced offer. Only DVAT shall not be included and same shall be reimbursed to the contractor on submission actual documentary proof. DVAT paid under DVAT Act 2004 not to distinct for indigous items or others. Please confirm. It is also to confirm that Taxes and Duties shall be reimbursed in case of the quantity of the material not measured due to Wastage, philferage, loss etc. as the subject quantity has been procured only for the project. Therefore, duties payable on respective quantities shall also be reimbursed.	Please read SCC clause 6
336	General			Contractor Care of works	System shall deemed to be handed over from the date of ROD or commercial uses of system by employer, whether taking over certificate shall be issued or not by the employer. Any theft or damage or loss of any type shall be the responsibility of the employer. Please confirm.	Please follow Bid conditions
337	Section-8(SCC)	Sub Clause-13.3	9	Performane Security	No additional performance security / insurance policy shall be required if variation is within 25% value of original contract value. Please confirm.	Please follow Bid conditions
338	Section-8(SCC)	Sub Clause-13.3	9	Performane Security	1/2 of performance security shall be released to the contractor from the date of ROD or commercial usage whichever is earlier and balance 1/2 of the performance security shall be released after DLP. Please confirm. In case of partial take over certificate issued performance bank guarantee value shall be reduced proportionally and insurance policy accordingly. Please confirm.	Please follow Bid conditions

339	Section -8(SCC)	11.Sub Clause 19	10	Sub-Contracting	Value of the sub-contractor should be 50 % as there are end number of sub-contractors / suppliers will be there for this project. Accordingly the value should also be increased to 50% to 75%. Please amend this clause. Proposal of Technical and Vendor submittal shall be proposed for those items which have been specified in the contract documents Vol-7 Appendix-A Only. Please confirm.	Please follow Bid conditions
340	Section -8(SCC)	SCC Clause no 11 (Sub Clause 4.13)	9	programmes	Necessary Coordinated Installation programme / interfacing inputs shall be provided by employer from the designated contractor with the stipulated period. Please confirm.	Please follow Bid conditions
341	Section -8(SCC)	25.Sub Clause 27.2	15	Defect Liability Period	DLP of complete system shall be commenced from the date of issuance of taking over certificate / part taking over certificate / ROD / Commercial usage of system whichever is earlier. Please confirm. Penalty to be imposed in case of complete system failure only for reason entire attributed to the contractor. Please confirm. Space to establish maintenance office and store to be provided to contractor free of cost. Please confirm.	Please follow Bid conditions
342	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	In case item quoted in Foreign Currency at tendering stage are procured from within India during execution, then also payment shall be made in quoted currencies without any clarification or financial impact. Please confirm.	In case item is quoted in foreign currency and procured indiginously then the amount shall be paid in INR. The lowest amount compared between the quoted price after conversion at evaluated price and procured price as per SCC clause 28(g) will be payable.

343	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	All contract shall be quoted without Custom / Excise Duty / VAT / CST in case same is paid or applicable in part or full, the same shall be reimbursed at actual and the same shall prevail for any statutory variation in case of EOT of contract completion period. Please confirm. It is also to confirm that Taxes and Duties shall be reimbursed in case of the quantity of the material not measured due to Wastage, pilferage, loss etc. as the subject quantity has been procured only for the project. Therefore, duties payable on respective quantities shall also be reimbursed. □	Please read the notifications and quote accordingly.
344	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	Concessional duty shall be payable and the same shall be reimbursed as evaluation is without custom duty. Please confirm.	Please read SCC clause 6
345	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	Service Tax shall be reimbursed in case it is applicable. Please confirm. VAT / CST shall be reimbursed in case it is applicable. Please confirm.	Please read SCC clause 6
346	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	Only concessional / full custom duty shall be reimbursed as paid at actual.	Please read SCC clause 6
347	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	Any deemed export benefit shall not be availed by the contractor as per SCC 24.1a.b. Therefore, any type of custom duty / excise duty / VAT / CST paid in full / part / concessional to be reimbursed to the contractor at actual. In case full custom duty or excise duty is paid same shall be reimbursed. Any increase in cost due to new taxes or change is existing during extended contract period, same shall be reimbursed to the contractor. Reimbursement of Taxes and Duties shall be payable within 21 days from the date of submission of documents. Please confirm. It is also to confirm that Taxes and Duties shall be reimbursed in case of the quantity of the material not measured due to Wastage, pilferage, loss etc. as the subject quantity has been procured only for the project. Therefore, duties payable on respective quantities shall also be reimbursed.	Please read SCC clause 6

348	Section -8(SCC)	6.Sub Clause 11.1	6	Contract Price	For Custom Duty Reimbursement Bill of entry & challan is required & Excise Duty Reimbursement Excise Invoice & challan is required. Any other documents is not required. Please Confirm.	Please read SCC clause 6
349	Vol-2 (SCC)	SCC Clause no 26 (Sub Clause 11.2.1)	20	Mobilisation Advance	10% advance to be paid in Single Instalment immediately against submission of Advance of Bank Guarantee of 110% from a commercial bank. Additional 5% payment is acceptable towards KD achievement of detailed design and submittal without any submission of Advance Bank Guarantee. Please confirm.	Please follow Bid conditions
350	Section -8(SCC)	SCC Clause no 29 (Sub Clause 11.2.5)	21	Terms of Payment	In case of extension of time is available advance recovery to be extended without any interest. Please confirm.	Please follow Bid conditions
351	Section -8(SCC)	32.Additional Clause	24	Quantity Variation	This clause is applicable for those BOQ items in which quantity is Zero or either rate only quantities or blank quantity. Please confirm. Also the rates for the subject items should not be re-negotiated or the subject item should not be executed by 3rd party re-negotiated rate at the rates not available in the respective contract without acceptance of the contractor. Please confirm.	Please follow Bid conditions
352	Section -8(SCC)	33.Additional Clause	24	Retention Money	Retention money shall become due to the contractor from the date of issue of part or full taking over certificate or ROD or Commercial Usage whichever is earlier. Please confirm.	Please follow Bid conditions
353	Section -8(SCC)	35.Additional Clause	26	Operation and Maintenance	Operation during DLP shall not be in the scope of Contractor. Therefore, all manpower for operation shall be provided by the employer. Please confirm.	Please follow Bid conditions
354	Section -8(SCC)	8.Sub Clause 13	8	Terms of Payment	Stage Payments shall be made as under: 10% against Advance Bank Guarantee 05% i.e. submission of working drawing / shop drawing 80% against delivery of material / equipments 10% against installation 05% against testing and commissioning or ROD For supply 100%, Installation 100%, Testing and Commissioning 100% shall be payable as per quoted rate.	Please follow Bid condition (Section 4 , Vol II- Preamble)
355	Section -8(SCC)	43. Additional clause	28	Nuisance	Contractor shall not be responsible for any unhygienic conditions created by other system-wide contractor. Please confirm.	Please follow Bid conditions

356	Section -8(SCC)	44. Additional clause	28	Interface requirement	Kindly provide the list of intermedating the interface requirements within the other different contractors.	Please follow Bid conditions. A detailed Interface Management Document is provided in the Bid document
357	Section -8(SCC)	47. Additional clause	28	Material not as per approved make	In case of urgency and in the interest of the project any unapproved make may be regularised to make the demand . Please confirm.	Please follow procedure for Vendor approval, provided in Bid document
358	Section -8(SCC)	48. Additional clause	29	BOCW	BOCW shall be applicable only for labour part i.e 15 % of contract value .Pls Confirm	Rate of BOCE cess is presently 1%. The same is to be deducted and deposited by JMRC
359	Section -8(SCC)	49. Additional clause	29	Bank agreement for supplementary agreement	Please clarify to which item this clause is applicable.	The clause is self explanatory
360	Kindly remove the refered clause	51.Additional Cause	29	Proffesional Indeminity Insurance	We understand that this is a BOQ based tender and the contract scope of works is limited to design verification only and their fore submission of any proffesional indeminity insurance shgall not be applicable to the contractor.Damage to material,machinery and works due to fire,theft etc.Validity required till the material is delivered at site.Since there is a considerable cost associated with the validity of aboe mention validity criteria is acceptable to the employer.	The PII is required to be submitted for the DG portion of the bid.
361	Section-8(SCC)	Sub Clause-13	8	Intrest in case of delay in repayment of advances	Intrest of advance not recovered due to delay in work completion/extension of time for whatever be the reason being attributed shall not be acceptable.Therefore request you to kindly remove the refered clause.In case of delay except reasons pertains to contractor and for which key date extension is granted by employer,date of original completion shall change automatically to extension of key datesand intrest shall be payable only after expiry of revised key dates which may get extended from time to time.Please Confirm	Please follow Bid conditions
362	Section-7(GCC)	34.Insurance	41	Insurance Validity	We understand that the validity for the inurance policy has to be considered till the ROD period or same has to be considered till the completion of the project.Kindly Confirm.	till the completion of the project.
363	Part-I Section 4 Volume-2	E04.4.11 a & b	54 of 86	Cabling of Tunnel Light Fixture	Due to long length of susbject work it is requested to confirm the length of cables to be considered in primary point of Tunnel light as it may vary from 60-400 meters in each section of the tunnel. Also in case the length of cables is higher than the length mentioned In the primary point and the same shall be paid extra as per actual measurement. □	Please refer tunnel alignment drawings in addendum.

364	Part-I Section 4 Volume-2	E04	51 of 86	Point Wiring	Please provide separate rates for all sizes of Conduits, wires & cables used in Wiring Accessories section	Please follow Bid conditions
365	Part-I Section 4 Volume-2	E02.2.2.1	42 of 86	Concourse and Platform Public Areas LDB	Since LBT is Used in these areas 3 nos of DP RCCB provided Per phase shall not working as desired, and the same shall be replace with 1 no of 4 pole RCCB provided in the incomer. Please confirm	Please follow Bid conditions
366	Part-I Section 4 Volume-2	E09	72 of 86	Add./Del. Work	Please add all the ratings of Breakers in this schedule	Please follow addendum
367	Part-I Section 4 Volume-2	E11	4 of 7	Softener Removal & Iron Removal Filter	In the discription of BOQ DMF is mentioned for Softener & IRF. Please clarify.	Please follow BOQ.
368	Part-I Section 4 Volume-2	E11.2 & 11.3	5 of 7	Softener Removal & Iron Removal Filter- Isolation Valves	CI Butterfly valve shall be provided rather than diaphragm valve as per manufacturers standard. Please confirm.	Please follow Bid conditions
369	Part-I Section 4 Volume-2	E11.4	6 of 7	Brine Measuring Tank	MOC for the Brine Measuring tank is mentioned .That is proposed to be HDPE. PI confirm acceptance.	Please follow Bid conditions
370	Part-I Section 4 Volume-2	E11	4 of 7	PUMP for Brine Measuring Tank	The BOQ do not list the provision of any "Brine Transfer pumps (1 w+1s) " from the Salt Dilution Tank to the Brine measuring Tank. Please introduce this item in BOQ so that same can be quoted.	Please follow Bid conditions. All necessary equipments & pumps required for functioning of system are in scope of bidder.
371	Part-I Section 4 Volume-2	E11.6	6 OF 7	Level Controllers for Water Tanks	Please describe the requirement of cables required for these level controllers.	Please follow Bid conditions
372	Part-I Section 4 Volume-2	E12	1 of 15	Fire Pumps- Foundation	Foundation and all necessary civil works required for fire pumps shall be provided by Civil Contractors. Please confirm.	Masonry foundations (RCC/PCC) will be provided by civil
373	Part-I Section 4 Volume-2	E14.14.6	6 of 15	Piping Ancillaries for Fire Systems	Pressure gauges shall be measured under separate BOQ item i.e 3.7 (Pressure Gauge) Kindly confirm.	Please follow Bid conditions
374	Part-I Section 4 Volume-2	E15.15.3	7 of 15	Fire Hydrant System	We understand UL Listed & FM Approved Fire Pumps are required. Please confirm.	Please follow Bid conditions
375	Part-I Section 4 Volume-2	E15.15.1	7 of 15	Specs: The air vessel shall be fabricated from MS plate confirming to IS:2002 grade 2A with minimum 8 mm thickness for the shell and the dished ends and suitable supporting legs. BOQ: Air Vessel of size 450 mm diameter and 1.50 m high, fabricated out of 6 mm thick M.S. plate having dish ends of 8 mm thick MS plate,	Contradiction. Please confirm the thickness of shell material. Should we follow BOQ.	MS Plate of minimum 8mm thickness as specified
376	Part-I Section 4 Volume-2	E17.17.3	11 of 15	Portable Fire Extinguisher of 4.5 Kg. capacity, carbon dioxide type with cylinder with CO2 gas-Pressure Gauge	Pressure gauges are not technically applicable. No manufacturer provieds. Please delete and confirm.	Acceptable
377	Part-I Section 4 Volume-2			LIST OF MAKES	Any make/vendor which is there in list of approved makes but deviate from specifications. Such deviations shall be acceptable to client without any cost implication. Please confirm.	Please follow Bid conditions

378	Part-I Section 4 Volume-2			LIST OF MAKES	Kindly suggest more Makes/Vendor for the Equipment/Items which have only one/two approved make/vendor specified. Kindly suggest.	Contractor can propose any vendor meeting the bid requirements.
379	Part-I Section 4 Volume-2			LIST OF MAKES	Vendor and Technical Submittals shall be provided for the items mentioned in the Appendix-A1 of Vol-2. For other items not mentioned in the Appendix-A1 of Vol-2. Contractor shall be free to use any make complying to specifications without going for any vendor approval. Since there are so many small items which are required in projects to complete the works. Kindly confirm.	Contractor can propose any vendor meeting the bid requirements.
380	Part-I Section 4 Volume-2	General		LIST OF MAKES	Also it is to confirm that vendors / manufacturers approved in earlier DMRC Projects i.e. DMRC Phase II projects, should also be considered as part of this approved list of vendors for this contract. Even though the respective names are not mentioned in the subject list and also no financial benefit shall be transferred to the employer as these makes are being to be approved make of the project. Also any vendor approval shall not be required in the subject case. Please confirm the above.	Contractor can propose any vendor meeting the bid requirements.
381	Part-I Section 4 Volume-2	General		LIST OF MAKES	Please confirm their shall be no cost implication or passing of any benefits to clients in case contractors proposes a new vendor/make. And if cost implication is envisaged by client, method of calculating the implication shall be stated in tender stage so that contractor can bid accordingly. If no method is proposed at this stage, it is assumed that their shall be no cost implication attached.	Please follow bid condition
382	Part-I Section 4 Volume-2	General		LIST OF MAKES	Please confirm contractor shall be free to choose any make from the list of approved make or in case any new make. Kindly confirm.	Contractor can propose any vendor meeting the bid requirements.
383	Part-I Section 4 Volume-2	General		LIST OF MAKES	If in specification/BOQ/Data Sheet or anywhere in the tender documents there is any equipment/item mentioned whose specification provides technical selection with options, employer shall accept the technical proposal of contractor as proposed by him without any objection. Please confirm.	Please follow bid condition
384	Part-II Section 6 Volume-II	1	18 of 23	Interface Management Document for Civil, Tunnel, Ventilation, ECS, E&M, Power Supply, S&T, AFC, Escalators, Lift and Track Contracts of Underground Section.	If Civil Contractor will not give the access as per schedule programme, Employer would arrange the same to Contractor.	Please follow Bid conditions

385	Part-II Section 6 Volume-II	E11.3.1.2.2.4 & E11.1.8	139 &155 of 259	Automatic Supply Changeover System & Battery System	UPS can charge batteries in the same duration as per defined above but it is not recommended by Battery Manufacturer. So, we request you to kindly remove the above clauses and please mention as per battery manufacturer recommendation. Kindly Confirm	Please follow Bid conditions
386	Part-II Section 6 Volume-II	E01.4.14.1	30 of 259	Discrimination	As per the specification, there should be total discrimination between ACBs, MCCB and MCBs upto the design fault level of the downstream devices and rating of MCCB & ACB is clearly defined in BOQ, so please confirm which is to be considered.	Please follow Bid conditions
387	Part-II Section 6 Volume-II	E.13.1	162 of 259	Temperature rise at any point in the bus duct shall not exceed 55 degree C over ambient temperature of 50 degree C.	As per the manufacturer, Over ambient temperature shall be of 40 degree C. Kindly confirm	Please follow Bid conditions
388	Part-II Section 6 Volume-II	E.13.1.7 .1	164 of 259	PAINT FINISH: RAL 7032 Grey Epoxy Paint or as approved by Engineer-in-charge	In place of Ral 7032 grey Epoxy paint, ANSI 49 Gray shall be used. Kindly confirm.	Please follow Bid conditions
389	Part-II Section 6 Volume-II	E.13.1.4.2	164 of 259	The enclosure of Bus Duct system and Rising Mains shall be fabricated from 1.6mm thick CRCA sheet steel/GI/Extruded AL	The enclosure of Bus Duct system and Rising Mains shall be fabricated from 1.5mm thick Electro-galvanized steel. Kindly confirm.	Please follow Bid conditions
390	Part-II Section 6 Volume-II	E.13.2	167 of 259	Provision of six Plug in Holes to be made in the Standard Length of 3 Mtrs. for 8 Wire System with accessibility on both sides and three Plug in Holes in Standard Length of 3 Mtrs for 2 Wire System.	Provision of five Plug in Holes to be made in the Standard Length of 3.048 Mtrs. for 8 Wire System with accessibility on both sides and three Plug in Holes in Standard Length of 3.048 Mtrs for 2 Wire System. Kindly Confirm	Please follow Bid conditions, however it will be decided during technical approvals
391	Part-II Section 6 Volume-II	E 01.3.2.20	10 of 259	Spare Space Capacity of Electrical Panels	Regarding the Spare Space in Electrical Panels, 20 - 25% spare space shall be provided. But if due to space constraint it is not possible to provide the spare space and the same is authenticated by the Engineer then No price deduction shall be applicable to the Contractor. Please confirm.	Please follow Bid conditions
392	Part-II Section 6 Volume-II	pt 4 & pt 5	14 of 23 & 7 of 23	Auxiliary Transformer Protection	Please confirm the Supply of CT's required for Diff Protection	Please follow BOQ.
393	Part-II Section 6 Volume-II	3 C iii	20 of 23	Civil with E & M	E&M contractor shall Provide the Sealing of cutouts for Openings less than or equal to 50mm x 1000 mm. If the Opening is larger in size the same shall be Sealed by Civil Contractor at no extra cost to E&M contractor. Also E&M shall provide the requirement of Openings in the slabs as per their requirement, if the Openings related to E&M are made higher in size due beam crossing or any other issue related to civil shall not be to E&M account.	Please follow Bid conditions

394	Part-II Section 6 Volume-II	E01.3.1.9	7 of 259	General & Technical Requirements of Electrical Panels	The short time withstand current shall be as per manufacturer standard and discrimination chart for all other Electrical Panels except the panels mentioned above. Please confirm.	Please follow Bid conditions
395	Part-II Section 6 Volume-II	E01.3.3.3	10 of 259	Earthing Busbar	The size of Earthing bus bar shall be as per Panel manufacturer Design. Please confirm.	Please follow Bid conditions
396	Part-II Section 6 Volume-II	E01.4.1.7 & E01.4.1.11	12 of 259	Busbar Insulation and identification	As per Panel manufacturers it is not required to provide Bus bar insulation as the panels are designed and type tested without Bus bar insulation. If it is mandatory to provide Busbar Insulation then please provide Specification for the same. Please confirm whether Paint shall be used for Busbar Identification or not.	Please follow Bid conditions. No sleeves on bus bars are to be provided, however all shrouds, insulators, as per IEC 61439 Pt 1 & 2 and as per type tested report have to be provided. Material for bus bar identification should be non fading of proven design.
397	Part-II Section 6 Volume-II	E01.4.1.11	12 of 259	Busbar	Please confirm whether Paint shall be used for Busbar Identification or not.	Please follow Bid conditions
398	Part-II Section 6 Volume-II	E01.4.9.3	18 of 259	Terminal Blocks	Non Hygroscopic Melamine material shall be used for Terminal Blocks. It is to be noted that Melamine material is little bit Fragile in nature in comparison with Polyamide Terminal blocks. Please confirm whether Polyamide TB's shall be used in place of Melamine TB's	Please follow Bid conditions
399	Part-II Section 6 Volume-II	E01.4.8.3	16 of 259	Internal & Control Wiring	Please confirm whether 1.5 sqmm Cu conductor shall be used in Internal wiring of panels or not due to easiness of wiring and maintenance of the same is better. Please note that there shall be better connectivity by using 1.5sqmm Cu conductors in switchgears and controlgears.	Please follow Bid condition
400	Part-II Section 6 Volume-II	E01.4.11.2 & E01.4.11.8	20 of 259	BMS Interface	Transducers shall be Provided by BMS contractors to E&M contractors Prior to Manufacturing /Despatch of Electrical panels from Manufacturing unit. If the same is not done then the Wiring of transducers to be done at site shall be at extra cost to the Employer. Please confirm.	Both BMS and E&M works are in scope of this bid
401	Part-II Section 6 Volume-II	E01.4.13.3.2 (m)	26 of 259	BMS Interface	MCCB trip units shall be as per BOQ, since it is mentioned in Technical Specs that all MCCB's shall have OverLoad ,ShortCircuit protection. Please Clarify	Please follow BOQ.
402	Part-II Section 6 Volume-II	E01.4.8	16 & 17 of 259	Control Wiring	Please confirm the List of Panels where Control wire complying BS-7846 to be used.	Internal control wiring of LSZH are required.
403	Part-II Section 6 Volume-II	E02.3.8.2	67 & 68 of 259	Voltage Drop	Please confirm the % of Voltage Drop to be considered.	Please follow Bid condition
404	Part-II Section 6 Volume-II	E08.1.6	105 of 259	Vandal Resistant	Please confirm the Vandal Prone areas and the Light fixtures which has to be Vandal Resistant.	As per prevailing site conditions

405	Part-II Section 6 Volume-II	E09.3.5.5 & E09.3.5.10	123 & 124 of 259	Earthing Busbar	The Size of Earth busbar in the panels shall be provided as per the Manufacturer design. Please confirm. If no and the same has to be provided as per technical specifications then please mention the list of panels where 400 sqmm Earth bond has to be provided. Also note that the Glandplate is made of Aluminium material and connected to the Panel earth bond hence no Extra Earthing Tape is required Please confirm.	Please follow Bid conditions
406	Part-II Section 6 Volume-II	E.01.3.2.6	8 of 259	The electrical panel shall be mounted on a robust frame made up of steel channel with a minimum height of 100 mm and the maximum height of electrical panel shall not exceed 2.40 meter....	Maximum height of panels shall be 2300 mm & Minimum operating height shall be 350MM	Please follow Bid conditions
407	Part-II Section 6 Volume-II	E.01.3.2.18	9 of 259	Connections: All the incoming / outgoing terminations shall be extended via fully insulated copper connections into a separate termination chamber adjacent to the rear of the switchboard. When busbars are used between switchboards, the internal busbars of the switchboard shall be in fully insulated copper bars of the same size as the switchboard busbars. No linking with cables shall permitted in this case.	Upto 250A Copper flexible wire shall be used for linking and above 250A Insulated copper busbar shall be used. Size of busbar/wire shall be as per manufacturer standard and current rating of switchgear.	Please follow Bid conditions
408	Part-II Section 6 Volume-II	E.01.3.3.3 & E.01.3.3.4	10 of 259	A continuous copper earthing busbar shall be provided along the whole length of each LVSB and shall be provided with terminals for connections to the metal housings of incoming busways, cable trunkings, and cladding or armouring of all incoming and outgoing cables and to the substation earth. The copper earthing busbar shall be tin-plated and with a cross-sectional area of not less than 400 mm ² .	Same is written 50X6 MM in clause Schedule of quantities/Switchboards/Panels. Cu. Earthing Busbar shall be sized based upon calculation/ manufacturer standard.Kindly confirm	Please follow Bid conditions
409	Part-II Section 6 Volume-II	E.01.4.1.3	11 of 259	The busbars shall be designed for easy extension in future at either end.	Extensible busbar shall be only in more than 2 bay panels.Kindly Confirm	Please follow Bid conditions
410	Part-II Section 6 Volume-II	E.01.4.8.3	16 of 259	All internal and control wiring shall be Low Smoke Zero Halogen (LSZH) copper conductor wires rated at 450/750 V complying with BS 7211 and Section A16 of this Specification. All control wiring within the LVSBs shall be with single core; minimum 2.5 mm ² copper conductor complying with the requirements of this Clause. Insulation shall have a glossy finish, be resistant to oil and be incapable of supporting combustion.	We recommend to use wires 2.5 mm sq for current circuit, 1.5 mm sq for voltage circuit and 1 mm sq for BMS circuit. Kindly Confirm	Please follow Bid conditions

411	Part-II Section 6 Volume-II	4.8.5 & 4.8.6	16 & 17 of 259	All internal wiring shall be neatly run and securely fixed in non-metallic cleats in such a manner that, wherever practicable, wiring can be checked against diagrams without removal of the cleats. Wiring passing out to fully accessible positions shall be run in non-metallic low smoke halogen free flexible tubes or conduits.	Material for flexible tubes or conduits shall be as per manufacturer standard practice.	Please follow Bid condition
412	Part-II Section 6 Volume-II	E01.4.4.2 & E01.4.4.4	13 of 259	All the meters shall be of 3 phase Digital type and shall be provided with a maximum demand indicator with RS-485/RS232 connectivity, as required.	Wattmeter shall be provided if mentioned in BOQ.	Confirmed. Please follow BOQ
413	Part-II Section 6 Volume-II	E01.4.4	13 of 259	Instrumentation	Trivector meter shall be provided if mentioned in BOQ.	Confirmed. Please follow BOQ
414	Part-II Section 6 Volume-II	E01.4.11.6	20 of 259	There shall be one interface for control open and one for control close operations	BMS provisions shall be provided as per I/O schedule in panels. BMS supervision or commissioning is not in our scope.	BMS is in scope of this bid
415	Part-II Section 6 Volume-II	E01.4.14.1	30 of 259	Discrimination	Since Rating of ACB/MCCB is clearly written in BOQ, so any variation to achieve total discrimination will be provided on extra cost.	Not accepted. please follow Bid conditions
416	Part-II Section 6 Volume-II	E01.4.4.4.14	14 of 259	CT & VT	As per IS:2705, short time current rating should be 25 times of rated primary current for one Sec. Kindly confirm.	Please follow Bid conditions (Relevant IEC 60044-1)
417	Part-II Section 6 Volume-II	E01.4.14.1	30 of 259	Discrimination	Kindly clarify whether total discrimination is required upto designed fault level or Ics value of downstream CB? As two are entirely different concepts.	Please follow Bid conditions
418	Part-II Section 6 Volume-II	E01.4.13.3.5	26 of 259	MCCB Specification	Electrical Endurance of 10000 operations is not possible for rating upto 630A for any vendor, kindly reduce it to 5000 op. upto 630A & 8000 Op. upto 250A MCCB's.	Acceptable as per manufacturer's type tested design
419	Part-II Section 6 Volume-II	E01.3.1.10	7 of 259	General & Technical Requirements of Electrical Panels	Form 4b type 5 is in accordance with BS EN 60439 and not BS EN 60947-1 as mentioned in Specifications, kindly clarify	Please follow Bid conditions
420	Part-II Section 6 Volume-II	E01.3.2.10	9 of 259	Electrical Panel Construction	ACB shall be EDO but rest all switchgear shall be fixed mounted on fixed type enclosure module	Acceptable,
421	Part-II Section 6 Volume-II	E01.4.4.4.14	14 of 259	CT & VT	As per IS:2705, short time current rating should be 25 times of rated primary current for one Sec.	Please follow Bid conditions (Relevant IEC 60044-1)
422	Part-II Section 6 Volume-II	E-14.1.3	169 of 259	pump heads	Since the subject tender is Unit Rate BOQ based and at tendering stage design calculation are not carried out the referred clause shall be deleted. Also there is a provision of addition of new items which can cater such requirements. Please clarify.	Please follow Bid conditions

423	Part-II Section 6 Volume-II	E-14.1.7	169 of 259	Additional vibration isolators.	Vibration isolators are not applicable to Submersible Pumps. Also, any sound attenuator if required shall form extra item. Noise levels are not mentioned in tender documents. Please clarify.	Please follow Bid conditions
424	Part-II Section 6 Volume-II	E-14.3.2.5	170 of 259	Cold Water Pumps- Impeller	As per manufacturers standard of various reputed manufacturers. In addition to referred impeller MOC, SS-304 shall also be acceptable. Please clarify.	will be reviewed at the time of vendor and technical approval
425	Part-II Section 6 Volume-II	E-14.3.2.6	170 of 259	Cold Water Pumps- Sleeves	As per manufacturers standard of various reputed manufacturers. In addition to referred Sleeves MOC, SS-304 shall also be acceptable. Please clarify.	will be reviewed at the time of vendor and technical approval
426	Part-II Section 6 Volume-II	E-14.3.2.10	170 of 259	Cold Water Pumps- Interconnection Pipes etc	Interconnecting pipes and ancillaries shall not be in E&M Contractors scope. Please clarify.	Plumbing is in the Civil Contractor Scope
427	Part-II Section 6 Volume-II	E-14.3.2.11	171 of 259	Cold Water Pumps- Base Plate	As per manufacturers standard of various reputed manufacturers, Base Plates of MS with epoxy coating shall be applicable. Please clarify.	will be reviewed at the time of vendor and technical approval
428	Part-II Section 6 Volume-II	E-14.3.2	170 of 259	Cold Water Pumps- General	Since Tender BOQ call for only Pump Sets. Therefore piping and all ancillaries like valves, strainer, gauges etc shall not be in E&M contractors scope. Please clarify.	Confirmed pump accessories are in the scope of the bid
429	Part-II Section 6 Volume-II	E-14.3.3.2	171 of 259	Seepage & Sewage Pumps- Impeller Construction	Both Sewage and Seepage impellers shall be open/semi-open type with cutter and tearing arrangement, closed impeller are not applicable for submersible type pumps. Please confirm	Please follow Bid conditions
430	Part-II Section 6 Volume-II	E-14.3.3.4	171 of 259	Seepage & Sewage Pumps- Impeller MOC	As per manufacturer standard, Impeller shall be suitable with FG 260 as per ASTM 40A. Please confirm as per manufacturer standards.	Please follow Bid conditions
431	Part-II Section 6 Volume-II	E-14.3.3.6	171 of 259	Sewage & Seepage Pumps- Two Mechanicals Seals	The requirement of no. of mechanical seals varies with manufacturer. Therefore this requirement shall be as per manufacturers standard. Accordingly moisture sensor shall or shall not be applicable. Please clarify.	will be reviewed at the time of vendor and technical approval
432	Part-II Section 6 Volume-II	E-14.3.3.7	171 of 259	Sewage & Seepage Pumps- Lifting Chains	Please provide the tentative length of lifting chains required as the same will incur considerable cost. Please confirm.	As per site requirement
433	Part-II Section 6 Volume-II	E-14.3.3.8	171 of 259	Sewage & Seepage Pumps- Insulation Class	'H' class motor insulation is not required for underground cold water application and 'F' class motor insulation will suffice the requirement. Manufacturers also recommends in this favor. Please confirm.	Please follow Bid conditions

434	Part-II Section 6 Volume-II	E-14.3.3.9	171 & 172 of 259	Sewage & Seepage Pumps- Submerged Cable	EBXL type (Electron Beam irradiated) cable shall be supplied with pumps which is best suitable for working in pumping media like sewage with better chemical resistance capacity & is having higher current capacity. Thus the submerged cable type shall be pertinent to the manufacturers standard. Please confirm.	Please follow Bid conditions
435	Part-II Section 6 Volume-II	E-14.3.3.10	172 of 259	Sewage & Seepage Pumps- Boltless Self Alingning Pumpset	However most of the pumps shall have this arrangement. But as per manufacturing range of most manufacturer, such requirement varies with pump working parameter and thus the model selected. Therefore it shall be as per manufacturers standard. Please confirm.	Please follow Bid conditions
436	Part-II Section 6 Volume-II	E-14.3.4.2 (c)	172 of 259	Water Supply Pump Sets Control- Lead/Lag Selection	Lead/Lag selection shall only be possible when the system is operated in remote mode through BMS. Automatic alteration is not possible as per the available description of Electrical panel BOQ. Other hardwares are required for such control. If still required kindly incorporate all hardwares as required. Please clarify or else same shall be considered deleted.	Please follow Bid conditions
437	Part-II Section 6 Volume-II	E-14.3.5.3 (d)	173 of 259	Water Supply Pump Sets Control- Lead/Lag Selection	Lead/Lag selection shall only be possible when the system is operated in remote mode through BMS. Automatic alteration is not possible as per the available description of Electrical panel BOQ. Other hardwares are required for such control. If still required kindly incorporate all hardwares as required. Please clarify or else same shall be considered deleted.	Please follow Bid conditions
438	Part-II Section 6 Volume-II	E-15.1.1	176 of 259	Water Treatment Plant- Reduction of TDS	Please note that the WTP equipment listed in the BOQ (DMF + IRF + Softener + Chlorination) , shall not be able to reduce the TDS level of the raw water (referred clause asks for less than 100 ppm TDS) . Please note that in order to reduce TDS of raw water , you need to provide Reverse Osmosis (RO) plant for water treatment. Please clarify what type of WTP is required -Softener based or RO plant based.	Please follow Bid conditions
439	Part-II Section 6 Volume-II	E-15.1.2	176 of 259	Water Treatment Plant- Wetted Surface of SS	Referred clause specifies all wetted parts to be SS. The BOQ, however, is asking for Mild Steel -Rubber Lined vessel. PI clarify the vessels MOC However manufacturer recommends MS -Rubber Lined vessels only.	Please follow BOQ.

440	Part-II Section 6 Volume-II	E-15.3.2	176 of 259	Water Treatment Plant- Monthly Testing Reports	We shall consider testing of water quality of the produced treated water after WTP commissioning at each site only once. Any further water testing charges shall be excluded from our scope of work / services. Please confirm acceptance.	Please follow Bid conditions
441	Part-II Section 6 Volume-II	E-15.4.1.1	176 of 259	Water Treatment Plant- Softening Plant	The Water Softener manufacturer to decide whether the Softener shall be Upflow or down flow as per their own design. Please confirm acceptance.	will be reviewed at the time of vendor and technical approval
442	Part-II Section 6 Volume-II	E-15.4.1.2.1	177 of 259	Water Treatment Plant- Softening Plant Underdrain	Filter / Softener underdrain shall be as per manufacturer's design. Please confirm acceptance.	will be reviewed at the time of vendor and technical approval
443	Part-II Section 6 Volume-II	E-15.4.1.3.1	177 of 259	Water Treatment Plant- Softening Plant Interconnecting Valves	Face piping of Filters & Softeners shall consist of CI Butterfly valves & not Diaphragm or Ball valves as per standard practices. Please confirm acceptance.	Please follow Bid condition
444	Part-II Section 6 Volume-II	E-27.4.1.7.1	177 & 178 of 259	Water Treatment Plant- Test Kits	Since these test kits are to be provided separately. Please form a BOQ item for Test Kit. Please confirm.	Please follow Bid condition
445	Part-II Section 6 Volume-II	E-16.2	182 of 259	1) BS 599: Methods of Testing Pumps. 2) BS 970: Wrought Steels for Mechanical and Allied Engineering Purposes. 3) BS 1400: Copper Alloy Ingots and Copper Alloy and High Conductivity Copper Castings. 4) BS 1452: Flake Graphite Cast Iron. 5) BS EN 1092-1: Circular Flanges for Pipes, Valves and Fittings. 6) BS 5316: Parts 1 and 2 : Acceptance Tests for Centrifugal Mixed Flow and Axial Pumps	As per manufacturers standard, please accept following alternate standards 1) The referred standard is obsolete, hence testing will be done as per ISO 9906 2) We propose equivalent Indian Standard IS 1570 with carbon steel. 3) We propose equivalent Indian Standard IS 318 with LT Bronze 4) The referred standard is obsolete, hence we offer equivalent ISO 210 with Gr.260 5) We propose Pump Flange drilling as per BS 4504 PN 16 6) The referred standard is obsolete, hence testing will be done as per ISO 9906 Grade 2	will be reviewed at the time of vendor and technical approval
446	Part-II Section 6 Volume-II	E-16.3.3	183 of 259	a) Casing-Cast iron to BS 1452 Grade 260 b) Shaft sleeve Stainless steel 410 c) Wear rings Bronze to SS 316 S 16	As per manufacturers standard, please accept following alternate standards a) Casing-Cast Iron to IS 210 Grade 260 b) Shaft sleeve- Bronze to IS 318 LT B2 (As SS will Cause Galling) c) Wear rings- Bronze to IS 318 LT B2	will be reviewed at the time of vendor and technical approval
447	Part-II Section 6 Volume-II	E-16.3.8	184 of 259	Fire Pumps - Wear Rings on impeller	Impeller wear rings are not applicable as per manufacturing standards. Please confirm.	will be reviewed at the time of vendor and technical approval
448	Part-II Section 6 Volume-II	E-12	157 of 259	Motors - Fire Pump	The referred clause for Motors are general and no one manufacturer can comply all the requirements. However in principle they shall comply to it. Please confirm.	will be reviewed at the time of vendor and technical approval
449	Part-II Section 6 Volume-II	E-12.1.10	157 of 259	Motors - Fire Pump Anti Condensation Heaters	Anti condensation heaters are not required for Fire pumps and same has never been used in previous DMRC projects. Please confirm if it is still required.	Acceptable

450	Part-II Section 6 Volume-II	E-12.1.16	158 of 259	Motors - Fire Pump Bearing Life	Most manufacturers offer Bearing with 50,000 Hrs operation life. Please confirm.	will be reviewd at the time of vendor and technical approval
451	Part-II Section 6 Volume-II	E-12.3.2.1	159 of 259	Motors - Fire Pump Motor Frame	MS Motor frame shall be applicable as most manufacturer offers the same. Please clarify.	will be reviewd at the time of vendor and technical approval
452	Part-II Section 6 Volume-II	E-12.3.3	159 of 259	Motors - Fire Pump Motor Terminal Box	Terminal Box shall be as per manufacturers standard. Please clarify.	Please follow Bid conditions*
453	Part-II Section 6 Volume-II	3.1.2.2.4	139 of 259	The rectifier / charger shall have sufficient capacity to enable simultaneous supplying of full load to the inverter and recharging a fully discharged battery to 100% rated value within 10 hours.	The rectifier / charger shall have sufficient capacity to enable simultaneous supplying of full load to the inverter and recharging a fully discharged battery to 90% rated value within 10 hours.	Please follow Bid conditions
454	Part-II Section 6 Volume-II	142 of 259	For specifications and requirements, refer to the battery specifications DMES-E- 0003	VRLA batteries shall be as per BS6290	Document DMES - E - 0003 is not available. Hence clause shall be modified.	Please follow addendum
455	Part-II Section 6 Volume-II	143 of 259	Output power factor:- 0.9 and above.	Output power factor:- 0.9 and above.	UPS System is designed with a fix power factor. This is also required while battery sizing. Hence, clause shall be modified.	Please follow Bid conditions
456	Part-II Section 6 Volume-II	149 of 259	The efficiency of the proposed UPS shall be at least 90% and above from 25% load to full load. The life and efficiency is of prime importance. The manufacture may offer UPS with any new proven technology having advantage of life and energy efficiency without compromising on other parameters of specification	The efficiency of the proposed UPS shall be at least 90% and above from <u>50%</u> load to full load. The life and efficiency is of prime importance. The manufacture may offer UPS with any new proven technology having advantage of life and energy efficiency without compromising on other parameters of specification.	Efficiency will achievable from 50% to Full load. This has asked with built in transformer. Hence, clause shall be modified.	Please follow Bid conditions

457	Part-II Section 6 Volume-II	154 of 259	The overall capacity of the battery system shall be such as to meet the specified performance and technical requirements throughout the life of the battery. The battery capacity shall be designed for long life with uniform charging and discharging rates. In calculating the battery capacity, an ageing de-rating factor, advised by the supplier, shall	The overall capacity of the battery system shall be such as to meet the specified performance and technical requirements throughout the life of the battery. The battery capacity shall be designed for long life with uniform charging and discharging rates. In calculating the battery capacity, an ageing factor of 25% and design margin of 10% shall be taken into account. This factor shall not be more than 0.8. Battery sizing calculations shall assume an ambient temperature of up to 40° C and room temp. of 25°C. The battery cell shall be of heavy duty, rechargeable, valve regulated lead acid and maintenance-free type and the performance shall comply with latest amendment of relevant code or IEC 60896- 21&22 having an intended design life of at least 20 years.	Ageing factor and design margin shall be clearly defined for batter clarity. Hence, clause shall be modified.	Please follow addendum
458	Part-II Section 6 Volume-II	155 of 259	Temperature monitoring equipment shall be incorporated in the UPS system to optimise the charger voltage as a function of battery room temperature, to generate alarm in case of room temperature exceeding the preset permissible temperature and to predict the battery backup time	Temperature monitoring equipment shall be incorporated in the UPS system to optimise the charger voltage as a function of battery room temperature . to generate alarm in case of room temperature exceeding the preset permissible temperature and to predict the battery backup time.	There is no relation between temperature alarm and back up time. Hence, clause shall be modified.	Please follow Bid conditions

459	Part-II Section-6	5	62 of 73	Employers Requirement Manufacturing, Installation & Testing	Please clarify that the lamps,ballast,salt etc will come in the maintainence consumables or not	Spares to be quoted as per BOQ
460	Part-II Section-6	Table 6.3 item no. 2	7 of 23	Interfacing with E&M contractors in stations (E&M)	Please clarify that the traction contractor will provide the transformer bus bar upto the transformer enclosure/ or as required by E&M contractor.	Included in the scope of this bid
461	Part-II Section-6	Table 8 item no. 4	15 of 23	Interfacing with E&M contractors in stations (E&M)		Question not clear
462	Part-II Section-6 Volume-II	E02.3.20.1 (d)	76 of 259	General	Please clarify, as per our understanding as provided in the TS and BOQ, the fire alarm cables are required FS cable as per BS 7846. In addition to this contractor is having a choice to provide mineral insulated copper cable for fire alarm system and it is not compulsory or employers choice	Please follow BOQ.
463	Part-II Section-6 Volume-II	E03.3.2.6-2.9	79 of 259	Cable Containment System	Please clarify whether the cost of C-Channel ,cantiliver arm etc are required for installation of cable tray/cable ladder will be provided as per BOQ no. 3.11(pagege no. 56 of 80)	Please follow BOQ.
464	Part-II Section-6 Volume-II	E08.1.5	105 of 259	Lighting	The wiring for the connection of light fixtures pertaining to emergency services will be done by low smoke zero halozen fire survival wire. Therefore it is requested not to use LSZH FS wire in light fixture internally . Please confirm.	Please follow Bid conditions
465	Part-II Section-6 Volume-II	E11.1.5 (a)	135 of 259	UPS	Input / Output power supply panel are included seperately in BOQ, and it is not the part of UPS System. Hence, shall be deleted.	Please follow BOQ.
466	Part-II Section-6 Volume-II	E11.1.1/BOQNo. 7.1.a	135 of 259	UPS	As per technical specification 30 minutes back up is required at full load while in BOQ same it required of 120 minutes backup.please clarify	Please follow addendum
467	Fire alram specification	E.22.1.3	Page 232/259	Scope of work -Fire Alarm in cross pasage Area	Please confirm that in Cross passage Area Fire alarm system not required. If required, Please provide the schematic of Fire alarm system for cross passage.	Not required.
468	Fire alram specification	E.22.1.3	Page 232/259	Communication driver at the FACP for interfacing with ISCS.	As per previous DMRC/JMRC metro project FACP Interfacing with ISCS shall be done through Fire relay Module . Kindly confirm	Please follow Bid conditions
469	Fire alram specification	E.22.1.3	Page 233/259	Other function of fire alarm system will include	As per previous DMRC/JMRC metro project FACP Interfacing with lift,Escalator,PAC and AFC shall not be required to avoid false alarm . Kindly confirm	Please follow Bid conditions
470	Fire alram specification	E.22.3.2.3	Page 235/259	The FACP housing shall be to a minimum protection rating of IP 54	UL does not provide any IP rating. Panel cabinets shall be tested & approved by UL. Kindly confirm	Please follow Bid conditions

471	Fire alarm specification	E.22.3.5.2 (a)	Page 240/259	Multi sensor detector shall meet UL standard and comply with BS EN.	Multi sensor detector shall be acceptable UL listed only. Kindly confirm.	will be reviewed at the time of vendor and technical approval
472	Fire alarm specification	E.22.3.5.5 (e)	Page 242/259	Hooter cum strobe - the unit shall be tapped for 1/4, 1, 2 and 4 watts output.	This is not a common feature for all manufacturer, please confirm if /14, 1 and 2 watts output is acceptable.	Please follow Bid conditions
473	Fire alarm specification	E.22.3.13.4	Page 245	Built in printer -Repeater Panel	All vendor doesn't have built in printer at repeater Panel .kindly confirm	will be reviewed at the time of vendor and technical approval
474	Fire alarm specification	E.22.3.13.2	Page 245	The repeater panel shall be fully stand alone complete with power supply,charger/batteris.	Repeater panel shall communicate with main FACP panel for fire status display and no separate charger/battery shall be provided for repeater panel.kindly confirm.	will be reviewed at the time of vendor and technical approval
475	Fire alarm specification	E.22.3.14	Page 245	Fire zone mimic panel	Kindly confirm IP rating for mimic panel.	will be reviewed at the time of vendor and technical approval
476	Vol. 2 (BOQ)	CI A.15.4.8.3	174 of 270	Control Cables	Please provide the feeder or panel description where we will use FS wire as a control wiring.	All internal control wiring shall be of LSZH
477	Vol. 2 (BOQ)	BOQ (Part A Electrical works 1.8.03.(d))	33 of 61	LED indication lamp	LED indication lamp for trip indication not mentioned in BOQ for power factor correction panel 130 & 230. Please clarify	Indication lamps shall be provided. Please quote accordingly
478	Vol. 2 (BOQ)	BOQ (Part A Electrical works 2.08) 225 of 270	34 of 61	Electrical cable tray	in BOQ, cable tray mentioned as GI whereas in TS at A17.3.3.1 same is mentioned as MS Hot dipped galvanized. Please clarify which material we have to consider for pricing	Hot dipped galvanized cable trays are required.
479	Vol. 2 (BOQ)	BOQ (Part A Electrical works 2.08)	47 of 61	Switch boards/ panels	There are two items mentioned for LCP namely BOQ Item 1.14 and 1.14.01.BQ Item no 1.14 for local control panel for chiller pumps, condenser water pump, and cooling tower pumps should have complete description. Please clarify which is to be considered	Please follow addendum
480	Vol. 2 (BOQ)	BOQ (Part A Electrical works 1.10)	35 of 61	DB-232	Outgoings for FCU's taken in DB 132 & 232 are 10A whereas flush type sockets taken for these FCU's at BOQ 1.10 are without MCB. Whereas MCB with socket is required for protection. Please clarify	Please follow addendum
481	Vol. 2 (BOQ)	BOQ (Part A Electrical works 1.5.03(a))	27 of 61	DB-131 & 231	in BOQ DOL starters for single phase damper motor mentioned whereas as MPCB considered is 3P, Please clarify the starter pole	DOL starter to be provided
482	Vol. 2 (BOQ) & SLD	BOQ (Part A Electrical works 1.1.01)	4 of 61	DB-170 & 270	BOQ item no 1.10.1 of DB 170/270 having 3 no 2500A ACB, which is not matching with SLD. 1 additional ACB is required as shown in SLD. Please clarify	Please follow addendum
483	Vol. 2 (BOQ) & SLD	Vol. 2 (BOQ) & SLD		Short circuit withstand capacity	BOQ & SLD short circuit withstand capacity of main breaker & ACB's are not matching. Please clarify	Please follow BOQ.

484	Vol-2 (BOQ)	Appendix-A1	BOQ	List Of Makes	Request to include following makes as the same have been used in other Metro Projects	Contractor can propose any vendor meeting the bid requirements.
					1) Axial Flow Fans: Flaktwood/System Air	
					2) Butterfly Valve: Honeywell	
					3) Pre Fab Duct: ETA/Techno/Zeco	
					4) Panels: Neptune-Elsteel, Tricolite,	
5) ECS & TVS Sound Attenuator: ETA						
					8) Tunnel Ventilation Damper: System-Air	
485	Vol-2 (BOQ)	BOQ		List Of Makes- Switchgear	We understand that as in other metro projects ABB & L&T switchgears were approved. Same shall also be acceptable as an approved manufacturer without any cost implication for the subject tender. Please confirm.	Contractor can propose any vendor meeting the bid requirements.
486	Vol-2 (BOQ)	Appendix-A	BOQ	List Of Makes	Kindly provide makes of all BOQ items and contact details of the vendors.	Contractor can propose any vendor meeting the bid requirements.
487	Vol-2 (BOQ)	Appendix-A	BOQ	List Of Makes	Latest models of equipments may deviate from specification. Same shall be acceptable to employer without any financial implication.	Please follow bid conditions
488	Vol-2 (BOQ)	Appendix-A	BOQ	List Of Makes- Vendor Approval	List 'A' and 'B' shall be provide for items mentioned under respective BOQ heads only.	Please follow bid conditions
489	Vol-2 (BOQ)	Appendix-A	BOQ	List Of Makes- Vendor Approval & Selection Procedure	Discrepancy: Please confirm the minimum no. of years for the product. As in the referred clause 2(a) and 2(c-3) mentions 3 Yrs and 10 Yrs respectively. Please confirm.	Please follow bid conditions
490	Vol-2 (BOQ)	Appendix-A	BOQ	List Of Makes- Vendor Approval & Selection Procedure	Please confirm whether earlier execution experience of Metro system is mandatory for all the vendors approvals. Kindly confirm.	Not mandatory
491	Volume -2 BOQ PART-D	Part D BMS works for ECS & E&M 7.01	page 6 of 17	(Minimum IP-54) panels with foamed -in PU gaskets ,fabricated from 2 mm thick CRCA sheets incorporating.	PLC Panel shall be IP 54 panel with 2mm CRCA sheet at front & Rear Door, However side panel CRCA sheet shall be 1.5 mm. Please confirm if acceptable.	Please follow Bid conditions
492	Vol. 2 (BOQ - PART D)	8.01 BMS PLC Equipment	Pg. 7 of 17	By-pass switch for PLC incase of total PLC failure.	By pass switch is not a feature of PLC. kindly confirm	The by-pass selector switch is to be provided at the MCC panels
493	Vol. 2 (BOQ -PART D)	8.01 BMS PLC Equipment	Pg. 8 of 17	Redundancy Module	For ECS PLC no redundancy required .kindly confirm.	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
494	Vol. 2 (BOQ -PART D)	8.01 BMS PLC Equipment	Pg. 8 of 17	CPU module with on board Ethernet RS 485 Port.	CPU module with board Ethernet RS 485 or RS 232 Port, both shall be acceptable kindly confirm.	Suitable local communication port shall be provided.
495	Vol. 2 (BOQ -PART D)	Part D BMS works for ECS & E&M, clause 10.0 WIRING CONTAINMENT SYSTEMS	page 10 of 17	WIRING CONTAINMENT SYSTEMS	in wiring containment system BMS cable, Cable tray, conduit, LAN cable & earthing are under one BOQ head item i.e. clause 10.0. Please accept for separate boq heads for each mentioned items for separate billing purpose. Kindly confirm	Please follow Bid conditions

496	Vol. 2 (BOQ Part E)	BMS PLC Equipment/7.01-7.20	Pg. 7 of 18	BOQ	All items mentioned in these clause refer to SIEMENS PLC system. Other vendors mentioned in the vendor list cannot supply the specified item. However, they will comply all other specifications of BMS and SCADA. Please confirm / clarify.	Please follow addendum
497	Vol. 2 (BOQ Part E)	Part E BMS works for TVS, clause 10.0 WIRING CONTAINMENT SYSTEMS	page 12 of 18	WIRING CONTAINMENT SYSTEMS	in wiring containment system BMS cable, Cable tray, conduit, LAN cable & earthing are under one BOQ head item i.e. clause 10.0. Please accept for seprate boq heads for each mentioned items for seprate billing purpose. Kindly confirm	Please follow Bid conditions
498	Vol. 2 (BOQ Part E)	Boq item 10 wiring containment Systems	page 15/18	wiring containment system	50 mm wide x 50 mm deep cable tray shall be acceptabale in TVS BMS as accepted in ECS BMS BOQ. Kindly confirm	Please follow Bid conditions
499	Vol. 2 (BOQ Part F)	1.0 SCADA for OCC system	page 1/5	The TVS SCADA for Chandpole station is also in the scope of bidder.	BMS contractor shall not provide any new PLC/IT hardware for chandpole station.BMS contractor shall do engineering ,modification and Integrate the New station BMS system to existing OCC . Kindly confirm	The integration work at OCC is in the scope of the bid
500	ECS SPECIFICATION Tentative station IO Summary TVS North & South, ,	Tentative station IO Summary TVS North & South	Pg No 6/6	Tentative station IO Summary TVS North & South, LHDS DATA	In BMS & TVS SCADA IO summary, Linear Heat Detection System interface shown with BMS System, please confirm if Lineat heat detection System shall provide by another vendor or please provide specification & BOQ for LHDS.	LHDS system is not in scope of this bid
501	BOQ PART D - BMS ECS	9		Transducer & Actuator, PM2.5, & PM10.5	Please provide PM2.5, & PM10.5 sensor specification.	Bidder to select suitable model of the same having BMS compatibility
502	BOQ PART B - ECS	26.2	Flow Meter	Supply, installation, testing & commissioning of flow meter compatible with BMS including all wiring	in BOQ qty. mentioed zero but as per CPM IO summary flow meter qty is 7 please confirm the same.	Please follow addendum
503	BOQ PART B - ECS	1B	Chiller Plant Manager	2 core, ATC, multistrand, 1.0 sqmm, twisted, shielded, LSZH sheathed cable (BAS Signal)	Please confirm size of the cable shall be 1.00 sqmm.	Please follow Bid conditions
504	Vol-II Technical Specification	ECS A00.9.1.2	8 of 270	General Specification- Acoistic Criteria	Kindly clarify the defination of nearest property line of residence for which the acoustic calculation shall be claculated for 2 stations of Jiapur metro Phase-1 B project to avoide any type of discripencies during design verification stage or at exicution stage.	Please follow Bid conditions
505	Vol-II Technical Specification	ECS A01.3.6.4	19 of 270	AHU- Enclosure	Instead of grooves in the extruded section, profile lips shall be acceptable as per manufacturing standards of various vendors. Kindly confirm.	Please follow Bid conditions
506	Vol-II Technical Specification	ECS A01.3.6.5	19 of 270	AHU- Enclosure	Sandwich panels shall be bolted from <i>inside or outside</i> for 50mm thick insulation as per manufacturing practices. Kindly confirm.	Please follow addendum

507	Vol-II Technical Specification	ECS A02.3.2.1	30 of 270	FCU- Tube Thickness	As per manufacturer measurable tolerance shall be provided for the copper tube on behalf of 12.5 mm thick copper tube. Kindly confirm.	Please follow Bid conditions
508	Vol-II Technical Specification	ECS A02.3.2.2	30 of 270	FCU- Al Fin Thickness	As per manufacturer 0.105mm thick Aluminum fins is applicable and shall be provided instead of 0.15mm thick Al Fin. Kindly confirm.	Please follow Bid conditions
509	Vol-II Technical Specification	ECS-A.03.3.5.7	39 of 270	Chiller- Anti Fouling Device	Please specify the make of Anti Fouling device as all chiller manufacturers doesn't provide Anti Fouling device. Kindly confirm.	Contractor can propose any vendor meeting the bid requirements.
510	Vol-II Technical Specification	ECS-A.03.3.5.6	39 of 270	Chiller- Insulation	As per recommendations of manufacturers, insulation to be done at site so the subject clause should be as per manufacturer's standard. Kindly confirm	Agreed. Insulation to be done by OEM only.
511	Vol-II Technical Specification	ECS-A.03.3.8.3	40 of 270	Chiller- Pre Charged Refrigerent	As per manufacturer's recommendation the refrigerent should be charged at site to avoid any type of leakage during transportation - Kindly Confirm	will be reviewed at the time of vendor and technical approval
512	Vol-II Technical Specification	Data Sheet	55 of 270	Chiller Data Sheet- Notes Point no.1	Chillers shall be as per DMRC Specifications- Any deviation in the chillers accepted by DMRC same shall be accepted in this contract also. Kindly confirm	Please follow Bid conditions
513	Vol-II Technical Specification	Data Sheet	59 of 270	Chiller Data Sheet- Notes Point no.2	Condensor & cooler shall be provided with marine water boxes made of steel or CI- shall be as per manufacturer's standard . Kindly confirm	Please follow Bid conditions
514	Vol-II Technical Specification	ECS- A.04 - 4.1	61 of 270	Air Cooled Chiller- Refrigerant	Kindly confirm whether R407C being Zero ODP Environmental friendly refrigerant shall be acceptable.	Please follow Bid conditions
515	Vol-II Technical Specification	ECS- A.04 - 4.2	62 of 270	Air Cooled Chiller- Chiller Tube Thickness	Kindly confirm the tubes shall be acceptable in mark up to some tolerance as per manufacturers standards on behalf of minimum 12 mm O.D.	Please follow Bid conditions
516	Vol-II Technical Specification	ECS- A.04 - 4.2	62 of 270	Air Cooled Chiller- Solenoid Valve	Kindly confirm whether direct solenoid valve shall be acceptable as per manufacturer recommendation performing same function.	will be reviewed at the time of vendor and technical approval
517	Vol-II Technical Specification	ECS- A.04 - 4.4	63 of 270	Air Cooled Chiller- Compressor Oil	Compressor oil are selected as per Refrigerant. Therefore mineral oil may not be applicable for all refrigerant. Kindly confirm.	will be reviewed at the time of vendor and technical approval
518	Vol-II Technical Specification	ECS- A.04 - 4.7	63 of 270	Air Cooled Chiller- Capacity Control.	Automatic capacity control is not applicable for Screw Chillers if applicable. Kindly confirm.	Please follow Bid conditions
519	Vol-II Technical Specification	ECS- A.04 - 4.8	63 of 270	Air Cooled Chiller- Control Panel	Programmable set points, display data, etc of control panel may slightly vary from manufacturer to manufacturer. Therefore manufacturer shall be free to supply the standard control panel as per industrial practice. Kindly clarify.	will be reviewed at the time of vendor and technical approval
520	Vol-II Technical Specification	Data Sheet	90 of 270	GI Sheet - Data Sheet	Reference codes & Standards- Kindly add As per IS 277/655	Please follow Bid conditions

521	Vol-II Technical Specification	Data Sheet	90 of 270	GI Sheet - Data Sheet	Thickness of sheet & type of joints- Kindly confirm as per IS 277/655	Please follow Bid conditions
522	Vol-II Technical Specification	ECS- A.06.3.4.4	89 of 270	Fire Rated Duct Work	Supply of accessories like fire paint, rockwool, sealant, gasket etc is not possible from single vendor. However installation & manufacturing of fire rated duct system certification shall be provided including all fire rated components as a whole. Same process was followed in previous DMRC projects. Please confirm.	Please follow addendum
523	Vol-II Technical Specification	ECS- A.06.3.6.4	93 of 270	Motorised Smoke & Fire Damper	Please confirm UL 555 S Class-II and III shall also be acceptable.	Please follow Bid conditions
524	Vol-II Technical Specification	ECS- A.06.3.6.6	93 of 270	Motorised Smoke & Fire Damper- Actuator, etc	Accessories including Electric Actuator, Limit Switch, Sensors etc shall be UL Listed fire rated for 176 degC for 1Hrs as available with manufacturers . Please confirm.	Please follow Bid conditions
525	Vol-II Technical Specification	ECS-A08.2.1	108 of 270	Cooling Tower- CTI Certification	As per specification Cooling Towers are required with CTI certification. Please suggest other makes at tender stage if the approved make/vendor does not have CTI certified Cooling Tower. Otherwise manufacturing standard of approved make shall be acceptable to employer without any cost implication. Please confirm.	Please follow Bid conditions
526	Vol-II Technical Specification	ECS-A08.3.5	109 of 270	Cooling Tower- Noise Criteria	While measuring noise for a running equipment there are many variables which contributes to noise apart from equipment noise itself. Noise criteria mentioned is 85dbA at 1 Mtr. There may be cases where these results may not be achieved. Also, we suggest noise shall be measured at 3Mtr and not 1Mtr. Please clarify and confirm.	Please follow Bid conditions
527	Vol-II Technical Specification	ECS-A09	114 of 270	FCU Connections- Copper	As per referred clause, FCU connections are required to be in Copper. Please include quantity of Copper pipe in BOQ as the same shall be measureable item. Please clarify.	Please follow Bid conditions
528	Vol-II Technical Specification	ECS- A.09.3.6.3	116 of 270	Piping- Supports & Hangers	As per the table in the referred clause for Hanger Rod sizes. The rod sizes mentioned seems be too high and some are even non standard sizes. Hanger rod sizes shall be selected during project stage with supporting calculations and as per best engineering practice superceeding this clause. Please confirm.	Please follow Bid conditions
529	Vol-II Technical Specification	ECS- A.09.3.8.12 & 13	117 of 270	Piping Installation- Sleeves	Sleeves as required in walls and floors shall be provided by civil as per Final Approved SEM Drawing of DDC. Please confirm.	Please follow Bid conditions
530	Vol-II Technical Specification	ECS- A.12.1.2	140 of 270	Fans- General	If during static claculation and fans selection during project stage any change in fan capacity is required. It shall form new item. Kindly confirm.	Please follow general note (c) of ECS BOQ.

531	Vol-II Technical Specification	ECS- A.12.3.1.2	140 of 270	Fans- Efficiency	Fans with nominal rating above 7.5 kW shall have a minimum efficiency of 60% as per manufacturer. Kindly confirm.	Please follow Bid conditions
532	Vol-II Technical Specification	ECS-A.12.3.3.3	142 of 270	Fans- Impeller	Thrust bearing are not part of all manufacturers design and instead they provide B3 Footed mounting or as applicable. Kindly confirm.	Please follow Bid conditions
533	Vol-II Technical Specification	ECS-A.12.3.4.3	142 of 270	Fans- Casing (Centrifugal)	Drain pipe material and construction shall be as per manufacturers standards. Kindly confirm.	Please follow Bid conditions
534	Vol-II Technical Specification	ECS-A.12.3.4.4	143 of 270	Fans- Impeller (Centrifugal)	Shaft material and Anti Rust coating shall be as per manufacturers standards. Kindly confirm.	Please follow Bid conditions
535	Vol-II Technical Specification	ECS-A.05.4.4.3	74 of 270	Pumps- AFD	Please confirm the enclosure of VFD shall be as per manufacturer standard.	Please follow Bid conditions
536	Vol-II Technical Specification	ECS- A.19	243 of 270	Motors	<p>This section specifies manufacture and installation of motors.</p> <p>(1) But it is not clear whether these specifications are applicable for Pump Motors, Fans Motors, AHU & FCU Motors, Chiller Compressor Motors, Cooling Tower Motor, etc as required.</p> <p>(2) Moreover specification for motors are also covered in separate item wise specification/details. Which one is to be followed and,</p> <p>(3) Please confirm in case of discrepancy which specification will supercede.</p> <p>(4) Also, specification as per this clause is common/general for all which may not be applicable for all.</p> <p>Kindly clarify above points.</p>	This clause will be applicable mainly for AHU, Pump, ECS Fans and Cooling Tower motors.
537	Vol-II Technical Specification	ECS-A.19.1.16	244 of 270	Motors- Base Frame	As per manufacturing standards of various manufacturer, base frame are provided with epoxy coating and not galvanized structure. Kindly clarify.	Please follow Bid conditions
538	Vol-II Technical Specification	TVS-V.01.2	12 of 78	TVS- Quality Controls	For non-American Fan/equipment manufacturers equivalent, international standards shall be complied i.e (ISO – mostly equal to BS), European (EN) and German (DIN, VDI, VDMA) standards etc.	Please follow Bid conditions
539	Vol-II Technical Specification	TVS-V.01.2.3.2	16 of 78	TVS- Documents	Documents to be submitted after employer notice- GA drawings shall be provided by the vendor . Kindly confirm	Please follow Bid conditions
540	Vol-II Technical Specification	TVS-V01.3.3.4	18 of 78	TVS- Fan Start Up Time	Possible only with DOL starters, whereas in case of the start delta starters start up time may vary from 15 to 60 seconds approx. It is recommended to follow NFPA reversing intervals. Kindly Confirm.	Please follow addendum
541	Vol-II Technical Specification	TVS-V01.3.3.6	18 of 78	TVS- Fan BkW & Nameplate kW	Shall be complied at design operation point only. Kindly Confirm.	Please follow Bid conditions

542	Vol-II Technical Specification	TVS-V01.3.4.1	19 of 78	TVS- Fan Fabrication	All manufacturers do not give index marks embossed or engraved on the hub and recommends other ways to adjust blade pitch angle. Please confirm.	will be reviewed at the time of vendor and technical approval
543	Vol-II Technical Specification	TVS-V01.3.4.2	19 of 78	TVS- Fan Fabrication	Weld located in the air stream should be ground smooth- Welds only close to the impeller will be ground smooth kindly confirm	Please follow Bid conditions
544	Vol-II Technical Specification	TVS-V01.3.6.4	20 of 78	TVS- Fan Motors	Possible only with DOL starters. Kindly Confirm.	Please follow addendum
545	Vol-II Technical Specification	TVS-V01.3.6.7	21 of 78	TVS- Fan Motor Voltage Dip	Starting Voltage dip of 25% is not possible in case of Star Delta Starter and Motor shall not be insensitive to line voltage variation but may function and deliver the torque required by the motor at +/- 10% variation for continuous operation.	To be evaluated during vendor and technical approval
546	Vol-II Technical Specification	TVS-V01.3.6.9	21 of 78	TVS- Motor Power Factor	It shall be including allowed tolerances. Please confirm.	Please follow Bid conditions
547	Vol-II Technical Specification	TVS-V01.3.16.4	26 of 78	TVS- Stress Test	Most manufacturers do not carry out stress testing on impeller. They are part of a range that has been subjected to finite elements analysis and stress testing as part of design and development process. Therefore kindly waive this test. Please confirm.	will be reviewed at the time of vendor and technical approval
548	Vol-II Technical Specification	TVS-V01.3.18	27 of 78	TVS- Reversal Test	Manufacturers offer reversal test where fan and motor being run up to full speeds in forward mode and allowed to run at that speed until the data is collected to create the fan curve. Similarly for reverse mode. Please confirm as per manufacturer standards.	Please follow Bid conditions
549	Vol-II Technical Specification	TVS-V02.3.2.4	39 of 78	TVS Dampers- Bearing Mounting	Bearing mounting shall be pressed into frame instead of external to frame or as per manufacturing standard of some manufacturers. Please confirm.	will be reviewed at the time of vendor and technical approval
550	Vol-II Technical Specification	TVS-V05.2	62 of 78	TVS- Booster Fan Quality Controls	For non-American Fan/equipment manufacturers equivalent, international standards shall be complied i.e (ISO – mostly equal to BS), European (EN) and German (DIN, VDI, VDMA) standards etc.	Please follow Bid conditions
551	Vol-II Technical Specification	TVS-V05.3.8.1	69 of 78	TVS- Booster Fan Housing	In addition to referred clause. Some reputed manufacturers offers surface treatment of booster fans with hot dip galvanization as per ISO 1461. Please Confirm.	Please follow Bid conditions
552	Vol-II Technical Specification	ECS A06.3.12.7(Point-3)	97 of 270	Grille/Diffuser Damper- Concealed Lever	Damper are with Concealed knob operated by Screw Driver and hence no extra tool/adjustment lever is required. Please confirm.	will be reviewed at the time of vendor and technical approval
553	Vol-II Technical Specification	ECS A06.3.12.7(Point-4)	97 of 270	Diffuser- Dummy parts	Please clarify this clause as diffuser don't have any dummy parts. Please confirm manufacturer standard shall be accepted.	will be reviewed at the time of vendor and technical approval

554	Vol-II Technical Specification	ECS A06.3.12.7(Point-8 a)	97 of 270	Square Diffuser	Maximun Pressure drop shall be 30 Pa at 4 m/s. Please confirm as per manufacturers standard.	will be reviewd at the time of vendor and technical approval
555	Vol-II Technical Specification	ECS A06.3.12.8(Point-1)	98 OF 270	Free Area - Supply air Grille	Free area varies between 65% to 70%. Please confirm as per manufacturers standard.	will be reviewd at the time of vendor and technical approval
556	Vol-II Technical Specification	ECS A06.3.6.6	93 OF 270	MSFD/MFD- Fire Rating	Fire dampers with 1.5 hrs Fire rating shall be applicable. Please confirm.	Please follow Bid conditions
557	Vol-II Technical Specification	ECS A06.3.6.8	93 OF 270	Fire Damper as VCD	Fire dampers cannot be used as volume control damper as per manufacturers standards. Please allow.	Please follow Bid conditions
558	Vol-II Technical Specification	A 03.3.7	39 OF 270	Chiller- Control Panel	As per the referred clause multi colour display control panel is mentioned. Please waive off this clause as all reputed manufacturer do not provide multi colour display. Please confirm.	will be reviewd at the time of vendor and technical approval
559	Vol-II Technical Specification	A01.3.3	18 of 270	Fans & Accessories	Plug Fans with intagrated factory VFD.- As the fans and VFD's will be precured by different vendors so many of the manufacturer's will not comply for the same so kindly confirm this as per manufacturer's standard.	Please follow addendum
560	Vol-II Technical Specification	A01.3.16.B.2	21 of 270	Intensity	The mesurment of Insensity of UVC emmitter in AHU's shall be Checked by UV Sensor at the time of testing and commissioning of AHU only. Kindly Confirm	Please follow Bid conditions
561	Vol-II Technical Specification	Data Sheet-AHU	27 of 270	Notes- Point no.5	The selection of minimum number of tubes per AHU shall be done as per design calculation given by proposed Vendor. Kindly Confirm	Please follow Bid conditions
562	Vol-II Technical Specification	GENENRAL	NA	Genrerel	All the Dimensional/Tickness/Density and other tolerances of material or equipments shall be as per relavent Codes and standards of related to that perticular material or Equipments. Kindly Confirm	Please follow Bid conditions
563	Vol-II Sechdule of Prices- BOQ Part B ECS Works	8.5	14 &15 of 28	PICV & Factory fitted Ball valves	We understand as being an seprate BOQ item the factory fitted FCU Valve package shall be billed to the Employer under this BOQ Sub head sepratly. Kindly Confirm	Confirmed
564	Vol-2 (TS)	CI A.15.4.1.11	171 of 270	Busbar Phase identification	Busbars shall be coloured with fire retardant LSZH paint for phase identification.That means there is no requirement of fire retardant sleeves in that case.Please confirm.	Please follow Bid conditions
565	Vol-2 (TS)	CI A.15.4.9.3	175 of 270	Terminal Blocks	For maintenance and service point of view terminal block made melamine material was not reliable.Shall we propose polyamide instead of that.Please confirm.	Please follow Bid conditions
566	Vol-2 (TS)	CI A.15.4.8.3	174 of 270	Size of Control Cabling	Shall we use 1.5 sq.mm core wire instead of 2.5 sq.mm in control cabling.Please confirm	Please follow Bid conditions

567	Vol-2 (TS)	CI A.15.4.8.4	175 of 270	Material for ferrule	Shall we use ferrule made of PVC material in place of LSZH material.LSZH ferrule is not easily available in the market. Please confirm.	Please follow Bid conditions
568	Vol-2 (TS)	CI A.16.3.18.1	220 of 270	Cable joints	Please confirm allowable number of joints for long cables above 300 mtr. Also please confirm the number of joints allowable for cables which shall be spliced at site during execution.	Please follow Bid conditions
569	Vol-2 (TS)	CI A.17.3.3.2.(e)	226 of 270	Cable tray earthing	Cable tray earthing is only required where non armoured cable was laid.But in this project we will use armoured cable which is already earthed through armoured.However we have used earth strips of suitable sizes on overall length of cable tray.So that there is no need of cable tray jointing through 150 sq.mm tinned copper bond.Please confirm.	Please follow Bid conditions
570	Vol-2 (TS)	CI A.17.3.3.4.(e)	227 of 270	Cable Ladders-Additional General Requirement;point (e)	Hot dipped galvanized clamps,bolts shall not easy to install.Shall we use Electro tinned clamps,bolts. Please confirm.	Please follow Bid conditions
571	Vol-2 (TS)	CI 2.9.5	236 of 270	Cast in Conduits/Concealed conduits point(a)	Shall we use M.S type of conduit as a concealed conduit. Please confirm.	Please follow Bid conditions
572	Vol-2 (TS)	CI A.15.4.4.2	172 of 270	All meters shall be compatible to RS-485 connectivity	Only Energy meter is compatible with RS-485 to suit BMS .Other meters like ammeter,voltmeter etc are not compatible with RS-485.Please confirm.	Please follow Bid conditions
573	Vol-2 (TS)	CI A.15.3.2.8	168 of 270	Low voltage Switchboards Cubicle Construction	We have consider 3.0 mm thick non-magnetic gland plates rather than 5 mm thick at the top and bottom.Please clarify.	Please follow Bid conditions
574	Vol-2 (TS)	CI A.15.3.2.18	169 of 270	Low voltage Switchboards Cubicle Construction	Upto 250A Copper flexible wire shall be used for linking and above 250A Insulated copper busbar shall be used. Size of busbar/wire shall be as per our standard and current rating of switchgear.	Please follow Bid conditions
575	Vol-2 (TS)	CI A.15.4.9.4	176 of 270	Plain and spring washers, nuts and lockouts shall be electro-tinned	As per Standard Design, we have used 8.8G HT,MS Fastners which are Zn Coated and Hexavalent yellow passivated, these bolts & nuts are capable of withstanding 30Nm torque required on the busbar joints.Please confirm.	Please follow Bid conditions
576	Vol-2 (TS)	CI A.15.4.4.6	172 of 270	Display of meter	Available range for ammeter and voltmeter is 3.5 Digit. We shall propose to use 3.5 digit meters.Please confirm.	Please follow Bid conditions
577	Vol-2 (TS)	CI A.15.4.13.3 (i)	181 of 270	Category for MCCB shall be A or B.	Utility category for MCCB shall be A.Please confirm.	Please follow Bid conditions

578	Volume 2 Part 1 Scope and Purpose	1.1	Page No. 2/10 scope of work-BMS	complete Building Management System (BMS) (including TVS SCADA work) to fully integrate control, monitoring, and supervision Environmental Control Systems, Low Voltage Power & Distribution System, Fire Alarm System, Hydraulic System (Seepage, Sewage, Bore Well Pumps etc.), and other nominated Building Services Systems and interface with Tunnel Ventilation System SCADA at the station level as well as at the OCC level.	In tender it is mentioned different units/equipments to be covered but as IO summary is available so we consider IO summary as your final requirement.kindly confirm.	Please follow Bid conditions, IO Summary is indicative bidder to consider additional IO if required to completely integrated the system
579	Volume 2 Part 1	1.3/5	Page No. 6/10 scope of work-BMS	Earthing of all Equipment as defined in the specification.	Earthing (MET & CET) for all BMS Equipment shall be provided system -vide contractor at Respective PLC, VCP & Mid tunnel controller locations. Kindly confirm.	Both BMS and E&M works are in scope of this bid
580	Volume 2 Part 1	1.3/11	Page No. 6/10 scope of work-BMS	The contractor will be responsible for sealing with fire rated material of all openings left due to BMS works.	sealing with fire material of all opening left due to BMS shall be the scope of civil or other vide contractor .kindly confirm	Please follow Bid conditions
581	Volume 2 Part 1	1.3/12	Page No. 6/10 scope of work-BMS	Providing Energy management system at station and OCC is in the scope of BMS works.	Please confirm if there is requirement of additional software & hardware other then BMS software for Energy Management System.	Confirmed the software or hardware required for Energy Management System is in scope of this bid
582	Volume 2 Part 1	1.3/12	Page No. 6/10 scope of work-BMS	Providing Energy management system at station and OCC is in the scope of BMS works.	Please confirm if there is requirement of additional software & hardware other then BMS software for Energy Management System.	Confirmed the software or hardware required for Energy Management System is in scope of this bid
583	Volume 2 Part 1 Scope of Works TVS SCADA	Cl 1.1	Pg 2/-12 clause 1.1 scope and Purpose	The Works to be executed under the Contract include the detailed design, development, manufacture, verification, delivery to site, installation, testing, commissioning (including integrated testing and commissioning) and technical support for a complete Integrated Supervisory Control System (ISCS) to fully integrate the control, monitoring, and supervision of Tunnel Ventilation System from OCC as well from station level. The Equipment, CPU's, Modules, Sub Modules, Power Supplies, Local Control Panels, Servers, Work Stations, modems, Gateways, RTUs, Printers, Local Area Network (LAN), Ethernet Hubs and Switches, Ventilation Control Panel (VCP), Cable containment and wiring systems, and other components as required whether or not specified necessary to deliver the requirements of this Specification to fully integrate the control, monitoring, and supervision of Tunnel Ventilation System from OCC in future and at present from Station Control Room as well as for control, monitoring, and supervision as required at the Operational Control Centre (OCC) in future and at present from Station Control Room for the ECS and other E&M systems. The TVS contractor shall	contractor shall provide the redundant server at SCR and data exchange with OCC will take place directly from Local Station PLC and if the BMS vendor is not able to achieve the same they need to provide the RTU at SCR kindly confirm the same.	Confirmed.

584	Volume 4 Part 1 Scope of Works TVS SCADA	Cl 1.2	Pg No. 3/14 clause 1.2	All necessary equipments at OCC whether specified or not specified like servers, work station, RTUs, Modems, Gateways, switches and other associated accessories including cables their containment arrangement necessary to provide for control, monitoring, and supervision of Tunnel Ventilation System from OCC as well as from station level and ECS, PS and BS system from OCC. Control and Monitoring Facilities the Contractor shall provide necessary hardware, software, data, etc., so that the control and monitoring functions for the TVS can be performed from OCC and stations and control and monitoring functions for ECS and E&M system from OCC. DMRC reserves right not to award/ execute the work of RTUs at the station and other equipment at the OCC level.	In previous phase we have TVS control from OCC and not ECS so kindly confirm the same.	Please follow Bid conditions
585	Volume 2 Part 1 Scope of Works TVS SCADA	Point 5	Pg No. 7/12 Point 5	To provide individual or group start/stop and indicate status of TVS equipment.	Kindly confirm whether individual control is needed or group control is needed from OCC as its effect the Design and size (SCADA and CTU) at OCC level, accordingly which involves considerable cost implication.	Individual control is not required from OCC
586	Volume 2 Part 1 Scope of Works TVS SCADA	Point 5	Pg No. 7/12 Point 5	To indicate and log the operating status and alarm conditions of the TVFs, TBFs, UPEFs, TEFs and their associated dampers, tunnel ventilation system bypass and isolation dampers, MCCs and emergency stop push button.	As UPEF's and its damper points are not mentioned in the IO summary so kindly provide the same.	Please follow Bid conditions, I/O schedule is indicative
587	Volume 2 Part 1 Scope of Works TVS SCADA	Point 8	Pg No. 8/12 Point 5	Local sequential controller	As per Schedule of quantities For Part E -BMS works for TVS, BOQ item no 7 .22 Touch screen LCD type local control panel shall be provided in Place of LSC/LCP . Kindly confirm	Confirmed
588	Volume 2 Part 1 Scope of Works TVS SCADA	Point 8	Pg No. 9/12 Point 8	To monitor the activation of the push buttons or switches on the VCP, SCP and LCP and execute priority control.	Kindly confirm that SCP will be part of VCP.	Please follow addendum
589	Volume 2 Part 1BMS specifications	BMS/2.01.13	Page 14 of 91	The designated contractor will only provide the main communication network and Local area network (LAN) located in OCC.	The designated contractor shall provide main communication link with 2 redundant port at each station & OCC. Also designated contractor shall provide IP addresses with router for communication with OCC. Kindly confirm.	Only Communication channel between OCC and station will be provided by Others. Any hardware like Routers, switches, gateways and software is in scope of this bid.
590	Volume 2 Part 1BMS specifications	2.01.23	Pg 17/91 clause BMS/2.01.23	EMC Conformance and certification.	EMC conformance and certification Applicable to PLC and not other devices. Kindly confirm.	Please follow Bid conditions

591	Volume 2 Part 1BMS specifications	2.01.24	Point 17/91 Clause BMS/2.01.24	Computer Simulation	All the testing will be carried out on the actual systems installed at site and no separate simulation will be provided.kindly confirm	For off-site testing simulation shall be required.
592	Volume 2 Part 1BMS specifications	2.01.30	pg No. 20/91 Clause BMS/2.01.30.	Design Considerations The complete installation shall be in strict accordance with the national and local electrical codes. All devices designed for or used in line voltage applications shall be U.L. Listed.	contractor shall provide equipment as per country of origin standards like CE, EN or UL.kindly confirm.	To be evaluated at the time of vendor and technical approval
593	Volume 2 Part 1BMS specifications	2.01.31	pg No. 21/91 Clause BMS/2.01.30.	Micro processor based PLC control processors shall interface directly with sensors ,actuators and enviornmental control systems (i.e HVAC units ,chillers ,pumps etc).	Micro processor based PLC control processors shall interface with sensors ,actuators and enviornmental control systems (i.e HVAC units ,chillers ,pumps etc) directly or through CPM as per Tender I/O schedule.Kindly confirm.	Confirmed
594	Volume 2 Part 1BMS specifications	BMS/5.01.13	PLC processor page 31 of 91	All the Modules of the PLC platform should have the capacity to be inserted and removed under fully powered up conditions, including the CPU Module.	For TVS system which is redundant is fine, for ECS systems which are non redundant systems, serves no purpose. kindly confirm	Please follow Bid conditions
595	Volume 2 Part 1BMS specifications	5.01.6	Pg No. 28/91 Clause BMS/5.01.6	To indicate and log the operating status and alarm conditions of the TVFs, TBFs, UPEFs, TEFs and their associated dampers, tunnel ventilation system bypass and isolation dampers, MCCs and emergency stop push button.	As UPEF and its damper points are not mentioned in the IO summary so kindly provide the same.	UPEF IO are not required
596	Volume 2 Part 1BMS specifications	5.01.8	Pg No. 29/91 Clause BMS/5.01.8	To provide back-up for the operation of the TVS in the event of failure of automatic control of the SCADA, the following additional provisions shall be provided Manual operation of the individual TVFs, TBFs and TEFs from the OCC.	From OCC group commands will be intiated and not the Manual opertaion of indiviual of points. Kindly confirm	Individual control is not required from OCC
597	Volume 2 Part 1BMS specifications	5.01.13	PLC processor page 31 of 91	The PLC system shall be Fail safe control ,Programmable Logic controller (PLC) based with a QUADRUPLE MODULAR REDUNDANCY (QMR) system architecture.	BMS contractor shall provide the PLC as per tender for ECS BMS - Non -SIL & for TVS BMS -SIL-2. It shall not be based on QMR system architecture which is OEM specific. kindly confirm.	Please follow addendum
598	Volume 2 Part 1BMS specifications	5.01.17	Pg No. 34/91 Clause BMS/5.01.17	PLC additional feature - Options shall include a built-in display screen, memory cartridges, a real-time clock and communication adapters.	its not a common feature for PLC maufacturer, Kindly confirm for deletion of this point.	Please follow Bid conditions
599	Volume 2 Part 1BMS specifications	6.01.9	Pg No. 39/91 Clause BMS/6.01.9	Alarm If a network link fails, the system shall have inbuilt programs within the processors which will generate fault bits available to workstation and OCC. The communications error rate will be logged and stored in the processor. If the error rate exceeds the set point , an alarm will be sent to OCC.	Kindly clarify the requirement.	Please follow Bid conditions

600	Volume-2 Part -1 specification OCC & Related works	3.2.10	Page 9 of 72	In case of clock system ;information will have to be retrieved through FOTS or vias RTUs at stations and depots or through Channel interfaces.	Master clock - system vide contractor shall provide redundant port at stations & OCC for synchronization of BMS system . Kindly confirm	Agreed
601	Volume-2 Part -1 specification OCC & Related works	4.20.2	Pg No. 50/72 Clause 4.20.2	Historical data shall be able to be manipulated.	Kindly clarify the requirement as historical data stored can not be manipulated in the database.	Please follow addendum
602	Volume-2 Part -1 specification OCC & Related works	5.1.3	Pg No52/72 Clause 5.1.3.	In particular the design and positioning of the mimic displays within the OCC shall be such that the information of interest to each operator is visible from their normal position.	As per BOQ, MIMIC display is not available. Please confirm if need to provide the same by BMS vendor.	Mimic display is not required
603	Volume 2 Part 1 ECS & TVS BMS Specification	6.01.6	Pg 37/91 Clause BMS/6.01.6	Two identically- configured PLC processors are connected in a "Hot Standby" arrangement as "Master" and "Standby" so that when a component of the Master PLC fails, the standby PLC will take over automatically without interrupting the plant operation. The two PLCs communicate with each other over Modbus plus communication bus or Fiber optic.	Contractor shall provide redundant PLC's for only TVS System (SIL-2) and for ECS System PLC shall be non redundant. kindly confirm.	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
604	Volume 3 Bid Drawings	Ecs Bms system architecture	Ecs Bms system architecture	JP -CRD-ECS-TVS-SC-1901	Tender drawings referring to particular make/model .kindly remove to same for competitive bid .	The drawings are for reference only. The system architecture as per drawings are to be followed
605	Volume 3 Bid Drawings	Ecs Bms system architecture	Ecs Bms system architecture	JP -CRD-ECS-TVS-SC-1901	As per the ECS BMS specification No redundant LAN network required for ECS BMS works.kindly confirm	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
606	Volume 3 Bid Drawings	TVS Bms system architecture	TVS Bms system architecture	JP -CRD-ECS-TVS-SC-1902	Tender drawings referring to particular make/model .kindly remove to same for competitive bid .	The drawings are for reference only. The system architecture as per drawings are to be followed
607	Volume -2 BOQ PART-D	Part D BMS works for ECS & E&M 7.01	page 6 of 17	(Minimum IP-54) panels with foamed -in PU gaskets ,fabricated from 2 mm thick CRCA sheets incorporating.	PLC Panel shall be IP 54 panel with 2mm CRCA sheet at front & Rear Door, However side panel CRCA sheet shall be 1.5 mm. Please confirm if acceptable.	Please follow Bid conditions
608	Vol. 2 (BOQ - PART D)	8.01 BMS PLC Equipment	Pg. 7 of 17	By-pass switch for PLC incase of total PLC failure.	By pass switch is not a feature of PLC.kindly confirm	The by-pass selector switch is to be provided at the MCC panels
609	Vol. 2 (BOQ -PART D)	8.01 BMS PLC Equipment	Pg. 8 of 17	Redundancy Module	For ECS PLC no redundancy required .kindly confirm.	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
610	Vol. 2 (BOQ -PART D)	8.01 BMS PLC Equipment	Pg. 8 of 17	CPU module with on board Ethernet RS 485 Port.	CPU module with board Ethernet RS 485 or RS 232 Port,both shall be acceptable kindly confirm.	Suitable local communication port shall be provided.

611	Vol. 2 (BOQ -PART D)	Part D BMS works for ECS & E&M, clause 10.0 WIRING CONTAINMENT SYSTEMS	page 10 of 17	WIRING CONTAINMENT SYSTEMS	in wiring containment system BMS cable, Cable tray, conduit, LAN cable & earthing are under one BOQ head item i.e. clause 10.0. Please accept for seprate boq heads for each mentioned items for seprate billing purpose. Kindly confirm	Please follow Bid conditions
612	Vol. 2 (BOQ Part E)	BMS PLC Equipment/7.01-7.20	Pg. 7 of 18	BOQ	All items mentioned in these clause refer to SIEMENS PLC system. Other vendors mentioned in the vendor list cannot supply the specified item. However, they will comply all other specifictions of BMS and SCADA. Please confirm / clarify.	Please follow addendum
613	Vol. 2 (BOQ Part E)	Part E BMS works for TVS, clause 10.0 WIRING CONTAINMENT SYSTEMS	page 12 of 18	WIRING CONTAINMENT SYSTEMS	in wiring containment system BMS cable, Cable tray, conduit, LAN cable & earthing are under one BOQ head item i.e. clause 10.0. Please accept for seprate boq heads for each mentioned items for seprate billing purpose. Kindly confirm	Please follow Bid conditions
614	Vol. 2 (BOQ Part E)	Boq item 10 wiring containment Systems	page 15/18	wiring containment system	50 mm wide x 50 mm deep cable tray shall be acceptabale in TVS BMS as accepted in ECS BMS BOQ. Kindly confirm	Please follow Bid conditions
615	Vol. 2 (BOQ Part F)	1.0 SCADA for OCC system	page 1/5	The TVS SCADA for Chandpole station is also in the scope of bidder.	BMS contractor shall not provide any new PLC/IT hardware for chandpole station.BMS contractor shall do engineering ,modification and Integrate the New station BMS system to existing OCC . Kindly confirm	The integration work at OCC is in the scope of the bid
616	ECS SPECIFICATION Tentative station IO Summary TVS North & South, ,	Tentative station IO Summary TVS North & South	Pg No 6/6	Tentative station IO Summary TVS North & South, LHDS DATA	In BMS & TVS SCADA IO summary, Linear Heat Detection System interface shown with BMS System, please confirm if Lineat heat detection System shall provide by another vendor or please provide specification & BOQ for LHDS.	LHDS system is not in scope of this bid
617	BOQ PART D - BMS ECS	9		Transducer & Actuator, PM2.5, & PM10.5	Please provide PM2.5, & PM10.5 sensor specification.	Bidder to select suitable model of the same having BMS compatibility
618	BOQ PART B - ECS	26.2	Flow Meter	Supply, installation, testing & commissioning of flow meter compatible with BMS including all wiring	in BOQ qty. mentioed zero but as per CPM IO summary flow meter qty is 7 please confirm the same.	Please follow addendum
619	BOQ PART B - ECS	1B	Chiller Plant Manager	2 core, ATC, multistrand, 1.0 sqmm, twisted, shielded, LSZH sheathed cable (BAS Signal)	Please confirm size of the cable shall be 1.00 sqmm.	Please follow Bid conditions
620	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, POINT F(d)	Pg No 263/270	Energy metering using special Energy Software with dashboard and customized reporting tools for DMRC stations.	As defined in Chiller Palnt Manager BOQ & IO summary, Chiller Plant manager scope is limited to monitoring & controlling of Chiller Plant room equipments Like chillers, pumps, cooling towers & Valves only. Please confirm if Energy metering report is required only for these equipments.	Please follow addendum
621	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, POINT F(e)	Pg No 263/270	Automatic alarm routing through email & SMS to user	Automatic alarm routing through email is avialable in maximum all vendors equipment but SMS feature is not availbale commonly. Please confirm if only email option is sufficient for automatic alarm routing.	Please follow addendum

622	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, POINT, Work included Point B	Pg No 264/270	The system (CPO) shall have minimum controlling capacity of 10,000 physical points without upgrading the data server software or related hardware.	In CPM IO summary there are approximate 300 hard and soft I/O points, we shall consider the software with maximum IO points requirement as per actual site conditions with 20% extra spare capacity. Also hardware module for the same shall consider accordingly as per actual site conditions with 20% spares otherwise panel size & cost with 10,000 I/O module shall be very high & not useful.	Please follow addendum
623	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, Work included Point B, CPO System Architecture point 1 standalone network automation/cpntrol engine (H)	Pg No 265/270	Network engine should have inbuilt display & keys to operate in absence of PC	This is not a common feature for all manufacturer, please confirm if it can delete.	Please follow addendum
624	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, Work included Point B, CPO System Architecture point 1 standalone network automation/cpntrol engine (I)	Pg No 265/270	Network engine should have inbuilt IO points functionality able to act as a DDC controller as well as supervisory controller.	This is not a common feature for all manufacturer, please confirm if it can delete.	Please follow addendum
625	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, Work included Point B, CPO System Architecture point 2 Work Station & Energy Management Software (To be integrated in BMS)	Pg No 265/270	The Specification mentioned herein are applicable for the energy management system which is to be provide in the station BMS & OCC for central monitoring	Please clarify if there is requirement of additional software other than CPM software for installation in BMS PC at station level & at OCC for central monitoring & controlling.	Please follow addendum
626	ECS SPECIFICATION	SECTION A.25 CHILLER PLANT MANAGER, Work included Point B, CPO System Architecture point 3 DDC field equipments controller and input/output Module. Point F	Pg No 267/270	Each panel shall be provided with a socket for a portable operators terminal which can be connected via Bluetooth communication for easy access for testing & trouble shooting and no need to open the panel, and a port for network communication in Max. speed of 76 KBPS.	Bluetooth connectivity is not common for all manufacturer, please confirm if can delete.	Please follow addendum
627	ECS SPECIFICATION	A 13.3.9.7	Pg No 151/270	Flow Convertor Electronic Package	Please confirm the type of flow meter to be used for works.	Flow converter not required.
628	ECS SPECIFICATION	A 13.3.18	Pg No 153/270	CARBON DI OXIDE & AIR QUALITY MONITOR SENSOR, AIR QUALITY	Please confirm types of parameter to be monitor by Air quality sensor.	Please follow addendum
629	ECS SPECIFICATION	A 13.3.19	Pg No 154/270	CARBON DI OXIDE & AIR QUALITY MONITOR SENSOR, The communication interface shall be RS-485	Please confirm if 4-20ma signal is acceptable instead of RS-485 for third party communication.	Agreed

630	Vol-I General Specification	Appendix 7	Appx : 7-1 of 2/ 7-1 of 3	Engineer's Accommodation for Site Works	As being an high value item we request the Details of the same should be incorporated as an BOQ item so that we can Quote the relevent scope during submission of finalcial bid. Kindly provide the BOQ for the same	Please follow addendum
631	Vol-I General Specification	16.1.1	Liaison with others	Obtaning necessary Approvals for Govt. Bodies	We understand all the necessary approvals from Govt.Dept or Bodies shall be provided by employer i.e JMRC ,however Contractar shall corinate for necessary paper works for the same.Kindly confirm	Please follow Bid conditions
632	Vol-I General Specification	17.2.7	Site Restriction	Waste Disposal	We understand that the area/land for disposing waste shall be provided by employer . Kindly confirm	Agreed
633	Vol-I General Specification	17.10.3	Transportation to site	Inteface with Govt. bodies	We understand all the necessary approvals from Govt.Dept or Bodies shall be provided by employer i.e JMRC ,however Contractar shall corinate for necessary paper works for the same.Kindly confirm	Please follow Bid condition
634	Vol-I General Specification	2.4	Work Programe	Outline Work Programe	Outline Work Programe to be provided by the Employer. Kindly Confirm	Please follow Bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
	TECHNICAL QUERIES (ELECTRICAL SYSTEMS)							
635	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	Section A15: Low Voltage Electrical Panel PART-A BOQ for Electrical Works	167 of 270 2 of 86	4.3.12 1.q	Insulation Voltage of MCCB	Rated insulation voltage: 660 V AC, higher voltage acceptable	In Technical Specifications insulation voltage is mentioned as 660V or higher but in BOQ it is mentioned as 690 V Please confirm.	Please follow BOQ
636	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	Section A15: Low Voltage Electrical Panel PART-A BOQ for Electrical Works	180 of 270	4.13.2(1)	MCCB	MCCBs shall comply with and be type-tested to IS/IEC 60947-2 or EN 60947-2. Each MCCB shall be of fixed or withdrawable type, as specified in the BOQ	Kindly confirm whether the MCCB shall be fixed or withdrawable since the same is not mentioned in BOQ.	Fixed Type
637	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	Section A15: Low Voltage Electrical Panel PART-A BOQ for Electrical Works	181 of 270	4.13.2(1)	MCCB	MCCB's to be provided in LV Main Switchboard shall be stored energy type motorized and Suitable for Remote Closing by BMS.	As per specifications & BOQ MCCB shall be Stored energy typr motorised breaker but the same is not mentioned in SLD. Kindly clarify.	Please follow BOQ

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
638	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications	Section A15: Low Voltage Electrical Panel	181 of 270	4.13.3 (h)	MCCB	Rated: service short-circuit breaking capacity (Ics): 65/50/35 kA	Kindly clarify as there is a mismatch in the clauses mentioned.	Please follow the BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS	2 of 61	1.0 (m)		The breaking capacity as mentioned in items of BOQ below, shall be Ics values and shall not be less than 50kA.		
639	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings			Classification	Classification B, C & D1	As per SLD bus bars are classified as B/C/D1. The same is not mentioned in BOQ. Kindly provide/clarify classification basis of the same.	Please follow bid conditions
640	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings		1.05			Quantity of outgoing feeders is 25 Nos as per BOQ but in SLD it is 29 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	19 of 86					
641	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings		1.06			Quantity of 400/250 A 3p MCCB outgoing feeders is 8 Nos as per BOQ but in SLD it is 7 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	19 of 86					

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
642	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	20 of 86	1.06			Quantity of 160/100 A 3p MCCB outgoing feeders is 8 Nos as per BOQ but in SLD it is 9 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
643	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	22 of 86	1.09			Mentioned Capacitor panel is not available in SLD. Kindly provide. We will quote as per BOQ.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
644	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	26 of 86	1.16			Outgoing feeder of DB 155 as per BOQ has RCBO where as in SLD it is mentioned as RCCB. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
645	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	26 of 86	1.17			Outgoing feeder as per BOQ is RCBO where as in SLD it is mentioned as RCCB. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
646	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	29 of 86	1.18			For Outgoing feeders TP contactor is mentioned in SLD but not in BOQ. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
647	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	31 of 86	1.19			Quantity of borewll outgoing feeders in 3 Nos as per BOQ but in SLD it is 2 nos only. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
648	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	31 of 86	1.19			Outgoing feeder as per BOQ is RCBO where as in SLD it is mentioned as RCCB. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
649	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	33 of 86	1.19			Quantity of Stat delta starter with 13 A MCCB is not matching.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
650	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	33 of 86	1.19			Quantity of DOL starter with 6.3 A MCCB is not matching.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
651	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	33 of 86	1.20			Quantity of Local motor control panels for sewage pumps is 2 nos (DB 111 & 211) as per BOQ but only one(DB 111) is mentioned in SLD. Kindly clarify.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
652	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	34 of 86	1.20			Rating of incomer feeder ois 100/63 A 4p motorised MCCB as per BOQ but in SLD it is 160/100 A MCCB . Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
653	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	34 of 86	1.20			Outgoing feeder as per BOQ is RCBO where as in SLD it is mentioned as RCCB. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
654	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	34 of 86	1.20			For Outgoing feeders TP contactor is mentioned in SLD but not in BOQ. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
655	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	35 of 86	1.20			Local motor control starter for Entry/Exit pumps panel is not available in SLD. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
656	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings		2.1			SLD's for Small power boards are not available. Kindly provide. The same will be quoted inline with BOQ.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
657	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications	Section A17: CABLE CONTAINMENT SYSTEM	225 of 270	A17.3.3.1 (e)	Cable trays	Widths of cable trays, thickness of steel, flanges of trays, and bends or tees, shall be nominally as follows:	Thickness of trays below 300 mm width is mentioned as 1.5mm as per specification but in BOQ it is 2 mm. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	3.09					
658	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications	Section A17: CABLE CONTAINMENT SYSTEM	225 of 270	A17.3.3.1 (e)	Cable trays	Widths of cable trays, thickness of steel, flanges of trays, and bends or tees, shall be nominally as follows:	Thickness of trays for 300-450mm width is mentioned as 1.6mm as per specification but in BOQ it is 2 mm. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	3.09					
659	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications	Section A17: CABLE CONTAINMENT SYSTEM	225 of 270	A17.3.3.1 (e)	Cable trays	Widths of cable trays, thickness of steel, flanges of trays, and bends or tees, shall be nominally as follows:	Flange height for trays below 300 mm is 35 mm as per specification but in BOQ it is 50 mm. Kindly clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	3.09					

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
660	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume – II Technical Specifications PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	Section A17: CABLE CONTAINMENT SYSTEM PART-A BOQ for Electrical Works	225 of 270 3.09	A17.3.3.1 (e)	Cable trays	Widths of cable trays, thickness of steel, flanges of trays, and bends or tees, shall be nominally as follows:	Flange height for trays 300-450 mm is 35 mm as per specification but in BOQ it is 50 mm. Kindly clarify	Please follow BOQ
661	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	List of electrical drawings PART-A BOQ for Electrical Works	79 of 86	9A.1			DG supply incoming feeder is mentioned as 3P ACB in BOQ but in SLD it is 4P ACB. Kindly clarify.	Please follow BOQ
662	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works	80 of 86			Outgoing feeders - (Total 4 Nos) - One Nos. for DB - 260, One Nos. for DB - 310 & One Nos. for Spare with each of the above feeders consisting of the following:	We presume that the total no f outgoing feeders shall be 3 nos- ne Nos. for DB - 260, One Nos. for DB - 310 & One Nos. for Spare . Kindly confirm.	Please follow BOQ
663	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	List of electrical drawings PART-A BOQ for Electrical Works	80 of 86	9A.2.D			Quantity of 400/400 A 3p MCCB is not matching with SLD.	Please follow BOQ

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
664	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	80 of 86	9A.2.D			Quantity of 100/40 A 3p MCCB is not matching with SLD.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
665	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	80 of 86		DB-291		Outgoing feeder 160/100 A 3p MCCB is not mentioned in BOQ. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
666	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	81 of 86	9A.3.A			Incomer to DB-291 is mentioned as 160/100 A in SLD but in BOQ it is 100/40 A . Kindly clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
667	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	81 of 86	9A.3.C			Quantity of DOL outgoing is not matching.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
668	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	81 of 86		DB-291		DG battery charger outgoing is mentioned in SLD but in BOQ the item is not available. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
669	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	81 of 86	9A.3.C			Outgoing of 10 A MCB is mentioned in BOQ but not in SLD. Kindly clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
670	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	4 of 61	1.1.01			No of incomers for 170/270 as per BOQ is 2 nos whereas SLD shows 3 incomers for DB-170/270. Please clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
671	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	4 of 61	1.1.01			As per SLD incomer of DB170/270 have 4P ACB whereas in BOQ it is TPN ACB. Please clarify	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
672	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	9 of 61	1.1.08			As per SLD feeder rating of Cooling tower fans is 40A whereas in BOQ it is 25A. Please clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
673	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	10 of 61	1.1.10			Please confirm whether MCCB or MCB is used in feeder for UPS-AB (Anciliary Building). BOQ does not call for any MCB feeder	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
674	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	14 of 61	1.3.03			As per SLD, there 3 nos of 250A star -delta feeder whereas BOQ does not call for star delta feeder. Please clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						
675	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	14 of 61	1.3.05			As per SLD, there are 7 nos of 4A DOL and 1 no of 100A DOL feeder whereas in BOQ it is mentioned as 8 nos 4A feeder. Please clarify	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A BOQ for Electrical Works						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
676	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	35 of 61	1.06A			In SLD there is only 1 CT for metering but in BOQ it is mentioned as 3 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
677	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	35 of 61	1.06C			In SLD DP Contactor for DOL outgoing feeders are mentioned where as in BOQ it is mentioned as 3Pole contactor. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
678	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	35 of 61	1.07.A			In SLD there is only 1 CT for metering but in BOQ it is mentioned as 3 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
679	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	31 of 61	1.07.C			In SLD DP Contactor for DOL outgoing feeders are mentioned where as in BOQ it is mentioned as 3Pole contactor. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
680	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	32 of 61	1.08.A			Incomer breaker for capacitor bank panel is 630 A TP ACB as per SLD whereas in BOQ it is mentioned as 630 A 3P MCCB. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
681	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	32 of 61	1.08.A			In SLD there is only 1 CT for metering but in BOQ it is mentioned as 3 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
682	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	33 of 61	1.09.A			In SLD there is only 1 CT for metering but in BOQ it is mentioned as 3 nos. Kindly clarify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
683	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	36 of 61	1.11			The mentioned item is not available in SLD. We will quote as per BOQ. Kindly confirm	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
684	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	43 of 61	1.12.01.A			In SLD there is only 1 Ct for metering but in BOQ it is mentioned as 3 nos. Kindly clarify.	Please follow the BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
685	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	43 of 61	1.12.01.B			As per BOQ short circuit rating of bus bars is 50 kA whereas in SLD it is 65 kA. Kindly calrify.	Please follow BOQ
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
686	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	43 of 61	1.12.01.C			Rating of soft starter feeder is mentioned as 280 KW in SLD whereas in BOQW it is 270 KW. Kindly clarify.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
687	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	43 of 61	1.12.01.C			For Soft starter outgoing 1.no of ACB is mentioned in BOQ. We presume that ACB for 2 sets ofsoft starter shall be 2 nos . Kindly confirm.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
688	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	44 of 61	1.12.01.C			As per BOQ 10 sets of Dol units are mentioned whereas in SLD there are 11 nos(including spare). Kindly clarify.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS						
689	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	43 of 61	1.12.01.C			The mentioned item is not available in DB-240 in SLD. Kindly clarify.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS				2 No. 10 A MCCB feeder for compressor Drier		
690	PART-II REQUIREMENTS Section 6 - Employer's Requirements (ERQ) Volume - III Bid drawings	List of electrical drawings	45 of 61	1.12.01.C			The mentioned item is not available in DB-240 in SLD. Kindly clarify.	Please follow Addendum
	PART-I BIDDING PROCEDURES Section 4 - Bidding Forms (BDF) Volume 2- Schedules of Prices (BOQ)	PART-A ECS ELECTRICAL WORKS				2 No. 100 A MCCB feeder for compressor		
TECHNICAL QUERIES (MECHANICAL SYSTEMS)								

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
691	Volume II	A04		Witness Testing of A/C Scroll Chillers in Factory	Air Cooled Screw Chiller	Witness Testing of A/C Scroll Chillers in Factory	The chiller can be tested at full load (100%) load that too for 250 KW at 28 Deg C Ambient Temp. The Eurovent Certified Test Bed has a limitation of minimum testing possibility for 250 KW which comes at 28 Deg C for proposed Model. Hence Part Load testing is not possible.	Please follow bid conditions
692	Volume II	A03	page 44 of 270	Clause A03.3.5.C chillers - A03.3.4	Centrifugal Water Chiller	Factory Installed Insulation	Insulation on cold parts are done on site as per factory recommendation; to avoid any kind of damage on insulation during transition from factory till site.Hence , we request you to consider Insulation at Site instead at Factory.	Acceptable. Insulation to be done by OEM only

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
693	Volume II	A03	page 55 of 270 & page 59 of 270	Data Sheet	Water Cooled Screw Chiller	Winding Temp. Sensor	<p>Tripping happens due to other safeties like high current draw, low suction pressure, Hi discharge Pressure, oil temp. etc.</p> <p>The draw back of winding temperature sensors embedded in windings is that when these sensors get weak/faulty after certain period of time , it leads to frequent on/offs of the machine. In order to replace the faulty sensor, the complete compressor need to be dismantled, winding to be removed , sensor to be inserted in stator slot & rewind again (gas to be removed/ flushing/ nitrogen charged/vaccumised & then recharged with refrigerant) . The other method is to bypass the faulty sensor.</p>	Please follow Addendum
694	Volume II	A25	ECS - Specifications - Page No 260R1, point no F d		Chiller plant manager	Energy metering using special Energy Software with dashboard and customised reporting tools for DMRC	<p>We can provide customised energy reports (captured from EM/FM etc) of equipments on daily basis . We can generate daily/monthly/quarterly/annual consumption reports.</p> <p>Customised Energy Dashboard will be there for real time values. KWh Consumption is calculated through energy meters and TR is calculated through flow meter in chilled water line.</p>	Please follow Addendum

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
695	Volume II	A25	Page No 266 of 270	CPO System Architecture e.2.C	Chiller plant manager	Historian of Point Data shall be configurable as part of the point definition. Historian shall be provided for both snapshot and averages with intervals ranging from 5 Sec to 24hrs	We are partially complying with this with the clarification that live trend viewer polls at 10 seconds intervals and we can go up to 1 minute trend interval for data logs.	Please follow Addendum
696	Volume II	A25	Page No 266 of 270	CPO System Architecture e.2.D	Chiller plant manager	Trend and change of value data shall be stored within the engine and uploaded to a dedicated trend database or exported in a selectable data format via a provided data export utility.	From the specifications, we have understood that all trends are being stored in network engine (Tracer SC) and can be easily exported to required format in Tracer ES. With this understanding we confirm that we are complying.	Please follow Addendum
697	Volume II	A25	Page No 266 of 270	CPO System Architecture e.2.K	Chiller plant manager	Automatic Alarm routing through e-mail and SMS to user, Automatic Alarm Email/SMS option available	SMS feature is not available however the email option is available In case of CPM, critical alarms etc shall be sent through email of the customer	Please follow Addendum
698	Volume II	A25	Page No 266 of 270	CPO System Architecture e.1.H & I	Chiller plant manager	Network Engine should have inbuilt display and keys to operate in absence of PC. Network Engine should have inbuilt IO points, functionally able to act as a DDC controller as well as a supervisory controller	The supervisory controller does not have inbuilt IO points and it cannot act as a DDC controller. Since our Network engine is webbased we can connect any Tab/PC/Laptop and directly access data in it. So no need to have dedicated inbuilt display. There is no need of built in IO points in Network Controller. However if there is any such requirement we can add one IO module.	Please follow Addendum

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
699	Volume II	A25	Page No 267 of 270	CPO System Architecture.3.F	Chiller plant manager	Each Panel will be provided with a socket for a Portable Operator Terminal(POT) which can be connected via Bluetooth communication for easy access for testing and trouble shooting and no need to open the panel, and a port for network communications in max speed of 76 Kbps	the controllers are provided with the USB Port(Socket) to connect POT, Instead of Bluetooth, the portable operator terminal will be connected with the controllers through a cable.	Please follow Addendum
700	Volume II	A25	Page No 268 of 270	Immersion Temperature Sensors	Chiller plant manager	Standard of acceptance : johnson controls TE-6300 series or approval equal	We propose to supply DMRC Approved make(GREYSTONE)	Please follow Addendum
701	Volume II	A25	Page no 264 of 270	World Included B	Chiller plant manager	The Chiller Plant Optimizer System (CPO) shall be a state of the art technology, freely expandable for any future expansion plans. The system (CPO) shall have a minimum controlling capacity of 10,000 physical points without upgrading the data server software or related hardware. In general the system shall support "Open Architecture Concept" with capability to Dynamic Data Exchange(DOE) Link. The system shall be modular in nature, and shall permit expansion of both capacity and functionality through the addition of sensors, actuators, controllers and operator devices, while re-using existing controls equipment.	we confirm that Trane software (Tracer ES) as well as hardware (server) has capacity of 10,000 controlling points without upgrading.	Noted
702	Volume II	A01	Page no 18 of 271	A01.3.2.1	Air handling Unit	The Cooling coil shall be of seamless copper tubes, not less than 0.5 mm thick and minimum 12.5 mm .	Please Clarify ,can it be as per manufacture standards	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
703	Volume II	A01	Page no 19 of 271	A01.3.6.2	Air handling Unit	outer Skin shall be 1.0 mm GI Steel sheet ,while inner skin shall be minimum 1.2 mm GI steel Sheet.	We confirm that unit performance, coil performance and Mechanical Strength shall be certified with Eurovent. However, we can meet the same with sheet thickness of 0.6mm and therefore, request you to kindly allow us to quote with Sheet thickness equal to 0.6mm or more, as per manufacturer standards	Please follow bid conditions
704	Volume II	A10	page no 134 of 270	A10.3.27.1	PICV-FCU	FCU Control valve	IN BOQ not Considered	It is considered in item 8.5 of ECS BOQ
705	Volume II	A02	page no 30 of 270	A02.3.2.1	Fan Coil Unit	in cooling cooling .coil shall be 4 rows deep of seamless copper tubes not less than 12.5 mm O.D and 0.5 mm thick encased in SS-304 frame and having copper header	Please Clarify ,can it be as per manufacture standards	Please follow bid conditions
706	Volume II	A02	page no 30 of 271	A02.3.2.2	Fan Coil Unit	the Coil Shall have continuous aluminium fins having minimum thickness of 0.15 mm max 13 fins per inch.The Fins shall have hydrophilic coating and shall be of sinusoidal pattern.	Please Clarify ,can it be as per manufacture standards	Please follow bid conditions
707	Volume II	A10	page no 134 of 270	A10.3.27.4	PICV-FCU	Valve body to be made from only ductile iron for Ahu and brass for Fcu PICV and should be dual soild Painted	Please Clarify ,can it be as per manufacture standards	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
708	Volume II				Scope of Work:	Capacities/Rating of Equipments	Tender price is based on the tender drawings(fan pressure drop, noise analysis,pump heads, cables, switchgear and etc. are determined based on the tender drawing hence the quoted price also based on the given tender drawings. In case any changes from either structure or architectural room layout in the execution stage, this shall be treated as variation. Please confirm this.	Please follow general note (c) of ECS BOQ.
709	Volume II				Scope of Work:	Delay	Contractor's responsibilities for the delay shall be confined by Contractor's fault If delays from other contractors(Civil or other system wide contractor), the time extension shall be given and reasonable monetary reimbursement.if the delay is more than 90 days also shall be given.please confirm	Please follow bid conditions
710	Volume II				BOQ	Sound Attenuators	Hope that Size of TVS Sound attenuators system taken care based on the velocity/cross section.Do we need to take additional size during design,if any change.Please confirm.	Please follow bid conditions
711	Volume II	V01	page no 18of 78	V01.3.3.3.	TVS Fans	Emergency fan-motor units shall have a total efficiency of not less than and not less than 50 percent in reverse flow, when operating at the specified nominal flow rate.	1400mm fan efficiency is 57%.Please Clarify ,can it be as per manufacture standards	Please follow Addendum

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
712	Volume II	V01	page no 18 of 78	V01.3.3.4.	TVS Fans	Fans shall be capable of starting from a standstill to full speed, in not more than 30 seconds as per NFPA 130, without failure of any part of the unit. Fans shall be capable of reversing to full speed from either direction of airflow and rotation during an emergency within 20 seconds, after a 10 second delay between power interruption and the energising of the motor for the reversed rotation, without failure of any part of the unit.	Only possible with DOL start. We recommend reversal intervals of NFPA and our O&M manual. Please Confirm	Please follow Addendum
713	Volume II	V01	page no 18 of 78	V01.3.4.1.	TVS Fans	Impeller hub and blades shall be of rating for 250 degreeC for 2 hours fabricated of aluminium alloy castings (ASTM B686) or forgings (ASTM B247) or steel (ASTM A-588, Grade A and A-151, 1020 hot rolled) or equivalent BS, EN & DIN std., suitable for the specified performance and environment. Fan rotating components shall be designed such that no measured or calculated stress level shall exceed 60 percent of the components materials In addition, the Contractor shall provide metal templates or other approved devices to facilitate settings of blade angles in the field. One emplate shall be provided attached to each fan unit in a location that is subject to the Authority's approval. One emplate shall also be provided with each maintenance manual.	Please Clarify ,can it be as per manufacture standards	Follow bid condition

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
714	Volume II	V01	page no 19 of 78	V01.3.4.6	TVS Fans	Emergency fan-motor unit assembly supports shall be of carbonsteel not less than 10 mm thick for TVF and 6mm thick for TEF.Supports for horizontally floor mounted fans shall include fan-motorunit structural steel base with vertical supports extending from thebase to the fan housing centreline flange and with horizontal thrust plates extending over the full length of the fan housing. Verticalsupports and thrust plates shall be welded continuously to thesurfaces with which they come into contact.	Fan/Motor supports will be of sufficient structural rigidity and design to meet their required purpose, thrust plates will not be required for smaller fan diameters.Please Clarify ,can it be as per manufacture standards	Will be evaluated during vendor and technical approval
715	Volume II	V01	page no 20 of 78	V01.3.4.9	TVS Fans	Bolts shall be not less than 12 mm diameter. Bolts, nuts, washersand lock washers used on the fans and components shall be Type316 stainless steel, silicon bronze, or other corrosion-resistant material as approved.	Galvanized bolts and nuts had been used in earlier Metro Projects.please Confirm	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
716	Volume II	V01	page no 20 of 78	V01.3.5.1	TVS Fans	After fabrication and prior to assembly, all inside and outside surfaces of all fan housings, fan housing extensions, supports and fan-motor unit bases shall be prepared in conformity to the requirements of SP-10 New White Blast Cleaning and shall be given a rust-inhibiting coating, which may consist of an approved plastic coating, or bonderizing, or phosphatizing, followed by the application of a suitable rust-inhibiting primer and finish paint that is resistant to abrasion and to exposure to elevated temperatures. Surface finish shall be capable of withstanding for one hour in an ambient temperature of 250 degree C without degradation of its protective quality, and without emitting toxic or noxious fumes. Contractor may also provide Hot dip galvanized fan housings, fan housing extensions, supports and fan-motor unit bases etc. with minimum 275GSM galvanisation	We will use our standard paint which will be of course non-toxic. Appr. thickness of the total coating (primer+paint) would be 160 µm. Same had been done for Dehli Metro before. Please Confirm	Acceptable as per manufacturer standard
717	Volume II	V01	page no 20 of 78	V01.3.6.4	TVS Fans	Motors shall be capable, under the specified operating conditions, of accelerating the impeller from a standstill to rated rotational speed in not more than 15 seconds after being energised. Motors shall also be capable of decelerating the impeller and accelerating to rated rotational speed in the opposite direction in not more than 30 seconds after being energised for reverse rotation.	Some units may require up to 20 seconds to reach full speed. Only possible with DOL start. We recommend reversal intervals of NFPA and our O&M manual. Please Confirm	Please follow Addendum

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
718	Volume II	V01	page no 21 of 78	V01.3.6.7	TVS Fans	During continuous operation, motors shall be insensitive to line voltage variation of ten percent above or below the rated voltage and to normal frequency variation. Motors shall be able to accelerate to full speed at rated load with starting voltage (dip) of 25 percent below rated voltage of themotor.	All the fan shall suitable to work for 415V +/- 10% or 5%/-15%	To be evaluated during vendor and technical approval
719	Volume II	V01	page no 21 of 78	V01.3.6.9	TVS Fans	Minimum power factor of motors shall be 85 percent of the high speed winding at the rated load.	All the power factor of the motor shall be per IEC Standard	Please follow bid conditions
720	Volume II	V01	page no 26 of 78	V01.3.15.1	TVS Fans	At least one TEF and oner TVF fan shall be operated continuously for a total of 8 hours, 4 hours in the forward (exhaust) mode and 4 hours in the reverse (supply) mode of rotation. During reversal, fan shall be allowed to coast for a period of five minutes before being restarted in the reverse direction.	Unidirectional fans will be only tested in one direction.Please Confirm	Unidirectional fans can only be tested in one direction.

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
721	Volume II	V01	page no 26 of 78	V01.3.16.4	TVS Fans	Triaxial Strain gauges shall be applied to two blades per impeller and to the hub of the unloaded impeller of each fan. To accurately measure strains and stresses developed in each rotor, one strain gauge at themidpoint and one strain gauge at the tip of blades on each side shall be applied on minimum of two blades. In addition, one strain gauge shall be applied on impeller hub for each strain gauged blade. The strains developed during performance testing shall be continuouslymeasured and monitored. Themeasured strains produced under the performance test load shall be used to calculate the corresponding stresses. Stresses found shall not exceed sixty percent of thematerial yield strength at 250°C. The methods of strain measurement and stress calculation shall be submitted to the Authority for approval. The Contractor shall submit themanufacturer's notarised certification that the measured strains and the corresponding calculated	This is not required for our blade design as per the manufacturer standard. The loads are transferred by cast-in steel structures. The aluminium just gives the aerodynamic shape. But by strain tests you measure the strain on the surface of the blade only. the results do not say anything about the strain inside the aluminium and nothing about the loads within the cast-in steel structures.Please confrm	To be evaluated during vendor and technical approval
722	Volume II	V01	page no 27 of 78	V01.3.17.1	TVS Fans	Preproduction unit which has satisfactorily passed all preceding tests and inspections specified shall be tested in accordance with the induct test procedure of ANSI 12.34 / BS EN 848 / ISO 13347 / DIN 45635 to obtain sound power level data at eight-octave band centre frequencies from 63 Hertz to 8.000 Hertz.	Noise test will be done acc. To ISO13347/ISO3747/DIN45635 as for previous Metro Projects.Please Clarify.	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
723	Volume II	V05	page no 64 of 78	V05.2.3.3	TVS Fans	Submit design calculations for the fan structural supports.	As a civil design is not in our scope ,We shall deliver GA drawings showing all necessary information to the Civil Contractors. Based on the information civil contractor has to design the pedestal/Structural supports for the Fans	Please follow bid conditions
724	Volume II	V05	page no 64 of 78	V05.2.3.7	TVS Fans	Submit design calculations for the fan structural supports.	As a civil design is not in our scope ,We shall deliver GA drawings showing all necessary information to the Civil Contractors. Based on the information civil contractor has to design the pedestal/Structural supports for the Fans	Please follow bid conditions
725	Volume II	V05	page no 64 of 78	V05.3.5.3.5	TVS Fans	Fabricate fan supports of galvanised steel not less than 10 mm thick. Weld supports to the fan housing and cross brace to provide rigidity.	As per Manufacturer standard material thickness (8mm) is offered, they are NOT welded to fan casing. Please Clarify.	Please follow bid conditions
726	Volume II	V06	page no 93 of 270	A06.3.6.6	Motorised Smoke And Fire Damper	All materials used for the construction of the MSFD/MFD shall be so selected and all components and accessories of the dampers shall be so designed that the dampers will be fully operational in accordance with the performance requirements specified when fully exposed in an air stream temperature of 250°C for not less than one hour. Accessories shall include electric actuators, limit switches and any other damper status sensing devices.	As per Manufacturer Standard all the fire dampers shall with stand 1.5 hrs @ 250°C. Please Confirm	Shall be rated for 2 hrs @ 250°C

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
727	Volume II	A08	page no 109 of 270	A08..3.3.1	Cooolin g Tower	the Fan Assembly shall be statically and dynamically Balanced	As per Manufacturer Standard Fan Assembly will be statically balanced only.Please Confirm.	Please follow Addendum
728	Volume II	A08	page no 111 of 270	Data Sheet	Cooolin g Tower	Fan : Blade/Hub--Cast Aluminum Alloy,En-8	Blades shall be of cast aluminium alloy and hub shall be of CI/ aluminium plated.Please Confirm	Please follow Addendum
729	Volume II	A05	page no 71 of 270	A05.3.2	Water Circulati ng pump	The pump efficiency shall be 80% minimum for primary Secondary and condenser water pump.	As the Duty conditions of the pumps are in a wide range the efficiency can also be from 73 to 80% and above.Please Confirm	Please follow Addendum
730	Volume II	A10	page no 130 of 270	A10.3.19.3	Vaccum Degaser	The Degasser shall be able to switch itself off when the pipeline achieves desired Pressure & degassed levels of water.	Smart Degasser can be connected to BMS & the status can be seen on the computer. Switching off the Degasser on reaching the set pressure can be achieved only if it is combined with refill equipment. We have not offered refill equipment & degasser which has been offered will not do water filling job & hence will operate after water is filled up in the system.	Please follow bid conditions
731	Volume II	A10	page no 130 of 270	A10.3.19.3	Vaccum Degaser	The Degasser shall be of Carbon Steel with a Brass Automatic Airvent. It should degas the volume from 150 to 300m3 holding	Degasser offered can be used only up to 150 CuM. For systems of water quantities more than 150 CuM, two degassers in parallel need to be used.	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
732	Volume II			BOQ	Pumps for Water Supply/ Sewage/ seepage water	Actual head should be as per contractor calculation ,without any extra cost for all pumps	please confirm once again the same clause.	Please follow bid conditions
733	Volume II			BOQ	Pumps for Water Supply/ Sewage/ seepage water	-	Since tender BOQ call for only pumps sets,therefore piping and all ancillaries likes valves, strainer,guauges etc,shall not be in E&M Contractors Scope .please Clarify	Confirmed pump accessories are in the scope of the bid
COMMERCIAL QUERIES								
734	Part- I	Sec-1, ITB	1-5	4.3.e	Conflict of interest	A Bidder participates in more than one bid in this bidding process, either individually or as a partner in a joint venture, except for alternative offers permitted under ITB 13. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a) - (d) above, this does not limit the participation of a Bidder as a subcontractor in another Bid or of a firm as a subcontractor in more than one Bid; or	We request you to kindly confirm that vendors mentioned under approved vendor list in specification will be treated as sub-vendors only and not as "sub-contractor".	The same will be treated as vendor.
735	Part- I	Sec-1, ITB	2-3	19.1	Currenci es of Bid	The prices shall be quoted either in the currency of the Bidder's home country, or in any fully convertible currency of up to three foreign currencies	We request you to kindly mention the list of fully convertible foreign currencies in which Bidder can quote his prices	Please follow ITB 19.1 of Section-2

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
736	Part- I	Sec-6, ER	6-20	7	Personnel Requirements	Personnel Requirements	We would like to bring to your kind notice that the key minimum staff requirement specified under the referred clause is on higher side and request you to kindly allow the Contractor to deploy sufficient manpower based on his execution expertise for successful & timely completion of the project as per the Key Dates. Please confirm.	Please follow bid conditions
737	Part- III	Sec-6,ER	6-24	9	Time Schedule	9. Schedule of Key Dates	Please let us know the readiness of the Civil Works of the two stations. Request you to kindly provide the details of the Access Dates in order to assess the lead time available for the Contractor to meet the Key Dates of the Project Completion Schedule	The access dates will be provided after award of the works
738	Part-I	Vendor Approval	6 to 11	Appendix-A1	Vendors List	Vendors List	We would like to bring to your kind notice that there are certain items for which only 1 or 2 makes are specified in the approved vendor list. In those cases we request you to kindly accept any other equivalent make in order to avoid monopoly. Please confirm.	Contractor can propose any make meeting the bid requirements

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
739	Part- III	Sec-9, Contract Forms	9-7	Appendix-2	Price Adjustment	Price Adjustment	Since major electrical vendors like Cables, Switchgears, Batteries etc. in India follow IEEMA basis for calculating Price Variation, we request you to consider IEEMA formulae for electrical equipments. And items for which IEEMA formulae doesn't exist, we shall follow the formulae given in Appendix-2 of Contract Forms. Kindly accept and confirm.	Please follow bid conditions
740	Part- III	Sec-9, Contract Forms	9-7	Appendix-2	Price Adjustment	Price Adjustment	Contractor shall be compensated for any price escalation during extension/delay period for the reasons not attributable to Contractor.	Please follow bid conditions
741	Part- III	Sec-8, SCC	8-6	6	Form C	Contract Price	Please clarify whether JMRC shall issue 'C' form for obtaining Concessional Sales Tax for interstate transaction on sale in transit basis	Form 'C' will not be issued.
742	Part- III	Sec-8, SCC	8-6	6	High Sea Sales	Contract Price	Please clarify whether the equipment under this project can be shipped on High Sea Sales basis?	High Sea Sales not permitted
743	Part- III	Sec-8, SCC	8-6	6	Contract Price	Contract Price	We request you to kindly clarify the following, (i) Whether Octroi to be included in the Price Bid ? (ii) Whether Octroi shall be considered for price bid evaluation? (iii) Whether Octroi shall be reimbursed by JMRC?	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
744	Part- III	Sec-8,SCC	8-15	23	Completion Time Guarantee	Liquidated Damages	Delay on account of any reasons not attributable to Contractor shall not be liable for levy of Liquidated Damages on Contractor, Please confirm.	Please follow bid conditions
745	Part- III	Sec-7,GCC	7-10	9	Contractor's Responsibilities	Contractor's Responsibilities	We presume that our scope is limited to getting approval from CEIG / CEA approvals only.	Please follow bid conditions
746	Part- III	-	-	-	-	ROW approvals and permissions	We presume that the ROW permissions and approvals is available for this project and shall be in Employer's Scope. All payments to the concerned authorities for obtaining ROW approvals, if any, shall be made directly by the Employer. Please confirm.	Agreed
747	Part- III	Sec-8,SCC	8-24	32	Quantity Variation	The quantities of items shown in the Bill of Quantities are approximate, and liable to vary during the actual execution of the work. The Contractor shall be bound to carry out and complete the stipulated work irrespective of variation in individual items, at the same rate as specified in the Bill of Quantities subject to variation in the value of the Contract being limited to 25% of the total original/enhanced value of the contract. The variations can be implemented anywhere in the network of JMRC.	Please restrict the quantity variation of individual item to \pm 10% of tender specified Bill of Quantities and shall not be considered on overall contract value. Further variation in the quantities derived during detailed engineering shall be implemented only for this project i.e., NCB NO. JP/EW/1B/E1. Please confirm.	Please follow bid conditions

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
748	Part- III	Sec-9, Contract Forms	9-7	Appendix-2	Price Adjustment	Price Adjustment	Considering the volatile market conditions, we request you to kindly consider Price Variation for Annual Maintenance Contract and provide the formulae.	Please follow bid conditions
749	Part-II	Sec-6,ERQ	2-3 of 13	2.4.2.7	Project Monitoring	All programmes shall be prepared using the latest version of CPM scheduling software Primavera Project Planner;	We propose to use "Microsoft Projects" software for Project Monitoring Plan instead of Primavera, without any deviations to the tender requirements. Please confirm.	MS project software is also acceptable.
750	Part- I	Preamble Bill of Quantities	8 of 9 1 of 1	Preamble SCHEDULE OF QUANTITIES	Civil Works	Schedule for Civil works items SCHEDULE OF QUANTITIES "Part-G BOQ for Civil Works" & "Part-D BOQ for Civil Works"	We understand that all Civil Works related to this package are in CIVIL CONTRACTOR SCOPE. Please clarify the scope and requirements of the Civil Works to be quoted in "Part-G BOQ for Civil Works" & "Part-D BOQ for Civil Works"	The Part G and Part D is in the ECS, TVS & E&M contractor scope for any minor civil related work required to be done by the contractor
751	Part-II	Sec-6,ERQ	2 of 6	Chapter 22	Construction Power and Water	Temporary Electricity Supply	Employer shall provide construction power at 415V level at each station nearest to the Contractor's scope of work at free of cost. Also, Please confirm that the construction water shall be made available at free of cost the contractor.	Please refer Interface Management Document in Volume-II of Section-6
752	Part-II	Sec-6,ERQ	7-1 of 2	Appendix - 7	Engineers Accommodation for Off Site Work	Engineers Accommodation for Off Site Work	Please clarify whether Bidder has to provide the Engineers Accommodation for Off Site Work (Project Office and Two Site Offices) as per the requirements specified in the Appendix 7	Please follow Addendum

Pre-bid Query No.	Volume	Section	Page No.	Clause	Item	Relevant Abstract from Tender	Query	JMRC REPLY
753	Part- I	Preamble	7 of 9	Preamble	Duration of Payment	Payment will be made after certification by the Contractor and acceptance by the Engineer that the sub-systems and systems, including all equipment have successfully completed the test procedures, and have been set-to-work and that all test results and other documentation, as described in the specifications, have been approved by the Engineer	We presume that the payment shall be made within 45 days from the date of certification by the Contractor. Please confirm. Also, clarify the mode of payment.	Please follow bid conditions

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
754	Section 1 - Instructions to Bidders (ITB)	Page 1-10	Clause 17.2,	Quoted rates shall be deemed to apply to whichever subcontractor is selected and no adjustment in price shall be permitted	We shall be free to choose any subcontractor and vendor proposed by us. We should also be free to propose any make which substantially complies to the tender requirement	Follow bid conditions (SCC Clause 11)
755	Section 1 - Instructions to Bidders (ITB)	Page 1-12	Clause 18.4,	Plant supplied from abroad	Clause says custom duty to be shown separately which is unlike DMRC where CD is not shown at all	Follow bid conditions
756	Section 1 - Instructions to Bidders (ITB)	Page 1-12	Clause 18.4,	Plant supplied from within the employer's country	Clause says sales tax to be shown separately which is unlike DMRC where sales tax is not shown at all	Follow bid conditions
757	Section 1 - Instructions to Bidders (ITB)	Page 1-12	Clause 18.4,	Design services and installation	Clause says all tax inclusive which is unlike DMRC where service tax is exempt	Follow bid conditions
758	Section 3 - Evaluation and Qualification Criteria	Page 3-7	Clause 2.3.3, Financial Resources,	The requirements of subject contract of Rs. 15 crore	Please clarify how requirement of Rs. 15 crore will be ascertained from the tender	From the audited financial statements (Balance Sheets) of the bidder
759	General			Solvency	Please clarify whether any solvency is required. Please specify the amount	Not required
760	Section -8, SCC	Page 8-7	Clause 6,	VAT, Rajasthan Entry Tax - Rajasthan VAT and Entry tax on certain goods are exempted	Please let us know the items on which Rajasthan VAT and Entry Tax are exempted	Please read the notifications and quote accordingly.
761	Section -8, SCC	Page 8-7	Clause 6,	Service Tax - Service Tax is leviable at 40% of total value @ 14% = 5.6% on gross value plus cess as applicable	Actual Labour component shall be worked out for payment of service tax. It may be lower than 40%	Service tax is the liability of the Bidder, we have only referred the notification that the exemption has been withdrawn and abatement is available. The bidder may opt any scheme and to bear all service tax liabilities also as may be applicable to the Contract.
762	Section -8, SCC	Page 8-8, Clause D	Clause 6,	Taxes and duties paid to the sub vendor shall not be paid separately and therefore are to be included in the price	As we will be taking most of the material from other vendors, therefore taxes and duties paid to the vendors shall be paid separately by JMRC/reimbursed/exempted	Follow bid conditions
763	Section -8, SCC	Page 8-26	Clause 36	Deployment of Personnel by the Employer	We request you to delete this clause	Follow bid conditions
764			Appendix 4, Time Schedule	Key Dates	We request you to shift Key Date 2 to 40 weeks and Key Date 3 to 68 weeks and Key Date 4 to 76 weeks	Please follow addendum
ECS & TVS Works						
	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
765	General	ECS - Specifications - Compressor Motor - & Data Sheet.		Chiller - Winding Temp. Sensor	Tripping happens due to other safeties like high current draw, low suction pressure, Hi discharge Pressure, oil temp. etc. The draw back of winding temperature sensors embedded in windings is that when these sensors get weak/faulty after certain period of time, it leads to frequent on/off of the machine. In order to replace the faulty sensor, the complete compressor need to be dismantled, winding to be removed, sensor to be inserted in stator slot & rewind again (gas to be removed/ flushing/ nitrogen charged/vaccumised & then recharged with refrigerant) . The other method is to bypass the faulty sensor.	Please follow addendum
766	General	Witness Testing of A/C Scroll Chillers in Factory		Chiller - Air Cooled Chiller	The chiller can be tested at full load (100%) load that too for 250 KW at 28 Deg C Ambient Temp. The Eurovent Certified Test Bed has a limitation of minimum testing possibility for 250 KW which comes at 28 Deg C for proposed Model. Hence Part Load testing is not possible.	Follow bid conditions
767	Section 6 - Vol. II - TS Part-I	General, F (d.)	Page No. 263 of 270	Chiller Plant Manager -Energy metering using special Energy Software with dashboard and customised reporting tools for DMRC	Chiller Plant Manager - We can provide customised energy reports (captured from EM/FM etc) of equipments on daily basis . We can generate daily/monthly/quarterly/annual consumption reports. Customised Energy Dashboard will be there for real time values.	Please follow addendum
768	Section 6 - Vol. II - TS Part-I	Serial No. 2. (C)	Page No. 266 of 270	Chiller Plant Manager -Historian of Point Data shall be configurable as part of the point definition. Historian shall be provided for both snapshot and averages with intervals ranging from 5 Sec to 24hrs	Chiller Plant Manager - We are partially complying with this with the clarification that live trend viewer polls at 10 seconds intervals and we can go up to 1 minute trend interval for data logs.	Please follow addendum
769	Section 6 - Vol. II - TS Part-I	Serial No. 2. (D)	Page No. 266 of 270	Chiller Plant Manager -Trend and change of value data shall be stored within the engine and uploaded toa dedicated trend database or exported in a selectable data format via a provided data export utility.	Chiller Plant Manager - From the specifications, we have understood that all trends are being stored in network engine (Tracer SC) and can be easily exported to required format in Tracer ES. With this understanding we confirm that we are complying.	Please follow addendum
770	Section 6 - Vol. II - TS Part-I	Serial No. 2. (K)	Page No. 266 of 270	Chiller Plant Manager - Automatic Alarm routing through e-mail and SMS to user, Automatic Alarm Email/SMS option available	Chiller Plant Manager - SMS feature is not available however the email option is available	Please follow addendum
771	Section 6 - Vol. II - TS Part-I	Serial No. 1. (J)	Page No. 265 of 270	Chiller Plant Manager - Network Engine should have inbuilt display and keys to operate in absence of PC. Network Engine should have inbuilt IO points, functionally able to act as a DDC controller as well as a supervisory controller	Chiller Plant Manager - The supervisory controller does not have inbuilt IO points and it cannot act as a DDC controller	Please follow addendum

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
772	Section 6 - Vol. II - TS Part-I	Serial No. 3. (F)	Page No. 267 of 270	Chiller Plant Manager - Each Panel will be provided with a socket for a Portable Operator Terminal(POT) which can be connected via Bluetooth communication for easy access for testing and trouble shooting and no need to open the panel, and a port for network communications in max speed of 76 Kbps	Chiller Plant Manager - The controllers are provided with the USB Port(Socket) to connect POT, Instead of Bluetooth, the portable operator terminal will be connected with the controllers through a cable.	Please follow addendum
773	Section 6 - Vol. II - TS Part-I	Clause - A01.2.1	Page 15 of 270	AHU - AHU shall be Eurovent certified	AHU - AHU shall not be EUROVENT Certified with plug fan. However overall construction of unit shall be same as EUROVENT Certified AHU.	AHU shall be Eurovent certified. Follow addendum
774	Section 6 - Vol. II - TS Part-I	Clause - A01.2.1	Page 15 of 270	AHU - AHU shall be Eurovent certified	Certain EUROVENT certified AHUs do not meet the specs like Casing thickness, Cooling Coil thickness, No. of blowers etc. And these AHU's are available for maximum of 65000 CMH. Please Advise.	AHU shall be Eurovent certified. Follow addendum
775	Section 6 - Vol. II - TS Part-I	Clause - A01.3.2.2	Page 19 of 270	AHU - The centrifugal fans shall also comply with section A12.1,A12.2, A12.3.1 and A12.3.4 of the specifications.	AHU - Section A12.1, A12.2, A12.3.1 & A12.3.2 shall not be applicable because these clauses are related with Propeller Fans, Axial Fan & Centrifugal fans, but in this case AHUs are equipped with plug fans which have different characteristics and features than Axial Fans & Centrifugal fans.	Plug fans not required. Follow addendum.
776	General	List of Make		AHU - Make of Plug fans	Plug fans make for AHUs shall be as per OEM Standard.	Plug fans not required. Follow addendum.
777	Section 6 - Vol. II - TS Part-I	Clause - A05.4.2.2, Sr. No.3	Page 72 of 270	Pumps - Shaft shall be SS protected by gun metal sleeves extending through stuffing boxes	Pump - Pumps shall be supplied with Mechanical Seal, hence Stuffing Box not Required.	Agreed
778	Section 6 - Vol. II - TS Part-I	Clause - A05.3.2, Sr. No.3	Page 72 of 270	Secondary pumps - Adjustable frequency drives with manual by pass	Secondary pumps - AFD Drive shall be without manual by pass starter.	Please follow addendum
779	Section 4 - Vol. 2 (BOQ)	BOQ Item No. 3.1.2	Page 7 of 28	Secondary Pumps - Horizontal/Vertical Split case double suction pump	Secondary Pumps - Pumps shall be Vertical split casing end suction pump.	Follow bid conditions
780	Section 4 - Vol. 2 (BOQ)	BOQ Item No. 3.1.3	Page 8 of 28	Air Cooled Primary Pump - The pump efficiency shall be 80% for primary, secondary and condenser water pump. Monoblock pump efficiency shall be minimum 60%	Air Cooled Primary Pump - The Efficiency of Air cooled chilled Water pump shall be maximum 56%.	Please follow addendum
781	Section 6 - Vol. II - TS Part-I	Clause No. A08.2.1 under Quality control	Page 108 of 210	Cooling Tower - Cooling Tower Shall demonstrate the performance test on selected sample in factory.	Cooling Tower - Heat load cannot be generated in factory as such performance test on cooling tower cannot be carried out in factory. However testing can be done at site post commissioning.	Please follow addendum
782	Section 6 - Vol. II - TS Part-I	Clause No. A08.3.2.1	Page 109 of 270	Cooling Tower - Hot Water Distribution shall be open gravity type	Cooling Tower - Hot water distribution shall be through header and branch pipe arrangement consisting of spray nozzles.	Please follow addendum

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
783	Section 6 - Vol. II - TS Part-I	Clause No. A08.3.4,	Page 109 of 270	Cooling Tower - Handrail shall be provided alongwith Ladder	Cooling Tower - Vertically straight ladder will be provided with safety cage instead of handrail	Please follow addendum
784	Section 6 - Vol. II - TS Part-I	Datasheet for Cooling Tower	Page 110 of 270	Cooling Tower - WBT Approach 2.6 Deg C	Cooling Tower - As per Data Sheet, the design wet bulb approach is only 2.6 Deg C = (30 Deg C - 27.4 Deg C). Which is not suitable for a CTI Certified Cooling Tower Designing. As per CTI-STD 201. the design wet bulb approach should be minimum 2.8 Deg C or 5 Deg F. Please Clarify	Will be evaluated at the time of vendor and technical approval.
785	Section 6 - Vol. II - TS Part-I	Clause - A09.3.3	Page 115 of 270	Piping - Flanges - Welding neck pattern	Raised faced flanges of PN-16 rating shall be used which is suitable for such application.	Please follow addendum
786	Section 6 - Vol. II - TS Part-I	Clause - A10.3.24	Page 130 of 270	Air & Dirt Separator - Mesh Made of Copper Wire	Air & Dirt Separator - Mesh shall be made of SS.	Follow bid conditions
787	Section 4 - Vol. 2 (BOQ)	BOQ Item No. 2.10	Page 57 of 61	GI Steel Works - GI Steel Works to support bus duct, light fixtures, conduit wirings , Bracket , & other electrical works	GI Steel Works - Cable tray support should also be included under this item for both ECS, TVS and E&M item.	Please follow addendum
788	Section 6 - Vol. II - TS Part-I	Clause A12.3.1.2	Page 140 of 270	ECS Fans - Axial Fan with nominal rating above 7.5 KW shall have a minimum efficiency of 70%	ECS Fans - Axial Fan with nominal rating above 7.5 KW shall have a minimum efficiency of 60% as per manufacturer standard.	Follow bid conditions
789	Section 6 - Vol. II - TS Part-I	Clause A12.3.2.2	Page 140 of 270	Propeller Fan - Motor of Propeller Fans shall be suitable for relative humidity upto 100%	Propeller Fan - Motor of Propeller Fans shall be suitable for relative humidity upto 80% instead of 100%.	Follow bid conditions
790	Section 6 - Vol. II - TS Part-I	Clause - V01.3.6.5	Page 21 of 78	TVS Fans - Motor shall be type H Insulation, rated for Class F Temperature.	TVS Fans - Motor shall be type H Insulation and shall be rated for Class B Temperature rise instead of Class F.	Follow bid conditions
791	Section 6 - Vol. II - TS Part-I	Clause - V01.3.6.7	Page 21 of 78	Starting Voltage Dip shall be 25%	TVS Fans - Motor shall be able to accelerate to full speed at rated load with starting Voltage Dip upto 20% below rated voltage instead of 25%	To be evaluated during vendor and technical approval
792	Section 6 - Vol. II - TS Part-I	Clause - V01.3.1.4	Page 17 of 78	TVS Fans - Motor shall be product of single manufacturer.	TVS Fans - TVF and TBF will include motors from a single manufacturer, while TEF could include motors from an alternative manufacturer.	Please follow addendum
793	Section 6 - Vol. II - TS Part-I	Clause - V01.3.3.3	Page 18 of 78	TVS Fans - Emergency fan-motor units shall have a total efficiency of not less than 60% in forward flow	TVS Fans - Emergency fan-motor units shall have a total efficiency 57 percent in forward flow.	Please follow addendum
794	Section 6 - Vol. II - TS Part-I	Clause - V01.3.4.6,	Page 19 of 78	TVS Fans - Emergency fan-motor unit assembly supports shall be of carbon steel not less than 10 mm thick for TVF and 6mm thick for TEF.	TVS Fans - Fan/Motor supports will be of sufficient structural rigidity and design to meet their required purpose, thrust plates will not be required for smaller fan diameters.	Will be evaluated at the time of vendor and technical approval
795	Section 6 - Vol. II - TS Part-I	Clause - V01.3.4.9	Page 20 of 78	TVS Fans - Bolts shall be not less than 12 mm diameter.	TVS Fans - All fixings will be of a size suitable for their purpose, not limited to 12mm minimum size, fixings will be of suitable corrosion resistant material	Follow bid conditions
796	Section 4 - Vol. 2 (BOQ)	BOQ Item No. 1.2	Page 03 of 10	TBS Fans - Axial flow Jet Fan with up and down stream metallic diffuser	TBF Fans - Metallic diffuser shall not required with Jet fan.	Follow bid conditions
797	Section 6 - Vol. II - TS Part-I	Clause - V02.3.2.5	Page 39 of 78	TVS Dampers - Damper Linkage shall be fabricated of Stainless Steel type 304.	TVS Dampers - Damper Linkage shall be fabricated of Bronze instead of SS.	Follow bid conditions

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
798	Section 4 - Vol. 2 (BOQ)	BOQ Item No. 4	Page 7 of 10	TVS Nozzles - Tunnel Ventilation Nozzles	Please provide the drawing of TVS Nozzles	Follow addendum
799	Scope of Works-BMS	1.1	2 of 10	BMS Works - The Contractor shall also interface for control, monitoring, and supervision as required at the Operational Control Centre (OCC) for the existing chand pole U/G station of Jaipur Metro	BMS Works - The interface with the existing station at OCC shall be on open protocol like Modbus TCP/ OPC. Kindly confirm the same	The Chandpole station is having Open protocol.
800	SPECIFICATIONS FOR ECS & TVS BUILDING MANAGEMENT SYSTEM	BMS/1.00		BMS Works - The PLC System shall be a Fail Safe Control, Programmable Logic Controller (PLC) based with a Quadruple Modular Redundancy (QMR) system architecture.	BMS Works - The requirements are for a SIL2 certified PLC for TVS control system, however the internal architecture of the PLC shall be as per manufacturer's standards to meet the SIL2 standards whether its QMR or TMR or DMR.	Please follow addendum
801	Part D ECS-BMS BOM	8.01		BMS Works - 1) CPU Module with on board Ethernet RS 485 port, . Integrated Remote I/O Bus Manager, 96 word Base memory, 12,000 I/O capacity, 64 process channels :4 nos. 2) CPU Module with Remote I/O Bus manager : 2 nos. 3) 256 KB memory Extension Capsule: 2 nos	BMS Works - Since the ECS BMS PLC equipment are quantified as a Lot item as per the segregation & quantification provided in the IO summary, the quantification in the BOM sub-items(4 nos of item 1, 2 nos of item 2, 2 nos of item 3) should not be provided. It should be the responsibility of ECS BMS vendor to provide sufficient number of modules to meet the technical specification and scope requirements. Kindly confirm the same.	Please follow addendum
802	Part D ECS-BMS BOM	8.01		BMS Works - Redundancy Module	BMS Works - Kindly confirm if redundancy is required for ECS BMS PLCs as well. If yes, kindly confirm the level of redundancy(processor/power supply/communication)	Redundancy at ECS PLCs is not required, the communication ring shall be provided as per the drawing.
803	General	BOQ		DLP Spare BOQ	DLP Spare - Minimum list of DLP Spares for ECS & TVS is given both between page 6 of 14 to 11 of 14 and 1 of 5 to 5 of 5 and in four pages after page 5 of 5. Please clarify which one to consider.	DLP spares to be quoted as per Annexure-1 of Appendix-C1 (ECS TVS BMS) and Annexure-1 of Appendix-B2 (E&M) once only
804	General	BOQ		Minimum list of mandatory tool & Testing	Minimum list of mandatory tool & Testing equipment during DLP is given on page 1 of 2 to 2 of 2. However annexure for pricing this item is not given in tender. Please clarify.	To be quoted in the supply of spares part of the BOQ
E&M Works						
	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	
805	Part-A- Electrical BOQ	Item no. 1 (LT Panels)	Description 1 (l)	Each incomer and outgoing feeder shall be provided with LED type status indication lamps suitable for 240 V, AC, as approved.	In BOQ of Power feeder MCCB, same is not shown. Please confirm whether to be considered. Also, please confirm what status required (ON/Off/Trip).	Indication lamps shall be provided. Please quote accordingly
806	Part-A- Electrical BOQ	Item no. 1 (LT Panels)	Description 1 (y)	All Motor feeders, having separate Thermal Over - load relay, shall be provided with Reset push button.	In case where Inbuilt O/L relay in MPCB/MCCB, please clarify if it is required separately also.	Please follow BOQ
807	Part-A- Electrical BOQ	Item no. 1 (LT Panels)	Description 1 (aa)	Surge Protection Device (SPD) shall be provided in all panels.	Not mentioned in individual item, please clarify whether to be considered in all panels. Please clarify.	To be provided in all panels

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
808	Tech Specification	4.8.3	16 of 259	LSZH and Fire Survival Cables shall be as specified in cable specification...	Please clarify whether all internal control wiring shall be of LSZH or FS.	Internal wiring shall be LSZH
809	Tech Specification	4.8.3	16 of 259	All control wiring within the Electrical Panels shall be with single core minimum 2.5 mm ² for CT and balance as per approved manufacturer design...	We recommend to use control wire of 1.5A mm ² for Voltage circuit and 0.75 MM SQ for BMS/PLC circuit. Please clarify	Follow bid conditions
810	Tech Specification	4.9.3	18 of 259	Terminal blocks for low voltage wiring shall be moulded from high-grade non-hygroscopic melamine...	All terminal blocks asked with Melamine Material. Since Melamine is breakable material so can we use non-breakable material of Polyamide. Please clarify.	Follow bid conditions
811	Tech Specification	4.22.1	45 of 259	DBs shall be provided with suitable size of surge protection...	Not mentioned in BOQ. Please clarify whether to be considered in all panels.	To be provided in all DBs
812	Part-A- Electrical BOQ	Item no. 1.01 & 1.02 (LT Panels)	Description C (a)	1 No. 3200/3200A, 415V, 70kA, 4 Pole, Electrically operated Draw Out type, ACB...	Since other outgoing ACB are with 65KA/1sec breaking capacity so request to accept 3200A ACB with 65KA/1sec also.	Follow bid conditions
813	Part-A- Electrical BOQ	Item no. 1.10 & 1.11 (LT Panels)		Auto Transfer Switch for UPS - 100 & UPS - 200 & for Lifts...	Please specify fault level of MCCB and busbar in ATS for UPS-100 & UPS-200, ATS for Lifts ATS.	Please follow addendum
814	Part-A- Electrical BOQ	Item no. 4.1-4.6		Wiring in cable trunking /conduits/flexible conduits/raceway complete....	We presume that supply of cable trunking/raceway shall not be covered under these items.	Follow bid conditions
815	Part-A- Electrical BOQ	Item no. 4.1-4.6		Wiring in cable trunking /conduits/flexible conduits/raceway complete....	Please clarify wiring for how many points is to be done in trunking /raceways and how many in conduits.	Follow bid conditions
816	List of Makes	Appendix A1	9 of 11	Electrical Panels: M/s Neptune - Elsteel JV (Sri Lanka), Schneider Electric (Nashik), Siemens (Kalwa), L & T (Powai), M/sTricolite-Schneider, Adlec-Schneider, Sudhir- Schneider	Since authorized channel partners of Schneider are approved, we request you to approve authorized channel partners of other OEMs also.	Contractor can propose any vendor meeting the bid requirements.
817	List of Makes	Appendix A1	9 of 11	Electrical Panels: M/s Neptune - Elsteel JV (Sri Lanka), Schneider Electric (Nashik), Siemens (Kalwa), L & T (Powai), M/sTricolite-Schneider, Adlec-Schneider, Sudhir- Schneider	We request you to approve ABB as OEM and its authorized channel partner as ABB is approved for switchgear.	Contractor can propose any vendor meeting the bid requirements.
818	List of Makes	Appendix A1	10 of 11	Cables: M/s Ducab, M/sPolycab, M/s KEI	Please approve Bonton as additional make for the same.	Contractor can propose any vendor meeting the bid requirements.
819	List of Makes	Appendix A1	10 of 11	UPS: M/s PCI, M/s Schneider, M/s Emerson	Please approve Socomec, Consul & Eaton as additional makes.	Contractor can propose any vendor meeting the bid requirements.
820	List of Makes	Appendix A1	10 of 11	Cable Tray & Raceways	Please approve BEC, Steelways & Rico as additional makes.	Contractor can propose any vendor meeting the bid requirements.
821	List of Makes	Appendix A1	10 of 11	Switchgears: Schneider, ABB, L&T	Please approve Siemens as the same is approved as OEM for Panels.	Contractor can propose any vendor meeting the bid requirements.

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
822	List of Makes	Appendix A1	11 of 11	Bus Duct: M/s EAE, M/s enikwon, M/s Schneider, M/s Siemens, M/s L&T, M/s C&S	Please approve Godrej as additional make.	Contractor can propose any vendor meeting the bid requirements.
823	Part-III- DG Set BOQ	1.1, DG BOQ		Standby Power rated output with other standard accessories	Please clarify whether required DG set is Prime Continuous Duty or Stand by Duty. We presume that requirement for DG sets is suitable for unlimited nos. of hrs. running in a year, hence it has to be Prime Duty DG Set only. Please confirm.	Standby Duty
824	Part-III- DG Set BOQ	1.1, (a) & (b), DG BOQ		1800 KVA (comprising of 2 DG sets. Minimum capacity of each DG set should be 900 kVA) & 2700 KVA (comprising of 3 DG sets. Minimum capacity of each DG set should be 900 kVA)	Mentioned requirement is for comprising of 2 & 3 nos. of 900 KVA DG Set. Rating of 900 KVA is not available with any Diesel Engine manufacturer hence you are requested to kindly confirm the suitable rating of DG set for essential DG output, refer to other DMRC job, it has to be 1010KVA Prime Only.	Follow bid conditions
825	Part-III- DG Set BOQ	DG Control Panel (/ AMF panel)/ Isolation panel			Please confirm, DG Control Panel (/ AMF panel) / Isolation panel required along with the DG set or not, Please also confirm the location of the Panel, it has to be inside the canopy or outside the canopy, please clarify.	DG control panel (AMF panel)/ isolation panel is to be provided. Their location is part of GA which would be approved later
826	DG PS - Specification	AMF PANEL	100 of 105	Approved makes of AMF Panels Tricolite Electrical Industries, ECS, L&T, GE, Associated Switchgears, Schneider, Unilec, Neptune, Anand Power, Adlec, ABB, Sudhir Genset Limited.	Kindly also allow the DG OEM (Sterling generators) make of AMF panel for better integration of DG set system.	Contractor can propose any vendor meeting the bid requirements.
827	DG PS - Specification	4.3.1(b) - Operating Mode	19 of 105	The set shall be used only for the standby purposes, supplying average load factor of 80 to 85% for periods of up to 24 hours continuously, followed by a rest period of minimum 30 minutes as per ISO-8528 standards	As per latest ISO 8528 the Avg. Load Factor 70 % and 10 % overload is not applicable hence you are requested to kindly issue sweettable amendment for the same.	Follow bid conditions
828	DG PS - Specification	4.3.1(d) - Ambient conditions	19 of 105	Temperature: 0oC to 50oC, Maximum Humidity: 95% RH, Altitude: 300 M (Above mean Sea Level)	As per all manufacture's standard manufacturing procedure for 415 V -rated Engine designed at 50° C and Alternator designed Amb. Temp. at 40°C & Class of Insulation 'H' & Temp rise limited to Class 'H'. Please clarify the same is suitable with you or we have to consider higher size Alternator.	Follow bid conditions
829	DG PS - Specification	4.14.1	28 of 105	The starting system shall comprise a 24 V heavy duty sealed maintenance free lead acid battery and electric starting motor. The battery shall be sized to give not less than six consecutive starts of the engine at 0°C	As per our standard manufacturer design, our standard inbuilt Lead Acid automotive Batteries 24 V, 180 AH of adequate rating suitable for 3 (three) successive quick starts in lieu of SMF. Please clarify the same is suitable with you.	Follow bid conditions
830	DG PS - Specification	4.9.5	24 of 105	The generator set shall be provided with an exhaust system incorporating Hospital grade silencers	As per our standard manufacturer design, we will provide residential type silencer. Please confirm.	Follow bid conditions

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
831	DG PS - Specification	3.1.1. (g) & 7.1.5	19 of 105	All approvals of the DG set Installation Including the EIG approval before the final commissioning of the system.	We presume that our scope is limited only Electrical Inspector to Government approval of the DG set. And also clarify In DG-BOQ, which line item / sub head we will consider the same price.	Follow bid conditions
832	Part-III- DG Set BOQ	8.1, 9.2 & 9.3		Acoustic Enclosure & Acoustic Treatment For DG Room	Mentioned requirement for Silent DG set/ Acoustic Enclosure in DG set but in Sr. no. 8.1, 9.2 & 9.3 also ask for Room Acoustic & Door Acoustic. Please confirm both are required or DG Room Acoustic/ Insulation are appropriate.	BOQ item will be operated if required.
833	Part-III- DG Set BOQ	3.1		MS Piping for Exhaust system	250 mm dia MS pipe is not suitable for required DG set, request please incorporate the 300 & 350mm dia pipe.	Follow bid conditions
834	Part-III- DG Set BOQ	3.1		Exhaust Bellow	Bellows required for Exhaust system for horizontal run is not mentioned in the BOQ, we also request you to please incorporate the same as a separate line item for further clarity.	Follow bid conditions
835	Part-III- DG Set BOQ	12.1, 12.21 & 12.3		Comprehensive maintenance services	Kindly confirm the DG set running operation of hour per year for CAMC charges & also required manpower deputation of site per year.	Follow bid conditions
836	Part-III- DG Set BOQ	11 & 12			We presume O&M & CAMC charges will start immediately after commissioning inlieu of after DLP.	Follow bid conditions
837	Appendix B2	Consumable Spares		General	Please confirm / clarify the Spares to be considered in the scope of supply, we assume Fuel / Lube Oil will be provided by Client for running the DG sets	Follow bid conditions
838	Appendix B2	Commissioning And DLP Spares		(vi) The Contractor shall include the price of this item in cost of DLP in their Financial bid. This will be part of Bid evaluation while assessing the L-1 bidder.	Please confirm Consumables & Mendatory Spares prices & cost include in DG Vendor Financial bid. This will be part of Bid evaluation while assessing the L-1 bidder or not, please confirm.	Follow bid conditions
839	DG Sets			Testing at Works	We assume Std. Testing will fulfil the requirement, We will submit the test report of the complete DG set tested at DG Vendor works to you along with DG Sets, please confirm	Follow bid conditions
840	DG Sets				Any Other testing of the DG sets at Dg vendor works, if any, please confirm the Nos. of Hrs. to be considered in the costing.	Follow bid conditions
841					We assume Loading boarding charges for works testing, if witnessed, the same shall be in client's scope.	Follow bid conditions
842	DG Sets			Testing at Site	We assume Diesel & Load for testing the DG sets at site will be provided by DMRC, Please confirm.	Follow bid conditions
843	Part-III- DG Set BOQ	5) Civil Work, Row No. 49		Civil works associated with the DG set dismantalling and its re-installation at the other station.	As we are not the civil experts, request you to please remove the same from our scope of work. If it will remain the part of our scope of work, request please clarify the scope.	Follow bid conditions
844	Part-III- DG Set BOQ	Subhead 7		Dismantling of all existing Electrical system	Request please clarify the scope to be considered, also please share the layout for the same.	Follow bid conditions
845	Part-III- DG Set BOQ	9.4 Intake / Exhaust Fans		Intake / Exhaust Fans for ventilation of Air requirements of DG Sets	Request please remove it from DG vendor scope and keep it in HVAC scope as they are the experts for Ventilation part.	Follow bid conditions

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
846	21242. Interface Management & Specification of E&M (E22)	E22. 3.5.5	Pg. 265	The sounder is required to operate on 4,2 and 1/4 watts only. Whereas the approved make speakers will only operate from 2 watts to 1/4 watts	Hooter cum Strobe - Kindly request to approve the wattage range between 2 watts to 1/4 watts only.	Follow bid conditions
847	21242. Interface Management & Specification of E&M (E22)	E22. 3.2.3	Pg. 258	Main FACP Cabinet shall be IP 54 Compliant	Control Panel - The Product would be UL listed and UL does not provide any IP rating. Panel cabinets are tested as per UL standards only for Indoor application.	Follow bid conditions
848	21242. Interface Management & Specification of E&M (E22)	E22. 3.3.3	Pg. 261	Batteries: The system shall work thorough battery power for 1 hour continuously under alarm condition	Battery Charger and Batteries - As per NFPA the system shall work cnsistently for half an hour only under alarm condition. Please approve for half an hour alarm condition.	Follow bid conditions
849	21242. Interface Management & Specification of E&M (E22)	E22. 3.5.2	Pg. 263	Multisensor detector shall meet the UL standards and comply to the EN norms	Multi-Sensor Detectors - Both the approved makes comply to UL standards only.	Will be evaluated at the time of vendor and technical approval.
850	Section- 4 volume - II	BOQ Sr. No. 12 & subclause 12.1	E&M works Part C Fire works bill of quantities Page 1 and 2	Main fire pumps, Pump RPM mentioned is 1400/2900.	Please clarify the exact requirement of RPM for the pumps	Please follow addendum
851	Section- 4 volume - II & Section-6, volume -II	BOQ Sr. No. 12 & subclause 12.2 & M&W specification E16.3.18.1	E&M works Part C Fire works Page 2& 3 fo BOQ & Page No:- 189 of 259 of Material Workmanship (M&W) / E&M Technical specifications	Diesel engine Fire protection pump	The specifications calls for single/ multistage, single/ multioutlet, BOQ is silent on the same. We understand that single stage single outlet pumps are sufficient for the requirement.Please clarify the requirement. BOQ calls for Heat exchanger/ Radiator cooled please clarify the requirement wether heat exchanger or radiator cooled. Pump RPM mentioned is 1400/2900 Please clarify the exact requirement.	Please follow addendum
852	Section-6, volume - II	M&W specification E17.3.4.5	Page No:- 198 of 259 of Material Workmanship (M&W) / E&M Technical specifications	Mechanical Grooved joints	The specification calls for Mechanical Grooved Joints for MS piping. Please clarify the requirement as the piping in the BOQ are all galvanised piping.	Please follow addendum
853	Section-6, volume - II	M&W specification E17.3.10.2 sub clause b	Page No:- 204 of 259 of Material Workmanship (M&W) / E&M Technical specifications	Siesmic Design Consideration	Seismic provisions for pipes and conduits shown in drawings are provisional. Seismic isolation/ provisions are not available in the drawings provided in the tender documents. Please specify the requirement, request to add separate item for the seismic protection in BOQ. BOQ is silent on the requirement of seiemic protection to the pipes and equipments.	Seismic Zone category -III may be considered for Jaipur

Pre-bid Query No.	Volume	Reference Clause	Page No./Dwg no.	Existing Provision	Point for Clarification	JMRC REPLY
854	Section-4, volume - II	BOQ Sr. No. 17.4	E&M works Part C Fire works bill of quantities Page 11 of 15	Fire protective clothing & breathing apparatus	Please provide the List of Makes for the Line item No:- 17.4.1 to 17.4.6	Contractor can propose any vendor meeting the bid requirements.
855	Section-4, volume - II	Bill of Quantities	E&M works Part E Additional Miscellaneous items bill of quantities Page 1 of 3 & 2 of 3	Fire Sealing	Please provide the List of Makes for all the line items as the same are not available in the list of makes in the tender documents.	Contractor can propose any vendor meeting the bid requirements.

Pre-bid Query No.	Sr No	Existing Clause	Request for Change/addition	JMRC Reply
856	1	<p><u>Please refer to Section 3 - Evaluation and Qualification Criteria clause 2. Qualification</u></p> <p><u>2.4.2 Experience in Key Activities (Must be complied with by the Bidder in all. In case of a Joint Venture Bidder, at least one of the partners must have experience in the key activity.</u></p> <p><u>1. Centralized Air Conditioning with Water/Air cooled chiller</u></p>	<p>In this regard we would to request you to consider the following as experience in this clause</p> <p>1. Experience of HVAC be added as or into this clause , as the requirement is to maintain a stable temperature/environment in Tunnel / station and not only providing Air Conditioning.</p> <p>2. Also please refer to the Mumbai Metro</p> <p>The similarity shall be defined as "A single contract with Air conditioning system of minimum capacity 2000TR for project MRT/ Railways/ Airports/ Ports/ Big Hospitals etc and/or Tunnel ventilation system of 2.5km tunnel for MRT/ Railways/ Highways".</p> <p>Hence requesting to add or Tunnel ventilation system of 2.5km tunnel for MRT/ Railways/ Highways</p>	Please follow bid conditions
857	2	4 *Control & monitoring of TVS system, ECS systems and E&M System of MRTS projects.	requesting to add tunnel projects for MRT/ Railways/ Highways	Please follow bid conditions
858	3	<p>At all places</p> <p>At least one completed similar work of one U/G metro station within last 7 years.</p>	<p>Be replaced as At all places</p> <p>At least one completed similar work of one U/G metro station or tunnel for MRT/ Railways/ Highways within last 7 years.</p>	Please follow bid conditions

PRE BID QUERIES FROM M/s JAKSON LIMITED						
Pre-bid Query No.	Equipment	Specification Details	Page No/Clause	Description	Clarification/ Observation	JMRC Reply
	FIRE ALARM SYSTEM					
859		E22. FIRE ALARM AND DETECTION SYSTEM -Tech Specs of E&M-Electrical	Pg 239 of 259 - CI-E22. 3.5.1 (c)	Each detector shall carry a built-in address via easily understood decade switch.	Addressing / Programming is to be considered as per OEM architecture, we request to amend this clause as addressing mode as address switch/ electronic programming/soft addressing so that all OEM's can comply as now many OEM's offers electronic programming which is based on advanced technology, secure and easy to configure.	Please follow bid conditions
	LT PANELS					
860		E01LOW VOLATGE ELECTRICAL PANELS - Tech Specs of E&M-Electrical	Page 8 of 259- Clause No. 3.2.8 at	Non-magnetic gland plates of not less than 5 mm thick of suitable size shall be provided at the top and bottom of the LV main switchboards for the termination of incoming and outgoing power cables of size 120 sq. mm or more or bus ways and 3 mm thick for cables of size less than 120 sq. mm. Where armoured multicore cables terminate inside the switchboard enclosure, glanding plates or glanding brackets shall be provided for securing the cables to the switchboard.	We shall provide non-magnetic gland plate of 5mm thickness at top or bottom of panels for single core cables. However 3mm thick gland plate shall be provided for multicore cables with CRCA material.	Please follow bid conditions
861		SCHEDULE OF QUANTITIES FOR PART-A ECS ELECTRICAL WORKS	Various BOQ Items		There are slight mismatches between the SLD & the BOQ (refer attached Annexure). Kindly advise whether we have to follow SLD or BOQ in case of any discrepancy.	Please follow BOQ
	DG SETS					
					We have following queries / observations in the DG Sets Part -	
862		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.9.9	Hospital grade silencers shall be suitable to achieve sound attenuation of minimum 32 dBA suitably certified by the silencer Manufacturer.	For residential silencer there shall be Insertion loss of 25dBA at 1 meter from exhaust pipe under free field conditions.	Please follow bid conditions
863		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.14.7/4.14.8	To facilitate starting in cold conditions, jacket water heating with automatic controls allowing temperature preset shall be provided as per recommendations of manufacturer, to heat the engine, while not in operation, so that the starting time and thermal shock is reduced as applicable for emergency generator sets	For given ambient temperature there is no requirement of jacket water heaters and same is not considered.	Please follow bid conditions
864		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.18.7	Transient voltage deviation following a step load of 60% of rated load at a power factor of between 0.4 and zero shall not exceed 15% with the recovery time to 97% of rated voltage not exceeding 1 second.	We request you to provide the detail of load such as base load, step loading. Detail and method of starting to confirm the TVD.	Please follow bid conditions
865		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.18.8	The alternator shall be capable of continuous operation with a phase current imbalance of 33% of rated current whilst maintaining the output voltage within $\pm 5\%$ of rated	As per BS/IS alternator are designed to withstand up to 25% unbalance between phase provided when none of the phase exceeds rated current.	Please follow bid conditions

866		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.18.9	The alternator shall have pre-packed grease lubricated ball or roller bearings and provided with facilities for re-greasing whilst in service. The alternator shall be foot mounted on a common bed frame with the prime mover and shall be close-coupled to the engine flywheel housing	In alternator there is no requirement of on line greasing facility with grease nipples and grease relief device as the offered alternators are permanent grease lubricated.	Please follow bid conditions
867		LOT 1 - 2125PART-III DG PS-Specification	CI - 4.20.1.1 (2-d)	Engine Parameter Monitoring: (d) Exhaust Temperature	There is no provision of exhaust temperature and same will not be considered in our controller.	Please follow bid conditions
868	BOQ	PART-III DIESEL GENERATOR (DG SET)	CI - 1.1		As per manufacture standard 900kVA is not our standard rating hence we propose 800kVA or 1010kVA. Kindly confirm	Please follow bid conditions
869			CI - 1 & 8		There is ambiguity in the BOQ as per the clause no. 1 DG set shall be silent type and clause 8 calls for Acoustic room treatment hence kindly confirm whether we have to consider Acoustic enclosure or Acoustic room treatment in our scope.	BOQ item will be operated if required.
870			CI - 7	Dismantling of all existing Electrical system, including 750 kVA to 1250 kVA DG Sets , Exhaust Pipe, Day Fuel Tank, Fuel pipe, Panels, Cables, etc installed in DG Room of a Station and shifting (including Loading, Transportation and Unloading) them to alternative location within Jaipur as suggested by JMRC.	Request you to mention the exact location of existing DG set and also mention whether existing Exhaust system, fuel system , panel and cable are re-useable or not.	BOQ item will be operated if required.
	AIR COOLED SCROLL CHILLERS					
871		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	Data Sheet for Air Cooled Scroll Chillers - Vibration Isolators	Spring Type Vibration Isolators	Please confirm.	Plase follow bid conditions
	WATER COOLED SCREW CHILLERS					
872		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A03.3.5. / Chillers CI - A03.3.4	Factory Installed Insulation	Insulation shall be provided at ite /factory depending on th manufacturer. Please confirm.	Acceptable. Insulation to be done by OEM only
873		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A03.3.10 / Accessories CI - A03.3.10.1 & Data Sheet	Spring Type Vibration Isolators	Vendor Recommends & Supplies Rubber Pads for Vibration Isolations Vibration Isolation pads are factory supplied inline to their guidelines.	Rubber pads are also acceptable based on manufacture recommendation

874		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	Compressor Motor - & Data Sheet.	Winding Temp. Sensor	Tripping happens due to other safeties like high current draw, low suction pressure, Hi discharge Pressure, oil temp. etc. The draw back of winding temperature sensors embedded in windings is that when these sensors get weak/faulty after certain period of time , it leads to frequent on/offs of the machine. In order to replace the faulty sensor, the complete compressor need to be dismantled, winding to be removed , sensor to be inserted in stator slot & rewind again (gas to be removed/ flushing/ nitrogen charged/vaccumised & then recharged with refrigerant) . The other method is to bypass the faulty sensor.Please clarify.	Please follow addendum
	COOLING TOWERS					
875		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.2.1	Cooling tower Should be CTI Certified as per latest CTI Std 201 Clarification Standard for cooling Towers and Shall Demonstrate the performance test on selected sample in factory	Heat load can not be generated in factory as such performance test on cooling tower can not be carried out in factory.however testing can be done at site post commissionig	Please follow addendum
876		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.1.2	The cooling tower shall be constructed with a study structrul hot dipped galvanized/FRP frame designed to transmit all wind, seismic and mechanical load to the equipment anchorage,the body shall be made of FRP sections of equal segments,all bolted together.the surface on both inside & outside shall be smooth,for minimum air resistance.The fan deck shall form an integral part of the body.	Fan deck panel shall be installed on the structural frame of cooling tower.Please clarify.	Please follow bid conditions
877		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI -A08.3.1.5	The water diffusion deck shall be of rigid PVC fill as per manufacturer"s standard,arranged in suitable pattern for ease of replacment.the fill shall be rated & certified by the cooling tower manufacturer	Not clear .Please Clarify.	Please follow bid conditions
878		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.2.1	The hot water distribution basin shall be open gravity type for easy cleaning and constructed with FRP and shall be distributed through a sprinkler system consisting of PVC,sprinkler pipe which shall be mounted on top of the main supply stand pipe.Alternatively,the water distribution could be with a water diffusion deck	Hot water Distribution shall be through header branch pipe arrangement consisting of spray nozzles.	Please follow addendum
879		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.3.1	The Fan assembly shall be statically and dynamically Balanced	The Fan shall be statically and balanced only.	Please follow addendum

880		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.4.1	Handrails shall be provided along the ladder	in the cooling tower,vertically straight ladder will be provided with safety cage instead of handrail	Please follow addendum
881		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.8.1	Suitable arrangement shall be provided for easy access into the plenum action for maintenance purpose.	In counter flow cooling tower no access door shall be provided/Applicable.	Please follow bid conditions
882		SPECIFICATIONS FOR ENVIRONMENTAL CONTROL SYSTEM INCLUDING ELECTRICAL WORKS	CI - A08.3.1.1	Induced draft,cross flow type with vertical discharge Cti certified	As per BOQ and ECS Specification both cross flow and counter flow cooling tower are acceptable.Please confirm.	Please follow addendum
883		Section II, Bid Data Sheet	Pg no. - 2-4, ITB - 22.2	In case of Foreign Partner(s), Power of Attorney(s) and Board Resolution confirming authority on the person(s) issuing the Power of Attorney for such actions, shall be submitted duly notarized by the notary public of origin.	Please confirm that in case of Foreign Partners, said documents will be accepted either stamped by Embassy/High Commission & tenderers from member country of „Hague,, Convention may submit these documents with „apostilled” stamp instead of notarized.	Agreed