

Pre Bid Query Reply						
Tender - KNPAGS-01						
UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
1	Volume 1	Pg no. 4/ITT	A2	<p>Source of Funds</p> <p>UPMRCL has applied Loans from multilateral funding agency (EIB) hereinafter-called "Funding Agency" towards the part cost of the Project, and intends to apply a portion of the proceeds of the loans to payments under this contract. Disbursement of the loans will be subject, in all respects, to the terms and conditions of the Loan Agreements, including the disbursement procedures and the applicable procurement guidelines of EIB.</p> <p>EIB has already agreed in principle for financing the Kanpur project requirements included in the tender. For Agra project, UPMRCL has already applied for funds for requirements included in this tender. However, in case the funding of agra project is not agreed by EIB then UPMRCL will fund from its internal resources.</p>	<p>As per this clause, arrangement of fund for the project is still in progress. In case, the fund is not approved in time or partially approved by Funding Agency, there must be some plan B for smooth execution of project.</p> <p>Request to elobarate on this or confirm if the fund has already been approved.</p>	<p>Please follow tender conditions</p>

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2	Volume 1	Pg no. 16/ITT	C2.1	<p>The Tenderer shall, on or before the date and time given in the Notice of Invitation to Tender, submit his Tender in one main envelope containing three separate sealed envelopes as given below clearly marked with the name of the Tenderer and with</p> <p>Envelope-1: "Contract KNPAGS-01": Tender Guarantee, Envelope-2: "Contract KNPAGS-01": Pre-qualification Package/Initial Filter Documents (in separate folder) & Technical Package Envelope-3: "Contract KNPAGS-01": Financial Package</p> <p>One copy each of all the tender documents including Tender Drawings and Addenda thereto with each page signed and stamped to confirm acceptance by the tenderer of the contents.</p> <p>These shall be addressed to The Managing Director, UPMRC and submitted to the Office of the CEE/Projects-II, UPMRC at the address given in the Tender Documents.</p>	<p>There are some contradiction in these clauses:-</p> <p>a) Regarding total copies to be submitted - The first clause doesn't talk about number of copies whereas second clause (Clause C25.1) ask bidder to submit one original one copy for both 'Technical' as well as 'Financial' Packages.</p> <p>b) Regarding addressee - As per one clause, the Bid should be addressed to ' The Managing Director' whereas in another clause, bidder is instructed to address the Bid to 'The CEE/Projects-II'</p> <p>To avoid the confusion, we recommend to include following clause which will supersede all previous clauses:-</p> <p>Envelope-1: "Contract KNPAGS-01": Tender Guarantee,</p> <p>Envelope-2: "Contract KNPAGS-01": Pre-qualification Package/Initial Filter Documents (in separate folder) & Technical Package [One (1) Original & two (2) soft copies in two separate pen drives]</p> <p>Envelope-3: "Contract KNPAGS-01": Financial Package</p> <p>All the inner and outer envelopes shall be addressed to the Employer at the following address:</p>	<p>1. 1 original + 1 Copy to be submitted.</p> <p>2. Bid to be submitted to "The CEE/Projects -II"</p>

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3	Volume 1	Pg no. 29/ITT	C25.1	The Tenderer shall prepare and submit- One (1) original of the Tender Guarantee, One (1) Original and one (1) copy of the documents comprising the Technical Package of the Tender, and One (1) original and one (1) copy of the Financial Package of the tender, as described in paragraph C2 of these Instructions to Tenderers clearly marked "ORIGINAL" and "COPY". In the event of discrepancy between them, the original shall prevail.	<p>There are some contradiction in these clauses:-</p> <p>a) Regarding total copies to be submitted - The first clause doesn't talk about number of copies whereas second clause (Clause C25.1) ask bidder to submit one original one copy for both 'Technical' as well as 'Financial' Packages.</p> <p>b) Regarding addressee - As per one clause, the Bid should be addressed to ' The Managing Director' whereas in another clause, bidder is instructed to address the Bid to 'The CEE/Projects-II'</p> <p>To avoid the confusion, we recommend to include following clause which will supersede all previous clauses:-</p> <p>Envelope-1: "Contract KNPAGS-01": Tender Guarantee,</p> <p>Envelope-2: "Contract KNPAGS-01": Pre-qualification Package/Initial Filter Documents (in separate folder) & Technical Package [One (1) Original hard copy & two (2) soft copies in two separate pen drives]</p> <p>Envelope-3: "Contract KNPAGS-01": Financial Package</p> <p>All the inner and outer envelopes shall be addressed to the</p>	Refer UPMRCL S.No 2

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4	Volume 1	Pg no. 30/ITT	D1.5	All the inner and outer envelopes shall be addressed to the Employer at the following address: To, The CEE/Projects-II Uttar Pradesh Metro Rail Corporation.....	<p>There are some contradiction in these clauses:-</p> <p>a) Regarding total copies to be submitted - The first clause doesn't talk about number of copies whereas second clause (Clause C25.1) ask bidder to submit one original one copy for both 'Technical' as well as 'Financial' Packages.</p> <p>b) Regarding addressee - As per one clause, the Bid should be addressed to ' The Managing Director' whereas in another clause, bidder is instructed to address the Bid to 'The CEE/Projects-II'</p> <p>To avoid the confusion, we recommend to include following clause which will supersede all previous clauses:-</p> <p>Envelope-1: "Contract KNPAGS-01": Tender Guarantee,</p> <p>Envelope-2: "Contract KNPAGS-01": Pre-qualification Package/Initial Filter Documents (in separate folder) & Technical Package [One (1) Original & two (2) soft copies in two separate pen drives]</p> <p>Envelope-3: "Contract KNPAGS-01": Financial Package</p> <p>All the inner and outer envelopes shall be addressed to the Employer at the following address:</p>	Refer UPMRCL S.No 2
5	Volume 1	Pg no. 18/ITT	C2.2.1(t)	Scanned digital copy of the technical offer submitted by the bidder in suitable digital storage device (Preferably 1+1 Pendrives).	<p>These clauses are contradictory as one ask to submit two soft copies of Technical Package only whereas another states to submit one soft copy of Technical and one soft copy of Financial Package separately.</p> <p>Please review and confirm which clause bidder should follow.</p> <p>For the ease of bidder (to fill the price) and purchaser (to evaluate it), we request UPMRC to please share Excel formats of Price Bid.</p>	2 nos Soft Copy(1+1 Pendrives) to be submitted

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6	Volume 1	Pg no. 30/ITT	D1.4	Thus, there shall be following envelopes- - One containing only Tender Guarantee of the tender - Second containing original and copies of the Pre-qualification & Technical Package in different envelopes (along with the true copy of the financial package with prices left blank as per clause C 2.2(p) of ITT and scanned copies of the respective pre-qualification & technical package in CD/Pen drive) of the Tender. - Third containing original and copies of Financial Packages in different envelopes (having different schedules of the Tender) duly marking "Financial Package for Contract KNPAGS- 01 along with the soft copies in MS excel format.	These clauses are contradictory as one ask to submit two soft copies of Technical Package only whereas another states to submit one soft copy of Technical and one soft copy of Financial Package separately. Please review and confirm which clause bidder should follow. For the ease of bidder (to fill the price) and purchaser (to evaluate it), we request UPMRC to please share Excel formats of Price Bid.	Please follow tender conditions
7	Volume 1	Pg no. 208/ITT -	Appendix C	Details of Railway Authority Locations where Proposed Equipment is in use on other Passenger Carrying railways	In ITT - Appendix C , the requirement of Information regarding Performance of the offered equipment is asked pertaining to railway projects. Whereas in PS Chapt 1 clause 6.9.2 (f) it is asked that the proposed system/ sub system shall be of proven & established reliability in Metro or large public utility infrastructure project for public uses like Airport or Stadium or educational institutes Therefore it is requested to align requirement in ITT - Appendix C as per PS Chapt 1 Clause 6.9.2 (f)	Refer Addendum-1
8	Volume 1	Pg no. 226/ITT	Annex.-9	Details of Providers of Performance Security The Tenderer shall provide the Bankers Reference who will provide the Performance Bank Guarantee, if the work is awarded to the Tenderer.	How many Banker's references, bidder is allowed to mention here? What if, for any reason, bidder wish to change it post winning the tender?	Any nationalized or scheduled bank, BG will be accepted
9	Volume 1	Pg no. 1/NIT & Pg no. 239/ITT	1.1.2 & 2	Expected Completion period of the Work: 36 Months & "Time for completion" of the work from the date of commencement of the work (Clause 8.2 of the GCC): 40 months	Two different completion period are mentioned in two different clause. As per our understanding, it should be 40 months from the date of commencement of work. Please confirm.	Refer Addendum-1
10	Volume 1	Pg no. 6/NIT & Pg. no. 239/ITT	1.1.4.2 B.(c) & Annexure 6	The Banking references should be from a Scheduled Bank in India or from an International Bank of repute (in case of foreign vendors) acceptable to UPMRC as per the standard proforma provided in NIT as <u>Annexure-6</u> and it should not be more than 3 months old as on the date of submission of bid. & Consent Form for participating as Sub-tenderer	There is no standard proforma provided in NIT as Annexure-6. And 'Annexure-6' in ITT is consent form for participating as sub-tenderer and doesn't have any column to provide banking references. Please share the relevant format.	Annexure-6 of NIT have the proforma

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11	Volume 1	Pg no. 5/NIT	Notes 2	The tenderer shall submit details of work executed by them, in the Performa of <u>Annexure-1</u> for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted. The offers submitted without this documentary proof shall not be evaluated.....	There is no such Annexure in NIT and 'Annexure-1' in the ITT is for Requirements for proposed Works Programme and Design Submission Programme.. Please share the relevant format.	Refer UPMRCL S.No 10
12	Volume 1	Pg no. 201/ITT	Annexure 3 Appendix A Project Organisation	Appendix A - Project Organisation	In Metro Rail Projects, Role and responsibilities of Design Engineer is sub set of roles & responsibilities of System Engineer. Our understanding is that at site the deployed System Engineer would be considered as Contractor's representative to deliver system design and documents, whereas System Engineers can be supported by core design team in back office at HQ. Please remove requirement of interface engineers to be deployed at Site as Testing & Commissioning Engineer (who is mobilised at site office) is well capable of discharging interface responsibilities also.	Refer Addendum-1
13	Volume 1	Pg no. 201/ITT	Annexure 3 Appendix A Project Organisation	1. Chief Project Manager – B. Tech/M.Tech in Electrical or Electronics Engineering having minimum 15 years of total experience out of which 5 years should be in projects of similar nature. Also he shall have minimum experience of one Metro Project as PM/Dy. PM for min 5 years.	We request relaxation in required experience for Project Manager. It is requested to replace the requirement as following : 1. Chief Project Manager – B. Tech/M.Tech in Electrical or Electronics Engineering having minimum 15 years of total experience out of which 5 years should be in projects of similar nature. Also he shall have minimum experience of one Metro Project as PM/Dy. PM for min 5 years.	Please follow tender conditions

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14	Volume 5	-	General Query		Please provide: > Route alignment / chain age details for KNP Corr I & II and AGS Corr -I. > Drawing to calculate distance of RSS also require from main line / near by station/depot > CAD Drawing of typical Elevated & Underground station. > Drawings for depots of KNP AGS Metro	Required Information has been provided in Volume 5
15	Volume 4	Pg no. 8/PS Chapt 1	List of Definition	RSS --- (Traction) Receiving substation along the Metro route for provision of CCTV cameras and Direct Line Telephone, integrating with the nearest station for viewing and communication requirements from the station. CER, RSS and OCC.	As per requirement in RSS, CCTV & Direct Line Telephone to be provisioned . Please confirm if PA/ ACIDS/MCK and other Telecom sub systems are also required in the RSS.	Please follow tender conditions
16	Volume 4	Pg no. 24 / PS Chapt 1	1.5 (10)	48 V DC Power Supply System for Powering the Telephone System and also for Powering all other Telecomm Systems such as Radio, Clock etc shall be designed, installed, commissioned, tested and maintained as part of the scope of KNPAGS-01 Contract.	If the proposed Radio, Telephone , Clock system is capable to function on 240 AC supply , then please clarify if still 48 V DC supply is required to be deployed.	Please follow tender conditions
17	Volume 4	Pg no. 27 / PS Chapt 1	3.6	The site for the Permanent works shall include stations, depots, OCC, CERs, Admin Buildings, RSSs/TSSs, Parking Areas, SPC, Ramp, Tunnels,...	Please illustrate 'SPC' and which part of permanent work it will be .	SPC stands for Signal Point Crossing at via duct and depot
18	Volume 4	Pg no. 28 / PS Chapt 1	3.6	...Telecom Contractor shall liaise and deploy initial setup to provide 3rd Party leased line connectivity with sufficient, dedicated & high availability bandwidth of approximately 1 Gbps from the Kanpur & Agra Metro Rail Projects to centralised OCC at Lucknow. The Leased line connectivity shall comply with following SLA but not limited to- Availability: 99.99%	What is the duration for which lease line (1Gbps) to be provisioned between Kanpur & Agra Metro Rail Projects to centralised OCC at Lucknow. Please clarify if setting up premises equipment in OCC at Lucknow is also in scope of KNPAGS 01 contractor. Please revise requirement of SLA to 99.90 %	Refer Addendum-1
19	Volume 4	Pg no. 28 / PS Chapt 1	3.8	The KNPAGS-01 Contractor shall be provided space of approximately 1500 SQM to set up Project Office and Storage Space. KNPAGS-01 contractor shall be required to setup project office at project location and site office at site location and necessarily have to station at this Project Office and Site Office throughout the contract period.	Please clarify if 1500 sq. m space to set up Project office and storage facility be provided at Kanpur and Agra both locations for respective Projects & corridors. Please mention area/location where space for site office will be provided.	Refer Addendum-1
20	Volume 4	Pg no. 30 / PS Chapt 1	4.1.6	Single Point of Failure Telecom Contractor shall propose for all the sub system, a design and topology without any single point of failure. Redundancy at every level have to be maintained.	Please clarify if this clause is exempted from redundancy at end device level (connectors/ terminating i/o points) i.e. redundancy at end device level is not applicable.	Please follow tender conditions

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21	Volume 4	Pg no. 44 / PS Chapt 1	6.7	Print Server	Is Print Server required to be deployed over OA&IT network or FOTS network of Kanpur & Agra Metro in LAN. Is there any requirement to interconnect Kanpur & Agra Metro <u>Network through leased line ?</u>	Separate Print Server for Kanpur and Agra, no interconnection required
22		General		Site Access Date	Please provide site access dates for respective sections of Kanpur & Agra Metro, so that same can be incorporated in the Works Programme	Access shall be provided sufficiently in advance, in stages before KD 6
23	Volume 4	Pg no. 61 / PS Chapt 1	10.3.1.3	The Tentative allocation for KNPAGS-01 Contractor ...	Please illustrate space allocation for Telecom Contractor for CER in BCC/OCC. Since UPS In Telecom Scope, 30 sq. m space in TER will be insufficient. Please allocate at least 60 sq. m space in stations' TER to Telecom Contractor	Telecom Contractor to interface with Signalling and Civil contractors and work on optimum space requirement
24	Volume 4	Pg no. 63 / PS Chapt 1	10.4	Primary cable containment, common for all telecom sub-systems around the station/depot/OCC areas and along track-side will be provided by Civil Works Project Contractor and E&M Project Contractors. The KNPAGS-01 Contractor shall however give destinations / cable route requirement and size of each cable and EMI requirements to the Project Contractors. The KNPAGS-01 Contractor shall have to pay for the cable trays used for his respective system, as per actual measurements. The price shall be distributed equally among the contractors who have utilised the primary cable containment. This amount shall be deducted from the Payment due from the KNPAGS-01 Contractor and paid by UPMRC to the E&M Contractor.	Each System contractor's requirement for cable tray depends on number & volume of cables to be laid and differs system to system /contractor to contractor. In similar other projects, Primary cable trays have/ had been provided by MEP/E&M as per approved Combined Services Drawings / cable layout drawings. Please keep responsibility of provision of primary cable trays at OCC/BCC/Depot/RSS/Stations along with cost of supply & installation of the same in MEP/Civil/E&M Contractor's scope.	Please follow tender conditions
25	Volume 4	Pg no. 71 / PS Chapt 1	10.7.5.6	Main Earth / Clean Earth	Please illustrate who's responsibility is for provision and extension of Clean Earth & Main Earth Terminals at Depot/ OCC- BCC/RSS	Please follow tender conditions
26	Volume 4	Pg No. 5 / PS Chapt 2	1.1.13	The FOTS shall conform to the applicable ITU-T and IEEE standards and shall fulfil the EMC standards EN 55022 class A and EN50082-1.	EN55032 emissions standard covers multimedia equipment and applicable for products marketed for communications and information technology (IT) end equipment. So, Requesting to please modify it as "The FOTS shall conform to the applicable ITU-T and IEEE standards and shall fulfil the EMC standards EN 55022 class A and EN50082-1 / EN55032. "	The relevant clause of EMC shall apply

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27	Volume 4	Pg No. 11 / PS Chapt 2	1.3.4.5	Kanpur Metro project have two corridors, two CERs & one OCC, two depots, two Administrative Buildings and three RSSs. Total nos. of Stations for Kanpur Project are 30. While Agra Metro Project have one corridors, two CERs & one OCC, one depots, one Administrative Buildings and two RSSs. Total nos. of Stations for Agra Project are 13.	As per understanding of this clause and PS document, redundant switches will be CERs. Please clarrify CERs will act as OCC and BCC for network redudancy point of view. Also please help to understand role of separate OCC as mentioned in clause. Please share the tentative building drawings of OCC,BCC,CER in depots. Please illustrate if OCC,BCC,CER to be considered as separate & individual nodes In Chpt 1 CLause 3.6, there is no mention of BCC. Please clarify location of BCC.	1. OCC means Operation Control Centre Theater. 2. CER means Central Equipment Room where all the Central Level Systems of Telecommunication System shall be placed. Second CER will act as the Backup of First CER. 3. Plesae refer volume -5 of Tender Document for drawings.
28	Volume 4	Pg No. 15 / PS Chapt 2	1.4.3.1. C)	The equipment shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks.	As per our understanding the Core switches,Distribution switches and Access switches will be installed in temperature controlled areas hence all switches will not be rugged (Industrail grade with high temperature 75 degree for outdoor/closed high temperature areas like tunnel,open area) switches. For open area only, industrial grade switches can be proposed. Please modify it as "The equipment for open area shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks". Please illustrate 'Open Area' in context of stations, buildings and other locations of the Corridors.	For switches grade refer 1.2.1 chapter 2(PS)
29	Volume 4	Pg No. 15 / PS Chapt 2	1.4.3.1. h)	Ability to integrate with Non-IP based equipment and networks.	Switches are based on IP/Ethernet protocols with open standard. Integrate to any other system will require IP/Ethernet / Open standard. Please clarify for the clause.	To be dealt during design phase

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30	Volume 4	Pg No. 20 / PS Chapt 2	1.10.1.5	<p>Each FOTS Network Management workstation shall be connected with the common colour laser network printer work server and associated printer for alarm and event printout. The minimum specification of colour laser network printer is as follows: -</p> <ul style="list-style-type: none"> • • Intuitive 25.65 cm Smart Operation Panel • • Web Browser: • Internal Multi-fold Unit • 3,000-Sheet Finisher • 	Indicated features are OEM specific and standard features of a Printer. These may be suitably amended.	Its minimum specs mentioned, any equipment of better specification and make shall be acceptable
31	Volume 4	Pg No. 21/ Chapt 02	1.10.1.18	NMS should support Software Defined Network (SDN) Management including Open Flow devices.	Software Defined Network (SDN) enables programmability in the network through open interfaces which shouldn't be limited to open flow only. Open flow based implementation is being adopted in Data Centers in a very limited manner. We reequest for allowing the Bidder to implement SDN Management for realizing the required functionalities in the network. Hence we request for deletion of " open flow" reference and modification of the clause as "NMS should support Software Defined Network (SDN) Management "	To be dealt during design phase

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32	Volume 4	Pg No. 24 / PS Chapt 2	1.17.2 1.17.3 1.17.4 1.23.5 1.8.1 1.8.2	1.17.2 The absolute group delay for voice traffic shall not exceed the ITU-T Recommendation G.712 which recommends a limit of 600 microseconds. 1.17.3 Voice circuits shall have an end to end performance in accordance with ITU-T Recommendation G.712. 1.17.4 Data circuits shall have an end to end error performance in accordance with the ITU-T Recommendation G-821. 1.23.5 The bit error rate of transmitted data on the FOTS shall be better than 10 ⁻⁹ . 1.8.1 In the event of an optical fibre cable break, the optical transmitter laser output shall shut down to a safe level as defined by IEC-825, ITUT-G 958. The shutdown mechanism shall not be software dependent. 1.8.2 The absolute group delay at the frequency of minimum group delay shall not exceed 600 microseconds taking into account of the worst delay scenarios.	The mentioned clauses are of SDH technology. As the current FOTS is completely on IP Ethernet, then these clauses are not applicable on FOTS. SO, we request you to delete these clauses. For your reference: ITU- G.712 : https://www.itu.int/rec/T-REC-G.712/en G.712 : Transmission performance characteristics of pulse code modulation channels ITU-T G.821: Error performance of an international digital connection operating at a bit rate below the primary rate and forming part of an Integrated Services Digital Network https://www.itu.int/rec/T-REC-G.821/en Bit Error Rate-Page 4 https://www.itu.int/dms_pubrec/itu-r/rec/f/R-REC-F.1605-0-200302-I!!PDF-E.pdf ITU-T G.958: Digital line systems based on the synchronous digital hierarchy for use on optical fibre cables https://www.itu.int/rec/T-REC-G.958-199411-S/en	Please follow tender conditions
33	Volume 4	Pg No. 25 / PS Chapt 2	1.18.3	A summary alarm indication shall be provided at the top of each rack to indicate the summary alarm status of the equipment within the rack.	Switches have dedicated LED indication for their health and for detailed observation for network alarms, it is recommended to check switch logs and NMS. Requesting to please remove the clause as mentioned above.	Refer Addendum-1
34	Volume 4	Pg No. 26/ PS Chapt 2	1.19.1	All the Network Switching Devices/NMS should support Open flow Protocol for SDN technology.	Software Defined Network (SDN) enables programmability in the network through open interfaces which shouldn't be limited to open flow only. Open flow based implementation is being adopted in Data Centers in a very limited manner. We reequest for allowing the Bidder to implement SDN Management for realizing the required functionalities in the network. Hence we request for deletion of " open flow" reference and modification of the clause as "NMS should support Software Defined Network (SDN) Management "	Refer UPMRCL S.No 31
35	Volume 4	Pg No. 35 / PS Chapt 2	1.20.10 S.No.11	Certifications- UL, EN 60950, ROHS, EN55032, EN55024	In cordination of CLause 1.1.13 of this chapter, Carrier grade Access switches should support either EN55022 or EN55032 as EMI standard. Since both are related with power-supply products marketed for communications and information technology (IT) end equipment. So, Requesting you to please modify it as EN55022/EN55032 for access switches.	Refer UPMRCL S.No 26

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36	Volume 4	Pg No. 35 / PS Chapt 2	1.20.10	7. Layer 2 Features - STP, RSTP, MSTP, IEEE802.1Q, ITU-TG.8032/equivalent, Port and VLAN mirroring (RSPAN), UDLD	UDLD is few vendor's proprietary, Please allow for the equivalent method for Unidirectional Link detection like Single port LAG etc. So kindly modify the UDLD feature with "UDLD or equivalent"	Equivalent or Better specification shall be acceptable.
37	Volume 4	Pg No. 35 / PS Chapt 2	1.20.10	11. Certifications- UL, EN 60950, ROHS, EN55032, EN55024	As we understand, EN55024 is withdrawn and EN55032/EN55022 is sufficient as the requirements in both standards are similar. Request to keep only EN55032/EN55022 only instead of EN55032 and EN55024 both.	Refer UPMRCL S.No 26
38	Volume 4	Pg No. 35 / PS Chapt 2	1.20.10	Security: DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI), Tri-authentication: MAC-based, web-based and IEEE 802.1x	As we understand, For web based authentication, it can be implemented through web based interface via EMS/NMS also. Please confirm it our understanding is correct.	To be dealt during design phase
39	Volume 4	Pg No. 5 / PS Chapt 3	1.2.5.1	(2) Among OCC and other locations like UPPTCL Control Rooms, RSSs / TSSs, Stations, Depot and Security Control Room through leased telephone line of PSTN (BSNL/Private Operator). (3) Among RSSs and UPPTCL, Security Control rooms through leased PSTN (BSNL/Private Operator) telephones lines.	The number of leased line requirement is not is not clear, we understand that the Employer will make available the necessary Leased PSTN Telephone line and contractor will provision to integrate in the EPABX.	Please follow tender conditions
40	Volume 4	Pg No. 5 / PS Chapt 3	1.2.5.4.2	It shall be possible to select any one additional EPABX phone conversation for recording purposes from the HMI .CDRS shall be provided as part of the this Telecom Contract and it shall be the responsibility of Telecom Contractor to coordinate, finalise the number and type of channels, interface, test and commission the recording of Telephone Communication in the CDRS. All Direct Line Telephone communication from and to all the Direct Line Consoles in the OCC, CERs and depots shall have to be recorded in the CDRS. The interface between Telephone system and CDRS should be IP and in active recording mode, passive recording is not acceptable. The number of channels have to be accordingly finalized by Telecom Contractor during the detailed design stage after getting approval from Engineer or Engineer	Since Analog and Digital phones need to tap physically from MDF to record conversation. Hence, requested to amend the tender specification accordingly.	Please follow tender conditions
41	Volume 4	Pg No. 7 / PS Chapt 3	2.2.1 (4)	EPBX Network (4) Digital telephone sets	We request you to amend as Digital Telephone sets/IP Telephone Sets, as mentioned in Clause 1.2.4 (page 4 of 47)	Please follow tender conditions
42	Volume 4	Pg No. 7 / PS Chapt 3	2.2.2 (1)	Automatic exchange/processor unit with line and trunk interfaces.	Automatic exchange/processor unit will be common for EPABX and Direct Line Network. Separate line and trunk interfaces are required for Direct line Network. Please amend accordingly.	Please follow tender conditions

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43	Volume 4	Pg No. 7 / PS Chapt 3	2.2.2, (3)	Appropriate subscriber telephone sets (Digital).	Due to technical limitation, Digital phone can be extended unto a limited distance which may not be adequate for this project. We request you to kindly accept IP Phone as all the mentioned features can be achieved from IP Phone as well.	Please follow tender conditions
44	Volume 4	Pg No 10 / PS Chapt 3	3.2.6	The service life of the Telephone System shall not be less than 15 years. Service life of all type of cables shall not be less than 25 years. Service life of server shall not be less than 10 years. Service life shall be counted from the commencement date of the Revenue Operation Date (ROD).	Since Servers are Commercial Off The Shelf (COTS) product. The service life of most of the standard COTS IT equipment is 5 years. Post that, it is difficult to get the support from the OEMs. Request you to modify the clause to 5 years.	Please follow tender conditions
45	Volume 4	Pg No. 12 / PS Chapt 3	4.1.1.3	4. Digital Phones Station: 02 Depot: 50	Due to technical limitation, Digital phone can be extended unto a limited distance which may not be adequate for this project. We request you to kindly accept IP Phone as all the mentioned features can be achieved from IP Phone as well.	Please follow tender conditions
46	Volume 4	Pg No. 17 / PS Chapt 3	4.1.1.11	4.1.1.11. (2) Digital trunks ETHERNET	In IP based EPABX, SIP based IP trunk is commonly deployed . Please ammend this requirement to "SIP Based IP Trunk "	Please follow tender conditions
47	Volume 4	Pg No. 19 / PS Chapt 3	4.1.1.13.1	The digital feature telephone shall be equipped with, but not be limited to, the following facilities: (7) Powered by the EPABX switch; (17) The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling.	Due to technical limitation, Digital phone can be extended unto a limited distance which may not be adequate for this project. We request you to kindly accept IP Phone as all the mentioned features can be achieved from IP Phone as well. Please amend as per below. The IP Phone feature telephone shall be equipped with, but not be limited to, the following facilities: (7) Powered by the L2/L3/ POE switch or adapter; (17) to be deleted	Please follow tender conditions
48	Volume 4	Pg No. 19 / PS Chapt 3	4.1.1.13.1 (7)	A minimum of 20 memory keys with 10 keys for speed dialling and 10 keys for programmable system features which shall include but not be limited to, call pickup, call forward, call back, system speed dial, call park, direct pickup, cancel call forward, cancel call back, personal speed dial and one spare key;	This is OEM specific requirement. Basic telephone comes with 10 memory keys. We request you to modify the clause with maximum 10 keys as analog phone does not come with 20 keys.	To be dealt during design phase
49	Volume 4	Pg No. 20 / PS Chapt 3	4.1.1.13.2 (17)	The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling.	The digital Phone can dial or receive a call from any trunk signalling, but as phone works on (2b+d) signalling. And does not required and support in side the digital phone as (30b+d) signalling. We request you to kindly amend the clause accordingly.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
50	Volume 4	Pg No. 22 / PS Chapt 3	4.2.1.8	Underground Stations, each shall have 20 numbers of Direct Line Telephones and each of all other Stations, Depots and OCC shall have 10 numbers of Direct Line Telephones and 01 number at each RSS, which shall be programmed for the required	As per Minimum BOQ (Instruction to Tenderers, Appendix-J page no 160) Quantity of Direct Line Telephone- 40 lines are 49 and DLT phones 10 lines are 140. Hence the quantity is not matches with Clause 4.2.1.8 please amend accordingly.	Please follow tender conditions
51	Volume 4	Pg No. 24 / PS Chapt 3	4.2.3	Direct Line Telephones shall be standard Telephones connected to Direct Line Console at OCC, DCCs and CERs through single push button selection. At each defined locations of Stations, OCC, CERs, Depots and RSSs, 1 Nos. of such telephone with 40 lines shall be provided. It shall be possible for the SCR to make normal and emergency direct line calls to the designated controllers in OCC & other locations. Different audio and visual indications shall be provided for incoming direct line calls on the Direct Line Telephones for normal and emergency calls.	As per Minimum BOQ (Instruction to Tenderers, Appendix-J page no 160) Direct Line Telephone- 40 lines and DLT phones 10 lines are required Please Specify features of DLT 10 Line Phone and amend Clause 4.2.3 accordingly.	Please follow tender conditions
52	Volume 4	Pg No. 34 / PS Chapt 3	6.2.1.8.1	Network Flash Forwarding & Network Flash Receive	Kindly share details if there is any functional requirement of these features	To be dealt during design phase
53	Volume 4	Pg No. 36 / PS Chapt 3	6.2.1.8.5	Class of Service – Extension (Station) Timers	This is OEM specific implementation details, this feature can be achieved by one timer also. This should be left for the bidders to the features. Therefore it may be removed.	To be dealt during design phase
54	Volume 4	Pg No. 39 / PS Chapt 3	6.4.1	a. For testing and simulation of RTP and RTCP packets etc, manual creation and terminate RTP sessions, independent of call-signalling protocols such as SIP, H323, and MGCP.	H323 and MGCP protocols are old generation Protocols and are superseded by SIP. Hence this protocol should be removed from tender specifications.	To be dealt during design phase
55	Volume 4	Pg No. 43 / PS Chapt 3	6.6.2	Power Supply system	As servers for other most of the applications such as CDRS, NMS, Voice mail etc. are AC operated, to maintain uniformity, AC power for telephone systems should be allowed.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
56	Volume 4	Pg No. 10 / PS Chapt 4	3.3.4	The Contractor shall liaise with all concerned authorities including DoT, WPC, SACFA, civil Aviation authorities and other local authorities and obtain necessary clearances / sanctions for installation and commissioning of the Radio system. All costs therein have to be borne by the Contractor.	We understand that all the licenses / clearances / sanctions need to be on the name of UPMRC. The contractor will liaise with the concerned authorities. However, the License fee / any other statutory fees should be borne by UPMRC. Kindly modify the clause	Refer Addendum-1
57	Volume 4	Pg No. 13 / PS Chapt 4	4.4.2	The service life of Server / Workstation shall not be less than 10 years.	The service life of most of the standard COTS IT equipment is 5 years. Post that, it is difficult to get the support from the OEMs. Request you to modify the clause to 5 years	Please follow tender conditions
58	Volume 4	Pg No 15 / PS Chapt 4	5.1.2	Telecom system shall be up-gradable to support higher data rates to support broadband services by adding broadband base station based on LTE technology or latest on the proposed infrastructure.	We understand that TETRA & LTE are two different Telecom Technologies. Shifting to LTE will require not only change in base stations, but complete overhaul of the Telecom Network to be installed for UPMRC. We assume that this will be additional scope of work and the same is not the part of commercial bid for this project. Is our assumption correct?	Refer Addendum-1

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
59	Volume 4	Pg No. 16 / PS Chapt 4	5.2.2	The Radio System shall cover, but not be limited to: 10) All parts of OCC and Depot, DCC's and UPMRC Headquarters	Please provide the locaton and coordinates of OCC, BCC and UPMRC headquarter	OCC & CER shall be in Admin Building of Depot. For Agra, second CER may be at the the other location as provided but the first CER will be in Admin Building. There is no BCC. UPMRC Headquarters shall be in Lucknow. Radio System shall work in the same city for respective Metro Networks.
60	Volume 4	Pg No. 20 / PS Chapt 4	5.3.3.4	Central Equipment Rooms (Telecommunication) at Depots/Admin Buildings One RCW with restricted access shall also be located in each Central Equipment Room for Telecommunication Systems at both Depots/Admin Buildings. This unit shall be used for maintenance monitoring and shall work as spares for RCWs in the OCC.	RCW required for maintenance monitoring is already considered in MMI distribution in Appendix H of PS as an RCW in CER. Kindly confirm whether this is the same or additional requirement. Also please confirm if RAU is also to be provided as back up to these RCW. Request you to update the BoQ accordingly.	Please follow tender conditions
61	Volume 4	Pg No. 28 / PS Chapt 4	5.6.15.2.3	The system shall also be up-gradable to support higher data rates by only software upgrades or by broadband services by adding broadband base station based on LTE or latest technology on the proposed infrastructure. The Contractor has to submit documents along with his Bid to substantiate his claim in this matter.	Request you to kindly remove the clause as both LTE & TETRA are different technologies and OEMs for both are different.	Refer Addendum-1
62	Volume 4	Pg No. 47 / PS Chapt 4	5.8.3.9.3	The maintenance radio's call shall be routed to the maintenance controller RCW.	The maintenance controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if maintenance controller for RCW needs to be considered. If not, request you to please remove the maintenance controller RCW from the clause. Request you to revise the BoQ accordingly.	CSS at CERs shall work as Maintenance Controller. RCW shall be provisioned as per Appendix-H of Chapter-11 of PS.
63	Volume 4	Pg No 47 / PS Chapt 4	5.8.3.9.4	The security radio's call should be routed to the security controller RCW.	The security controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if Security controller for RCW needs to be considered. If not, request you to please remove the Security controller RCW from the clause. Request you to revise the BoQ accordingly.	RCW shall be provisioned as per Appendix-H of Chapter-11 of PS
64	Volume 4	Pg No. 47 / PS Chapt 4	5.8.3.9.5	The Traction supply radio's call should be routed to traction supply controller RCW.	The traction supply controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if traction supply controller for RCW needs to be considered. If not, request you to please remove the traction supply controller RCW from the clause. Request you to revise the BoQ accordingly.	RCW shall be provisioned as per Appendix-H of Chapter-11 of PS

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
65	Volume 4	Pg No. 81 / PS Chapt 4	6.9.7	Controllers RCW in OCC, DCC & other locations shall be provided a RAU in addition to RCW to work as a back-up/ all other controllers shall be provided only RAUs. One extra RAU complete with all accessories shall be provided and installed at each of the terminal stations also.	Please confirm if the number of terminal stations to be considered is 1 for each corridor. As the RAU quantity is not included in MMI distribution in Appendix H of PS, request you to please add the same in Appendix H. Request you to revise the BoQ accordingly.	Please follow tender conditions
66	Volume 4	Pg No. 87 / PS Chapt 4	6.10.9.1.2	Contractor shall install minimum one LCX cable in each tunnel, tunnels leading out of the underground up till out in open and minimum two LCX cables throughout in underground station areas all along the Cable containment, for future expansion and use for the TETRA services and Fire/Police services.	Reuquest you to clarify why there is a requirement of minimum two LCX cables throughout in the underground station areas all along the Cable containment. This should be left for the bidders to design the IBS in Underground station as per requirements stated in the PS.	To be dealt during design phase
67	Volume 4	Pg No. 88 / PS Chapt 4	6.10.9.1.5	Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	Please confirm that the clause is only asking about the failure of repeater of one tunnel and not about the failure of LCX cable. Providing redundancy in LCX cable is not a standard practice in any Metros. Coverage from on LCX cable may not be possible in other tunnel.	Please follow tender conditions
68	Volume 4	Pg No. 99 / PS Chapt 4	6.12.1.3 (3) & 6.12.1.8	The portable radio shall comply with the following international standards: 3) IP 54 or better concerning condensing (Water& Dust) requirements. And The Hand-portable radio shall have a WRF Power Output, Full Keypad and shall comply IP 67 rating.	Both the clause are contradictory. Kindly clarify the IP ratings required for Handset	The Hand-portable radio shall have a WRF Power Output, Full Keypad and shall comply IP 67 rating
69	Volume 4	Pg No. 110 / PS Chapt 4	7.2.3.3	RS Contractor shall install the complete Train borne radio system, at the designated locations in the driving cab under supervision of Telecom Contractor, for the First Train	Kindly provide the details of Rolling Stock location where the Train borne Radio system is to be installed	Train borne Radio system willl be installed in Train manufacturing factory.
70	Volume 4	Pg No. 112 / PS Chapt 4	8.4	Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	The IBS for cellular communication will be dependent on the Cellular communication design including frequency, power, location of cellular BTS, cellular coverage available, etc. Further 100% overalpping of signals is not possible in Cellular network due to technolgy challengs and the system performance. It is recommended to have the overlapping only at the hand over zones, please consider the revision of the requirement	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
71	Volume 4	Pg No. 112 / PS Chapt 4	8.8	No repeater equipment shall generally be installed in the tunnels. Nevertheless, if it is unavoidable then intermediate repeaters can be allowed to install adhering to the schedule of dimensions. Power for the same has to be extended by the Telecom Contractor from the S&T UPS. Any co-axial cable, optical fibre cable, power cable, etc has to meet the FRLSZH (Fire Retardant Low Smoke Zero Halogen) criteria for underground environment and has to be provided by the Telecom Contractor along with associated equipment for receiving signals of mobile service providers. In this regard, certificates and test reports of the manufacturer are to be submitted to employer representative for review. Further, if required to install more active components to cover the stations areas, such locations of active components can be decided during detailed design phase. The installation of passive equipment has to be done inside the false ceiling and aesthetics of areas to be maintained. Location of such installation is to be approved by employer representative.	Cellular system works in a wider spectrum with various technologies 2G,3G & 4G. The higher frequencies and latest technologies are working with user shared output power, The reference power distinguish the coverage level is much lower and require to install the amplifiers a frequent interval inside tunnel to meet the coverage requirement. This madates the requirement of installation of BDA inside the tunnel wall also. Request you to please confirm the same.	To be dealt during design phase
72	Volume 4	Pg No. 120 / PS Chapt 4	5.15.1	The specifications for centralised digital recording system	These specifications are for Analog recorders. Request you to kindly delete these clauses or modify to suit digital recording system	To be dealt during design phase
73	Volume 4	Pg No. 3 / PS Chapt 5	1.2.3	The station PAS control equipment shall be interfaced to the FOTS for connection to the equipment located in the CERs to facilitate system control from Stations, Depots, OCCs and CERs.	Our understanding is Location Equipment can only be controlled from that location or from OCC and rephrase the clause as "The station PAS control equipment shall be interfaced to the FOTS for connection to the equipment located in the CERs to facilitate system control from OCC."	Please follow tender conditions
74	Volume 4	Pg No. 12 / PS Chapt 5	5.1.3	PAS announcement shall be capable of being originated from designated hand portable radios also to a set of pre-defined PAS zones at each station. It should be possible to make simultaneously Radio to PAS announcement at minimum 30 different stations. This needs to be coordinated and demonstrated with Radio/Telephone sub systems.	This Clause talks about interface of PAS wth Radio system. Kindly remove the Telephone Subsystem from the clause	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
75	Volume 4	Pg No. 15 / PS Chapt 5	5.4.2.2. (4)	In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console;	As hard wire PAS console will not implement this in an efficiently operational manner therefore ammend the clause as Multi-drop data links (TCP/IP) of adequate bandwidth through FOTS shall be provided to each station, PAS allowing the OCC & CERs to broadcast messages to the following as a minimum: (1) One station; (2) A group of stations; (3) All stations; (4) In a particular zone, group of zones and all zones at stations through Software and / or hard-wire PAS console; (5) One Train and a group of trains via Radio/FOTS Interface	Please follow tender conditions
76	Volume 4	Pg No. 15 / PS Chapt 5	5.4.2.4	Each hard-wired PAS control panel shall be provided along with zone selection & extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	Our Understanding is Hard wire Control Panel can only address zones locally available at the location. Please confirm.	Please follow tender conditions
77	Volume 4	Pg No. 19 / PS Chapt 5	5.7.6.5	Platform display boards shall show the estimated time of arrival of the next train by a countdown counter.	Time count down expected at Display level or AVLS will update count down value.	Refer UPMRCL S.No 77
78	Volume 4	Pg No. 19 / PS Chapt 5	5.9.2	The PAS shall have the necessary facilities to mute and attenuate selected PAS locations and zones manually & automatically under time mode control in areas where broadcasts may disturb the public.	Please remove this clause as muting of Zone is not recommended as per the IEC 60849 standards	Please follow tender conditions
79	Volume 4	Pg No. 20 / PS Chapt 5	5.10.1.1.11	Each MMI position shall be equipped with a PAS Control Panel including a microphone to enable live broadcast messages to be made even when the Server, MMI, and DVA equipment fail. Hence PAS Control panel shall work as a manual backup to MMI (including the DVA) at all locations i.e., stations and OCC/CERs etc.	Please consider changes as below: Each MMI position shall be equipped with a PAS Control Panel including a microphone to enable live broadcast messages to be made even when the Server, MMI, and DVA equipment fail. Hence PAS Control panel shall work as a manual backup to MMI (including the DVA) at all locations i.e., stations and OCC/CERs for their respective location zone message broadcasting .	Please follow tender conditions
80	Volume 4	Pg No. 24 / PS Chapt 5	5.12.3.1 (15)	Failure of hard wired MMI for PSB/PSP.	There is no requirement of MMI at PSB/PSP, therefore kindly ammend the clause as following : "Failure of hard wired PAS Control Panel and or MMI at any location.	Please follow tender conditions
81	Volume 4	Pg No. 25 / PS Chapt 5	5.13.1.1	The equipment shall incorporate a self-diagnostic process for monitoring, as minimum but not be limited to, all amplifiers and loudspeaker circuits. In the event of a fault being detected, an alarm shall be given on the control panel at OCC, CERs and at SCR MMI at stations and Depot.	The clause should be read as "The equipment shall incorporate a self-diagnostic process for monitoring at least all amplifiers and loudspeaker circuits. In the event of a fault being detected, an alarm shall be given on the control position at OCC CER and at SCR MMI at stations and Depot	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
82	Volume 4	Pg No. 28 / PS Chapt 5	6.3.1.6	The PAS control equipment shall be equipped with a monitoring speaker to test and verify audio output functions of each amplifier in the PAS equipment racks at all stations and the Depot. This facility can also be provided at SCRs and TERs.	To be removed as this option is available on analog PA system not Digital PA System.	Please follow tender conditions
83	Volume 4	Pg No. 28 / PS Chapt 5	6.3.1.9	The audio matrix switch shall be fail safe and shall be capable of being manually/automatically bypassed to maintain all zone broadcast availability, if necessary on failure of the audio matrix switch.	This is Vendor specific feature, the clause may be read as "If audio matrix switch is used, it shall be fail safe and shall be capable of being manually/automatically bypassed to maintain all zone broadcast availability, if necessary on failure of the audio matrix switch.	Please follow tender conditions
84	Volume 4	Pg No. 30 / PS Chapt 5	6.3.4.4	The monitor speaker with volume adjustment control on the PAS control panel shall be used for real time monitoring of any message being broadcast to the pre-defined zones.	This Monitor Speaker will be placed along with MMI and not with PAS control Panel	To be dealt during design phase
85	Volume 4	Pg No. 32 / PS Chapt 5	6.3.11.11	All PA speakers shall have a uniform bandwidth from 340 Hz to 18 kHz and shall be equipped with selectable multi power tapings.	Both clause 6.3.11.7 & 6.3.11.11 are contradictory to each other .please change tender clause 6.3.11.11 as below. All Loudspeakers shall have a minimum frequency response for 340 Hz to 14 kHz within - 10 dB.	To be dealt during design phase
86	Volume 4	Pg No. 36 / PS Chapt 6	6.3.3.1.6	(5) Module Resolution : 192 x 192 dots, Single module pixel resolution	Can we supply other pixel resolution modules as per lower pitch?	To be dealt during design phase
87	Volume 4	Pg No. 36 / PS Chapt 6	6.3.3.1.6	(1) Viewable picture size : minimum 1500 mm(W) x 500 mm (H)	With 2.6 mm pitch 500 height is possible. If we propose lower pitch than picture height will be lesser than 500mm. Will it be acceptable?	To be dealt during design phase
88	Volume 4	Pg No. 36 / PS Chapt 6	6.3.3.1.6	(16) Each "True Colour LED" display panel shall have an inbuilt 20 watts output loudspeaker for colour video clips with audio.	All display location audio may not be synchronized Announcement from Display Speaker may interfere with PAS announcement Hence this requirement may be removed	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
89	Volume 4	Pg No. 1 / PS Chapt 7	1.2.1	The Master Clock System shall be compliant with ITU-T G.811. It will serve as Primary Reference Clock (PRC) for all clock functions of the UPMRC. The Master Clock shall provide synchronised time signals received by radio communication from orbiting GPS satellites. The Master Clock shall derive Coordinated Universal Time (UTC) from received GPS satellite signals and shall convert this to local Indian Standard Time. The Telecom Contractor shall provide the Master Clock for Date & Time signal also so that it can act as NTP server for the Master Clock System of UPMRC network.	ITU-T G.811 provided the clock on E1/2.048 MHz which is not required as there is no SDH system in the network. Kindly remove this standard	Equivalent or Better specification related to FOTS specification shall be acceptable.
90	Volume 4	Pg No. 5 / PS Chapt 7	3.2.1 (5)	Floor Mounted Rack	Rack will not be the part of MCS system. Therefore delink it with MCS	Rack is in the scope of KNPAGS-01 contractor
91	Volume 4	Pg No. 8 / PS Chapt 7	5.2 (3)	Sub-Master Clocks shall further distribute the synchronized signal to all slave clocks. In the absence of valid Sub-Master Clock signal, the Slave clocks shall operate in free running mode with an internal clock supplying the time signals. On restoration of the Sub-Master clock signal the Slave clocks shall validate the signal. After the successful validation, the Slave clocks shall selfcorrect, if necessary. The Master Clock unit, Sub-master Clock unit and Slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date & time without any interruption	The Master Clock unit, Sub-master Clock unit and Slave clocks (digital) are being provided to provide power from UPS therefore internal battery back of 4 hours is not required, kindly remove the sentence "The Master Clock unit, Sub-master Clock unit and Slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date & time without any interruption"	Please follow tender conditions
92	Volume 4	Pg No. 8 / PS Chapt 7	5.2 (5)	Sub-master clock shall supply timing signals to the voice recording equipment (CDRS), the train control & signalling system, FOTS, PIDS, PAS, Radio System (with CDRS), Telephone system, CCTV System, power supply sub-system, T-SCADA, OA&IT, other SCADA systems, the AFC central computer and other necessary equipment to be finalised at design stage.	This Clause may be amended as, since the Master Clock System will provide timing reference over LAN, Master Clock System / Sub-master clock shall supply timing signals to the voice recording equipment (CDRS), the train control & signalling system, FOTS, PIDS, PAS, Radio System (with CDRS), Telephone system, CCTV System, power supply sub-system, T-SCADA, OA&IT, other SCADA systems, the AFC central computer and other necessary equipment to be finalised at design stage.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
93	Volume 4	Pg No. 8 / PS Chapt 7	5.4	The Sub-Master Clock system shall provide appropriate clock output interfaces for master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	There seems to be some ambiguity in this clause, kindly review and please amend this clause. Suitable clause could be: The Master Clock system and or Submaster Clock System shall provide appropriate clock output interfaces for master clock timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	Refer Addendum-1
94	Volume 4	Pg No. 9 / PS Chapt 7	5.7	Digital Slave Clocks to be built to Open Protocol (like AFNOR, VNTP V4 or latest one etc.) and to work on this Open Protocol only. In this reference following points must comply:	There is typo error for VNTP V4, therefore kindly ammend the clause as following : "Digital Slave Clocks to be built to Open Protocol (like AFNOR, NTP V4 or latest one etc.) and to work on this Open Protocol only. In this reference following points must comply":	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
95	Volume 4	Pg No. 9 / PS Chapt 7	5.7	(4) Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 66 standard and those used in indoor environment (Rooms) with IP54 standard.	<p>We understand that the digital outdoor clocks at head end and tail end of each platform shall be necessary for the use of the train driver as well as passengers, however such clocks quantity is neither specified in the specification nor in the BoQ, kindly indicate the same as well. Secondly, As per industry norms, the outdoor display clocks are installed & tested to survive the IP 65 ingress protection degree whereas IP 66 compliance are not sought. Kindly review and please amend this clause.</p> <p>Suitable clause could be: Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 65 ingress protection degree and those used in indoor environment (Rooms) with IP54 ingress protection degree as standard. Further, the quantity of outdoor slave clocks are neither specified in the specification nor in the BoQ, kindly indicate the same as well.</p>	Please follow tender conditions
96	Volume 4	Pg No. 9 / PS Chapt 7	5.7	(4) Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 66 standard and those used in indoor environment (Rooms) with IP54 standard.	Clocks at Concourse are similar to indoor environment and not exposed to direct rain therefore may have IP rating of IP 54.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
97	Volume 4	Pg No. 9 / PS Chapt 7	6.2	<p>Technical System Performance</p> <p>The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal quartz oscillator. This oscillator ensures that the Master Clock accuracy is better than 1x10⁻¹² (Seconds per 24 Hours) in free running mode without the input of GPS signal.</p>	<p>We understand that as per ITU-T G.811 standard, accuracy of a PRC clock when synchronised with GPS should meet 1*10⁻¹¹ (Seconds per 24 Hours) whereas free running accuracy asked in specification is 1x10⁻¹² (seconds per 24 hours) is contradictory because in free running mode (after the holdover period of 24 hours or as applicable loss of synchronization, without the input of GPS signal) the accuracy of internal quartz oscillator will start degrading and it must be comparatively lower than the PRC accuracy.</p> <p>Moreover, overall Master clock system accuracy has been asked +/- 0.01 second per 24 hour, which can be achieved by any Masterclock having accuracy less than 1 x 10⁻⁹ (Seconds per 24 Hours) in free running mode without the input of GPS signal.</p> <p>Hence Please review, omit the accuracy specified here under this clause and please amend this clause.</p> <p>Suitable clause could be: The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal Rubidium atomic oscillator. This oscillator ensures that the</p>	Please follow tender conditions
98	Volume 4	Pg No. 10 / PS Chapt 7	6.3.1.6	The master clock system shall work from 48 V +/- 20% DC and 240 AC UPS with an internal battery backup of at least 4 hours for continuous display of date and time without interruption.	The Master Clock may work on either 240 V AC or 48V +/- 20% DC therefore rephrase the clause as "The master clock system shall work from 48 V +/- 20% DC and / or 240 AC UPS" Systems are anyway being provided with UPS therefore internal battery back of 4 hours is not required therefore kindly remove it.	Please follow tender conditions
99	Volume 4	Pg No. 10 / PS Chapt 7	6.3.1.9	The sub-master and slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date and time without interruption.	Systems are anyway being provided to provide power from UPS therefore internal battery back of 4 hours is not required therefore kindly remove it	Please follow tender conditions
100	Volume 1	Pg No. 169 / ITT - MCS BoQ	Sr. no. 82 and 83	<p>Power Cable (armoured) Fire Retardant type with low smoke/zero halogen in full Underground section and Low smoke/low halogen in elevated/at-grade section as per the requirements of PS.</p> <p>&</p> <p>Power Cable Fire Retardant Type with low smoke/low halogen content (armoured) for Depots, RSS, etc as per the requirements of PS.</p>	Clocks will be powered and gets network connectivity on PoE, therefore there is no requirement of Power cable. Hence It will be made as an optional item	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
101	Volume 4	Pg No. 3 / PS Chapt 8	1.2.4 (4)	CCTV surveillance system for monitoring important locations outside the stations/depots like TSSs/RSSs (tentatively there are three RSSs & TSSs planned in Kanpur Metro Project and 2 RSSs & TSSs are planned in Agra Metro Rail Project), Parking areas and specifically identified theft prone areas etc, from adjacent station and remotely from OCC, Security Control Rooms, DCCs, CERs. Night Vision (IR illuminated) cameras are to be used at these	Please provide the tentative locations and the area to be covered	Please follow tender conditions
102	Volume 4	Pg No. 5 / PS Chapt 8	1.2.10	In emergencies or as required it shall, however, be possible, without any additional resources, to view images from any/all cameras and/or record any dynamically selected location on the system.	As I understood from requirement In emergencies it shall be possible to view any /all camera and recorded video dynamically from any location. Please clarify .	Please follow tender conditions
103	Volume 4	Pg No. 5 / PS Chapt 8	1.2.12	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	Pleqase clarify the intant of operator screen in the sentence "The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens."	Please follow tender conditions
104	Volume 4	Pg No. 5 / PS Chapt 8	1.2.12	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	What is meant by re constructing complete incident into one timeline? Is it meant for event based frame changes for recording? And if there is any incident on any camera it has to be recorded and playback as and when required till the video is available on NVR as per defined retention time.? please clarify	Please follow tender conditions
105	Volume 4	Pg No. 6 / PS Chapt 8	2.1.2	At the depots, cameras shall be provided inside the depot connected to the NVR located in the TER and thereon to the Monitor in the DCC for display to the Depot Controller and Depot Security Controller. The same shall be connected to the CER through the Layer 3 Network, for both viewing live and recorded video and also for occasional recording. Camera shall also be provided for train entering in the Depot area.	Since all the cameras are being recorded consinuously, What is requirement of Occasional recording , please expain.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
106	Volume 4	Pg No. 11 / PS Chapt 8	4.2.3	<p>The Contractor shall ensure that the CCTV system equipment supplied under the Contract shall comply with the reliability figures herein:</p> <p>CCTV System Equipment MTBF (Power on Hours/POH) per unit Station and central equipment > 250,000 IP Fixed Cameras > 200,000 PTZ cameras >200,000 Video recording equipment > 250,000 Video Display Units (monitors) >150,000 Digital CCTV Keyboard >200,000 Layer-2 Switch > 150,000</p>	<p>Defined MTBF values are too high . Kindly consider the changes as below as non of the Metro till date have asked this much of MTBF for each equipment.</p> <p>1-IP Fixed Cameras : > 100000 Hours 2- IP PTZ Cameras : > 100000 Hours 3- Digital CCTV Keyboards : > 50000 Hours 4- Monitors: > 50000</p>	Not Acceptable
107	Volume 4	Pg No. 14 / PS Chapt 8	5.1.10	<p>The station and depot surveillance CCTV control equipment, for connection to the equipment located in the CERs at Depots for remote viewing, recording and control, shall be interfaced through Layer-3 Switch Network at every station/Depot/OCC (in the scope of FOTS at every station / depots / OCC / CERs).</p> <p>There shall be 4 x1 Gbps optical ports and 10x10/100/1000 Base T ports available for CCTV system on each distribution Layer-3 switch at stations/RSSs/depots and 24x10/100/1000 Base-T redundant ports will be available at CERs for CCTV system. All the cameras in the station/Depot/OCC shall be connected to the Access layer 2 switches (as part of FOTS chapter this contract) and no cameras will be directly connected to the distribution layer 3 network.</p>	<p>At station level distribution switch, the requirement of 4 x1 Gbps optical ports and 10x10/100/1000 Base T ports are not required. Please change it to minimum 2 x1 Gbps optical ports and 4x10/100/1000 Base T or as per design requirements. This helps in better placement and maintainability.</p>	Not Acceptable

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
108	Volume 4	Pg No. 19 / PS Chapt 8	5.2.5	<p>Advanced video compression techniques, such as MPEG-4, H.264 and H.265, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images.</p> <p>End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 150 m secs under conditions of maximum network traffic.</p>	<p>Kindly consider the changes as below to align the requirement as per tender equipment specification.</p> <p>Advanced video compression techniques, such as MPEG-4, H.264 or better, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images.</p> <p>End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 240 m secs under conditions of maximum network traffic.</p>	Not Acceptable
109	Volume 4	Pg No. 20 / PS Chapt 8	5.4.1	<p>Network Video recording system shall provide local recording at the station itself and mirrored recording at adjacent station for all stations. The Network Video Recording system shall provide Failover and Redundancy.</p>	<p>Our understanding is adjacent station network video recording system will act as failover and redundancy, please confirm.</p> <p>Kindly remove "The Network Video Recording system shall provide Failover and Redundancy"</p>	Please follow tender conditions
110	Volume 4	Pg No. 23 / PS Chapt 8	6.1.8	<p>The CCTV system shall afford viewing simultaneously from the SCR (Station Control Room) at all the stations, Depot Control Centres, Depot Security Control rooms at the Depot and from the OCC, CERs at full frame rate. The viewing and recording for 2 MP cameras shall be at 2 MP at 25 FPS resolution. The normal 2 MP stream at 25 fps for each type of camera shall determine the size of the storage device. The storage capacity shall be calculated keeping in view the spare capacity of 25% of the installed capacity. The primary recording shall be at the Station TER and the recording shall also be mirrored at the adjoining station at the same frame rate and resolution. Telecom Contractor shall ensure adequate bandwidth, ports, channel, forwarding rate etc</p>	<p>Contradicting with clause 3.2(24), which says all recording are to be stored with 30 fps. Please clarify.</p>	Please follow tender conditions
111	Volume 4	Pg No. 24 / PS Chapt 8	6.2.1.4	<p>Unless specified otherwise elsewhere in the PS, Cameras, field switches, PF Monitors & other equipment, meant for outdoor installations, shall be suitable to work from 0oC to +60oC with RH up to 90% non-condensing.</p>	<p>Please consider the camera operating tempretue- 0oC to +55oC as defined in tender Camera specification .</p>	Refer Addendum-1
112	Volume 4	Pg No. 24 / PS Chapt 8	6.2.1.4	<p>Unless specified otherwise elsewhere in the PS, Cameras, field switches, PF Monitors & other equipment, meant for outdoor installations, shall be suitable to work from 0oC to +60oC with RH up to 90% non-condensing.</p>	<p>Kindly exclude PF monitors as those will not be available as per specified temperature</p>	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
113	Volume 4	Pg No. 24 / PS Chapt 8	6.2.2.1	Varifocal Lenses: 1- Focal length 9mm – 50mm 5 -Angle view wide (1/2.8") 30° x 19° or better 6 -Angle view tele (1/2.8") 6.6° x 3.8° or better 7- Iris Control P-Iris Focus control 8- Focus Control - Auto (i-CS) 9- Zoom Control - Auto (i-CS) 10. Operating Temperature -10 0C to +55 0 C	Kindly change the lense requirement as below which is most common lens type used in all metros. 1- Focal length 9mm – 40mm 5 -Angle view wide (1/2.8") 35° x 20° or better 6 -Angle view tele (1/2.8") 8° x 5° or better 7- Iris Control P- Iris Focus control / DC Control 8- Focus Control - Auto (i-CS)/Manual 9- Zoom Control - Auto (i-CS) / Manual 10. Operating Temperature -10 0C to +55 0 C	Not Acceptable
114	Volume 4	Pg No. 25 / PS Chapt 8	6.2.3.5	The housing should support input power of 110 VAC- 230 VAC.	Please ammend the clause "The housing should support input power of 110 VAC- 230 VAC or PoE" as mentioned in clause 6.2.3.3 (8)	Please refer table under clause 6.2.3.3
115	Volume 4	Pg No. 26 / PS Chapt 8	6.2.8 (1)	2 MP (Full High Definition) IP Fixed Box Camera (Day/Night): Pick-up device : 1/2.8" or bigger CCD/CMOS progressive scan image sensor, P-iRIS Sensor.	As we understood camera should have pickup devices 1/2.8 or bigger CCD/CMOS progressive image sensor or P-iRIS Sensor. Please clarify	Not Acceptable
116	Volume 4	Pg No. 26 / PS Chapt 8	6.2.8 (12)	GBT Standard - The Camera to be provided by the bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings.	Please remove this specification as this is vendor specific specially US based company only provide this options or allow bidders to have option to enable / disable the settings as per requirement.	Not Acceptable
117	Volume 4	Pg No. 27 / PS Chapt 8	6.2.8 (26)	2 MP (Full High Definition) IP Fixed Box Camera (Day/Night) Camera Specifications SD Card Support: Built in SD Card slot with support upto 2 TB with Class 10 Speed	Kindly ammend the feature of SD Card Support as "256 GB with Class 10 Speed"	Not Acceptable
118	Volume 4	Pg No 28 / PS Chapt 8	6.2.9 (12)	GBT Standard - The Camera to be provided by the bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings.	Please remove this specification as this is vendor specific specially US based company only provide this options or allow bidders to have option to enable / disable the settings as per requirement.	Not Acceptable
119	Volume 4	Pg No. 29 / PS Chapt 8	6.2.9 (31)	2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night) Camera Specifications SD Card Support: Built in SD Card slot with support upto 2 TB with Class 10 Speed	Kindly ammend the feature of SD Card Support as "256 GB with Class 10 Speed"	Not Acceptable

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
120	Volume 4	Pg No. 29 / PS Chapt 8	6.2.10	High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)- Point 26 - Privacy Mask/Zones 32 individually configurable Privacy Masks/Zones	Number of privacy masks/zones varies across OEMs and is not a standard. Based on typical operational requirement and as a industry practice met by all the CCTV OEMs named in the tender, we request that this be modified to 16 or more privacy masks/zones, individually configurable to encourage wider OEM participation.	Not Acceptable
121	Volume 4	Pg No. 32 / PS Chapt 8	6.2.11	IR Illuminator Power consumption 28W(850nm) Voltage - 24V	These parameter should not be defined as it makes camera specific kindly make it as per Design	Refer Addendum-1
122	Volume 4	Pg No. 33 / PS Chapt 8	6.2.14 (4)	Digital CCTV Keyboard: Keyboard shall be with user-friendly menu displayed on LCD with dynamic menu and easy to read display	Instead of LCD display in keyboard, the menu can be display on the monitor in front of the operator , therefore that can be acceptable	To be dealt during design phase
123	Volume 4	Pg No. 33 / PS Chapt 8	6.2.14 (5)	Digital CCTV Keyboard: Joystick (Keyboard) should support USB Interface 2.0 and should be supplied with required interface units.	As all OEM do not have USB based CCTV keyboards .so kindly consider the changes as below : Joystick (Keyboard) should support USB Interface 2.0 /RS-232 /RS-485 and should be supplied with required interface units.	To be dealt during design phase
124	Volume 4	Pg No. 35 / PS Chapt 8	6.2.17.1	Management Server and Network Video Recorder (Server/Storage) - Hardware - Approvals The Management Server shall be CE/FCC/UL listed and shall be one of the reputed makes such as IBM, Dell, HP, Fujitsu, Sun Microsystems, either Camera/VMS OEM or equivalent subject to meeting the above specifications. The Server accessories shall also be CE and UL listed. To ensure seamless integration and performance, server should be	Kindly ammend the clause as server may be from same VMS OEM or other reputed make such as IBM, Dell, HP, Fujitsu, Sun Microsystems.	Please follow tender conditions
125	Volume 4	Pg No. 38 / PS Chapt 8	6.2.20	Requirements for CCTV Video Analytics for CCTV System. Additional Suggested Specifications in Video Analytics	In Critical infrastructure like Metro, it is highly recommended to use Machine Learning based Analytics which will give you 90% + accuracy and it will not give you false alarm rate due to shadows, lighting conditions etc. which is the case with edge based VA technology. Hence, we request that Server based VA technology be accepted for desired outcome.	To be dealt during design phase
126	Volume 4	Pg No. 38 / PS Chapt 8	6.2.20.1	Any other video analytic feature relevant to UPMRC.	Please Specify the Other Video Analytic features as additional Video Analytic feature required for server sizing	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
127	Volume 4	Pg No. 40 / PS Chapt 8	6.2.21.1.D	The video management system shall allow an unlimited number of cameras, recording servers and clients to be connected to management server across multiple sites.	The requirement should be definitive . therefore kindly ammend the clause as following : The video management system shall allow support for design based number, recording servers and clients to be connected to management server across multiple sites, supported expansion 50% additional.	Agreed, please follow tender conditions
128	Volume 4	Pg No. 43 / PS Chapt 8	6.2.21.2.P (1)	Management servers, recording servers, Failover servers which shall show CPU and memory usage of the servers.	Inorder to get health status of serves Server Status details suffice the requirement.,thereforeKindly ammend the cluase as follows: "Management servers, recording servers, Fail over servers which shall show the status details of the servers"	Not Acceptable
129	Volume 4	Pg No. 44 / PS Chapt 8	6.2.21.3.H	Network video recorders (NVRs) shall be designed to operate in a mirrored redundancy mode. The station cameras will be recorded in primary NVR server at the station itself and in mirrored mode at the adjacent station. The system shall support an unlimited number of recording servers.	The requirement should be definitive . therefore kindly remove the sentence from the clause "The system shall support an unlimited number of recording servers."	To be dealt during design phase
130	Volume 4	Pg No. 45 / PS Chapt 8	6.2.21.4	VIEWING CLIENT A. The viewing client shall enable operators to connect to the management server for initial authorization. Upon authorization, the viewing client shall be able to connect to the recording server(s), for access to live and recorded videos. Once authorized, the viewing client shall run independently of the management server and shall continue to operate even if the management server is offline. However, in the downgraded mode (when the connectivity between central server and the station is not available), the viewer client shall be able to login the system and the video recording & the local viewing shall not be affected.	Each OEM has its own architecture for the VMS. Based on the requirement for such critical operation and as per RFP, N+N redundancy is to be configured for the complete system & network. This mean if primary server goes down, failover server is going to automatically become active and hence such scenario will not take place. The specification for downgraded mode is aligned to certain OEM architecture. We request to update this specification to encourage wider OEM participation.	Please follow tender conditions
131	Volume 4	Pg No. 52 / PS Chapt 8	8	Incident Management System for CCTV	Kindly remove the incident management system from CCTV and include part of T-SCADA system . As till now all the metro have incident management system along with T-SCDA system	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
132		-	-	General	SLD(Single Line Diagram) for Power Supply system is required to understand correct configuration. Please provide.	Refer Addendum-1
133	Volume 4	Pg No. 3 / PS Chapt 9	1.1.3	This specification describes the electrical, mechanical characteristics and requirements of three phases, on-line, double conversion, Modular Hot Swappable Uninterruptible Power Supply (UPS). The UPS should be having VFI (Voltage Frequency Independent) technology, fully DSP controlled power factor corrected rectifier and IGBT inverter capable of providing high quality AC power for sensitive electronic equipment loads.	Tender calls for Modular Hot Swappable UPS which will have cost increase, not only capital cost but maintenance cost as well. Conventional system can be repaired at site by replacing required cards. In modular system, complete module needs replacement for any problem in module. Hence, request you to consider conventional system.	Refer Addendum-1
134	Volume 4	Pg No. 3 / PS Chapt 9	1.2.1.g	Output isolation transformer for all subsystems	Generally transformer is used for neutral isolation which is already taken care by input transformer in supply system. Hence, separate output isolation transformer is not required. It'll also reduce overall efficiency of the complete system. We request for its deletion.	Refer Single Line Diagram in addendum-A
135	Volume 4	Pg No. 5 / PS Chapt 9	2.1.2	The complete UPS system, except VRLA cellblocks, shall have a minimum service life of 15 years operating continuously. The service life of all the cables shall not be less than 25 years. All equipment and components supplied under the Contract shall have proven reliability and shall be designed, manufactured and installed to meet the specified and / or relevant international or national standards. The Contractor shall submit to the Engineer for approval, a list of all supplied equipment and components with declaration of conformance to standards. The Service Life of Server / Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	The Service Life of Server/ Workstation is generally 5 years from the date of supply. We request to consider it.	Not Acceptable
136	Volume 4	Pg No. 5 / PS Chapt 9	2.1.6	UPS should be configurable for Energy Recycle Mode that enables testing of the unit for load testing without external load to test & verify the UPS	This requirement is OEM specific. Required testing happens while FAT. Hence, this clause should be deleted.	
137	Volume 4	Pg No. 30 / PS Chapt 9	3.1	The 48 V Battery Backup provided by the Contractor shall be sized to power its full load including Radio System & Telephone System with redundant configuration (Two numbers of Battery Chargers and Two banks of 48 V Battery Bank) for busy hour reserve of two hours for each Battery Bank for equipment installed in telecommunication equipment rooms at stations, depots	Clause 1.1 asks for a busy hour reserve for 4 hours by each 48V Battery Bank. Please clarify the required duration of busy hour reserve by 48V Battery Banks.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
138	Volume 4	Pg No. 9 / PS Chapt 9	3.1.2	Provision of suitable earth leakage detection both for DC and AC supplies and alarms shall be made individually at each location (station/ depot etc.)	Suitable earth leakage detection can be provided in ACDB to comply to this requirement for AC Supplies. It is not applicable to DC supplies.	To be dealt during design phase
139	Volume 4	Pg No. 9 / PS Chapt 9	3.1.3	The Hot swappable modular UPS with maximum of 6 modules vertically and 8 frames horizontally.	This requirement is OEM Specific. We request to delete the phrase " with maximum of 6 modules vertically and 8 frames horizontally " from clause.	Refer Addendum-1
140	Volume 4	Pg No. 15 / PS Chapt 9	3.2.9 (1)	Output capacity (KVA) of each UPS: 135 KVA for depot; 75 KVA for interlocked stations and OCC; 45 KVA for Non-Interlocked stations	Please specify which Stations are interlocking and which are non-interlocking.	Quantity of interlocking stations-15 nos. Any change to be dealt in terms of Appendix-J, dealt as variation as per the rate.
141	Volume 4	Pg No. 15 / PS Chapt 9	3.2.9(14)	Efficiency (AC-AC) of complete system (including input and output transformers) :Better than 90% (From 25% load to full load)	Efficiency is a multiplication of all sub-systems efficiencies. If we consider the efficiency of transformer as 95% and UPS System efficiency 95% at 25% load, effective efficiency will be $0.95(\text{input transformer}) \times 0.95(\text{UPS System}) \times 0.95(\text{UPS Output Transformer -1}) \times 0.95(\text{UPS Output transfoerm-2}) = 81.4\%$. Losses of dual UPS System and SCVS is not considered here. Hence request you to amend the clause as " Efficiency (AC-AC) of complete system (including input and output transformers):Better than 80% (From 25% load to full load) "	Refer Addendum-1
142	Volume 4	Pg No. 15 / PS Chapt 9	3.2.9(15)	Inverter efficiency (including output transformer): Better than 0.95	Efficiency is a multiplication of all sub-system efficiencies. If we consider the efficiency of transformer as 95% and UPS System inverter efficiency 95% at 25% load, effective efficiency will be $0.95(\text{UPS System}) \times 0.95(\text{UPS Output Transformer -1}) = 90.25\%$. Hence request you to amend the clause as " Inverter efficiency (including output transformer): Better than 0.90 "	Refer Addendum-1
143	Volume 4	Pg No. 16 / PS Chapt 9	3.2.12	The UPS system shall have at least the following LED 10" displays:	UPS System comes with LCD display to inform status to customer . Hence ' LED 10" display ' may be OEM specific requirement and should be deleted.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
144	Volume 4	Pg No. 16 / PS Chapt 9	3.2.12	Temperature: STS/Inverter/PFC	Safety mechanism due to over-temperature is a standard feature of UPS system but displaying temperature may not be a standard practice. Hence 'Temperature: STS/Inverter/PFC' is OEM specific and should be deleted from clause.	Please follow tender conditions
145	Volume 4	Pg No. 16 / PS Chapt 9	3.2.14	All alarms and messages generated by the UPS shall be recorded at least for a period of six months and self-clearing of message in FIFO logic	Requirement is unrealistic and OEM specific. We request you to kindly consider as " All alarms and messages generated by the UPS shall be recorded at least for a period of one month, or otherwise the message storage capacity should be at least 500 messages and self clearing of message in FIFO logic. "	Please follow tender conditions
146	Volume 4	Pg No. 28 / PS Chapt 9	4	The UPS system shall be designed and equipped with all necessary hardware, software and capacity for future 25% additional load. Modular UPS Frame must have the provision to add required power modules to cater 25% spare capacity.	Required quantity and capacities for system is already specified in Chapter-9, Appendix J of 'Instruction to Tenderers'. These capacities are assumed to be inclusive of required spare capacity.	Refer Addendum-1
147	Volume 4	Pg No. 30 / PS Chapt 9	3.1	...The exact size of Battery Backup System for each location shall, however, be determined during detailed design stage reviewed by the Employer's Representative. For sizing the Battery for each location relevant factors (K factor = 4.76, Ageing factor = 1.25, Design Margin = 1.1, Temperature factor 1.01 & ECV = 1.75) and spare capacity of 25 % shall be considered. Battery Charger Capacity shall be determined by load current + Battery Capacity*10%. However, Batteries and the chargers shall as a minimum be of the size listed in the BOQ.	Some factors, such as K Factor, may be OEM dependent. Hence the value should be determined during design.	Please follow tender conditions
148	Volume 4	Pg No. 31 / PS Chapt 9	3.4	The Battery Backup shall include line protecting devices, chargers, battery banks and changeover logic system for change over from battery set 1 to battery set 2 and vice versa.	As per Clause 1.1 there will be two Chargers per location and two battery banks, one with each Charger, and hence the requirement of changeover logic may please be removed.	Please follow tender conditions
149	Volume 4	Pg No. 31 / PS Chapt 9	3.7	There shall be no break in the battery supply to the Telecommunication systems during changeover from the working to standby battery set.	In online parallel redundant configuration, both the batteries will feed load in parallel. So there is no standby configuration required.	Please follow tender conditions
150	Volume 1	Pg No. 175 / ITT - PSS BoQ	Bill of Quantities	In Chapter-9, Appendix J, S. No. 134 2*400A 24-cell Battery Bank for 48V DC as per the requirements of PS.	Please replace '2*400A' with '2*400AH'.	Refer Addendum-1
151	Volume 4	Pg no. 4 / PS Chapt 10	1.1.11	The Access Control facilities shall jointly detect any breach of security or unauthorized intrusion and raise an audio and visual alarm.	The Audio Visual alarm is built in the reader. Please confirm if any other Audio Visual alarm to be provided	Please follow tender conditions
152	Volume 4	Pg no. 4 / PS Chapt 10	1.1.13.3	Management of Authentication The Access Control System shall provide the authentication function with IC card. The IC card shall be register in database of Security Access Control System.	Please share details of IC card so that technically compliant reader can be proposed.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
153	Volume 4	Pg no. 4 / PS Chapt 10	1.1.13.4	Management of Integration Function with Other systems The Access Control System shall have the function to interface with other systems such as the CCTV system, fire alarm system and seismic sensor provided by SCADA (Traction/E&M).	Please share details of Fire alarm system and how many IO interface need to be considered and also details of seismic sensor	To be dealt during design phase
154	Volume 4	Pg no. 4 / PS Chapt 10	1.1.13.5.2	Middle Security Zone	Please provide functionality in middle security zone	Please follow tender conditions
155	Volume 4	Pg no. 5 / PS Chapt 10	1.2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Normally the AFC card are critical, which has the sectors and payments which are secured. The Security and Encryptions are as per the guidelines of RBI and NPCI, These are Qspark cards. For the Access Control application only the CSN no. is to be read without reading the sectors which are secured and encrypted. Therefore it is recommended that AFC vendor to provide these cards and access control can integrate these cards for ACS application. Or there should be separate cards for both.	Please follow tender conditions
156	Volume 4	Pg no. 6 / PS Chapt 10	1.2.3	It shall be able to display all the operational status and send the alarm signals to the ACS server and HMI. It shall also be able to detect sensor failure and the damage to the connecting cables.	The system detects the sensor failure not the cable damage. It is recommended to remove the cable damage detection.	Please follow tender conditions
157	Volume 4	Pg no. 7 / PS Chapt 10	2.2. Scope..c	Central and Redundant ACS server at CERs. System functionality shall be achieved with central server in redundant mode.	Our understanding is this is 1 + 1 Configuration. 1 Primary Server & 1 Secondary/failover server.	Please follow tender conditions
158	Volume 4	Pg no. 8 / PS Chapt 10	2.2. Scope..f	Switches, egress equipment and power supply equipment. All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Hence please change this to tamper resistant.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
159	Volume 4	Pg no. 6 / PS Chapt 10	2.2	<p>The supply shall include all necessary hardware, software, firmware, accessories, materials and Documentation. Contract Scope of Services to be performed by the Contractor shall include, but not be limited to, the following</p> <p>a). Training for Employer's Training Instructors, operations staff, maintenance staff and engineering staff as specified in the PS</p> <p>b). Recommendation and provision of contract spares, tools and test equipment</p> <p>c). Quality and safety management.</p> <p>d). Prototypes, mock-ups, emulation and simulation as required.</p> <p>e). Project management of the implementation of the System.</p> <p>f). Presentations, reviews and audit support as specified in the Specification. g). Preparation and submission of documentation.</p> <p>h). Overall site supervision and management.</p> <p>i). Operation and maintenance support services. j). Manpower resources.</p> <p>k). Main earth extension from Earthling strip in TER to Rack</p> <p>l). Design, Supply and Installation of Base Frame, False Floor & under False Floor Cable Trays with required risers for wall mounted units in TER of Stations/Depot and under false floor cable trays in SCR.</p> <p>m). Design, manufacture, delivery, system assurance, installation, testing and commissioning of Access Control system.</p> <p>n). Decommissioning, removal and disposal of Temporary Works.</p>	<p>Please clarify if enclosure required for smart card reader seperately. Please also confirm if override keyswitch required only for equipment rooms and not all access control doors.</p> <p>It is recommended that for indoor use, IP 54 enclosure is not necessary .</p> <p>For door sensor and buzzer kindly clarify if IP 54 rating is necessary as they are installed on door frame. EML is excluded in this already and as per (m), Door contact is inbuilt in EML and hence, door contact and buzzer can also be removed. Please confirm .</p> <p>For underground sections of the Kanpur Agra Projects, please illustrate the requirement for Access COnTrol System , if any.</p>	Please follow tender conditions
160	Volume 4	Pg no. 10 / PS Chapt 10	3.3.2.3	For up-dating of access control configuration, it will include the stand-alone Workstation, LAN, Central Server at CERS, FOTS and the site LAN up to the access point controller	what is meaning of standalone in "standalone workstations". are standalone workstations connected on network..?	Standalone workstation will be connected through network
161	Volume 4	Pg no. 10 / PS Chapt 10	3.6.1	The system shall be immune to be hacked and shall provide end to end security and authentication of data.	Please clarify level of encryption. Market trend is 128 bit between card and reader, 256 bit in controller, controller to server, server to client communication.	Please follow tender conditions
162	Volume 4	Pg no. 10 / PS Chapt 10	3.6.2	Suitable encryption and associated electronic safeguards shall be provided to prevent any cloned Proximity ID Cards gaining access to the system and entry to controlled locations.	As cards are provided by AFC, this will be in AFC scope. Please confirm if there will be separate cards for ACS system & AFC system ..	Access control cards will be provided by Telecom Contractor.
163	Volume 4	Pg no. 10 / PS Chapt 10	3.6.3	Any card reading equipment removed from site, by unauthorized means, shall be automatically barred from future access to the system	As card reader is only card reading equipment and doesnot store any data, barring this from future access is a manual process	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
164	Volume 4	Pg no. 11 / PS Chapt 10	4.4	It shall be able to perform its function standalone in case of communication failure with the ACS central server in the CERs. The system shall be able to detect sensor failure and damage of connecting cables.	The system detects the sensor failure not the cable damage. It is recommended to remove the cable damage detection.	Refer UPMRCL S.No 156
165	Volume 4	Pg no. 12 / PS Chapt 10	4.8	Smart Cards used for the Access control System shall be compatible with the Automatic Fare Collection system such that the card can serve the dual purpose of Access control as well as Employee Pass for travel on the metro System.	Please confirm the smart cards are provided by AFC Contractor & same will be in AFC scope. Please confirm if there will be separate cards for ACS system & AFC.	To be dealt during design phase
166	Volume 4	Pg no. 13 / PS Chapt 10	5.1.3	Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	Is station HMI required? If communication is failed, station HMI will not work as alarms and status is routed by ACS server and is contradicting with 5.2.2 where station controller will work in conjunction with central server. Kindly clarify	Access Control Application can be integrated with any other telecom system HMI.
167	Volume 4	Pg no. 14 / PS Chapt 10	5.2.1	Access Point Controllers shall be IP based and installed at TER/CER or entry side of access point (door) either individually for each door or for a group of doors (as per detailed design of the Contractor, in such a way so as to meet all prescribed functional & performance requirements	The access controller installed on the entry side of the door is security threat. It is recommended that the access controller to be installed insider/secured area.	To be dealt during design phase
168	Volume 4	Pg no. 14 / PS Chapt 10	5.3 b	All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Hence please change this to tamper resistant.	Please follow tender conditions
169	Volume 4	Pg no. 14 / PS Chapt 10	5.3.1	General (a) At each access point (door) the equipment detailed below shall be provided, as appropriate (b) All access point facilities shall be vandal resistant and tamper proof. (c) These units shall be mounted at suitable locations for operation by staff, maintenance, those with disabilities and, where appropriate, delivery personnel and those who require access to various locations throughout the premises of the Metro railway. Due care shall be exercised to ensure an ergonomic design. (d) The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	Please confirm which equipment of ACS for Access Point facilities shall be Vandal resistant & Tamper resistant.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
170	Volume 4	Pg no. 15 / PS Chapt 10	5.3 d	The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	The access card readers are just antennas for reading the card credentials, does not have any memory. The data is stored in the controller which has the memory. In case of fal back mode the controller stores the data and all the event , alarms.	To be dealt during design phase
171	Volume 4	Pg no. 15 / PS Chapt 10	5.3.2 C	The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.	1. The Electromechanical locks are powered locks. The fail close mode can not be achieved in case of power failure. 2. For fail safe locks, Door compatability is required. Please include compatibility requirement in Door's Contractor scope also.	Please follow tender conditions
172	Volume 4	Pg no. 15 / PS Chapt 10	5.3.4	Access Point Egress Button (a) Each access point shall be fitted with a manually activated egress button, at the exit location. (b) On initiation, the access point controller shall release the lock to allow users to exit.	As per 1.1.13, 1.2.1.3, exit reader is required, where as here, Egress button is asked. Kindly clarify if exit reader is required or egress button is required	To be dealt during design phase
173	Volume 4	Pg no. 16 / PS Chapt 10	5.3.6.4	Consideration shall be given as to the distances over which a proximity ID is required to operate to cover pedestrian access at gates and door access, such as based on ISO 14443 for communications at distances up to 10 cm.	Please confirm the smart cards are provided by AFC Contractor & same will be in AFC scope. Please confirm if there will be separate cards for ACS system & AFC.	Refer UPMRCL S.No 162
174	Volume 4	Pg no. 20 / PS Chapt 10	5.9 h	A local alarm sounder shall be activated at the operator's HMI and locally at the door, gate to alert security personnel to the location of the forced entry. Reset of the forced entry shall be security protected.	The Audio Visual alarm is built in the reader and a local alarm sounder can be provided at the HMI.Please confirm if any other Audio Visual alarm to be provided.	Please follow tender conditions
175	Volume 4	Pg no. 22 / PS Chapt 10	5.10.8	CERs Specific Functions (a) Control and monitor the entire Access Control System. (b) Respond to event alarms on occurrence of a security breach at unmanned sites such as Receiving sub-stations (c) Control shall be transferred to the CERs by responding the event alarms at the stations when the stations are closed or when the local SCR is unmanned.	Is separate HMI required at RSS. Please confirm	No separate HMI is required at RSS
176	Volume 4	Pg no. 25 / PS Chapt 10	6	Relevant Codes and Standards	It is recommended the ACS Software should be VAPT certified and as per ISO27001, so that it is not prone to be hacking/cyber attacks.	Please follow tender conditions
177	Volume 4	Pg no. 26 / PS Chapt 10	7	System Expansion and Spare Capacity	It is recommended the Software OEM should provide the Source Code for the future of future use and maintenance by the UPMRC.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
178	Volume 4	Pg no. 26 / PS Chapt 10	8	Summary of Interfaces	It is recommended the Software should be independent of the hardware and it should be open platform to integrate with multiple makes of hardwares and integration with any 3rd party systems.	Please follow tender conditions
179	Volume 4	Pg no. 33 / PS Chapt 11	1.1.4	All power cables, control cables, data cables, PAS cables, MCS cables and optical fiber cables (excluding Telephone cables, which shall be supplied as per clause 7.0 & 7.6 of this Appendix) used for Kanpur and Agra Metro Rail Projects shall be the armoured type and shall be able to withstand rain and ultraviolet rays. This clause shall supersede all the clauses written in PS & GS regarding all types of cables for Kanpur and Agra Metro Rail Projects.	Kindly replace the clause with following : All outdoor power cables, control cables, data cables, PAS cables, MCS cables and optical fiber cables (excluding Telephone cables, which shall be supplied as per clause 7.0 & 7.6 of this Appendix) used for Kanpur and Agra Metro Rail Projects shall be the armoured type and shall be able to withstand rain and ultraviolet rays. This clause shall supersede all the clauses written in PS & GS regarding all types of cables for Kanpur and Agra Metro Rail Projects.	Please follow tender conditions
180	Volume 2	Pg no. 82/GCC	11.12	Calculation of Payments in Foreign Currency	Please clarify while delivery time which currency rate will be applicable, Is it current based on which bid is going to be evaluated or that when material is going to be delivered(Material delivery Key date)	Payment will be made as per respective milestones
181	Volume 2	Pg No. 19/SCC	35	11.1.1 (a)The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions.	1. Please confirm if custom duty is exempted for this project. 2. Please confirm if taxes , Goods and Services Tax, duties, levies, cess, royalties to be shown separately in the Pricing Document (Financial Package), if yes then please provide the tabulated format which is required to filled and submit with Bid.	Please follow tender conditions
182	Volume 2	Pg No. 19/SCC	35	(c) Any taxes, duties, levies cess, which are required / may be required to be paid by the Employer in the fulfilment of the tender condition including on reverse charge basis should also be included by the tenderer in the Contract Price.	Please illustrate the details of taxes, duties, levies cess, which are required / may be required to be paid by the Employer in the fulfilment of the tender condition.	Please follow tender conditions
183		General	-	Additional Items Required	Please clarify if there is any intrusion detection to be considered for the depot perimeters and tunnel portal / tunnel ramp areas.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
184		General	-		The RFQ calls for central architecture and the Station HMI works as client to the central server. The Station HMI will be operation till the communication with central server is on, However the access control system will work in stand alone mode even if the communication with the central fails. All the events and alarms will be stored in the controller and uploaded to central server once the communication is restored. Please confirm if above understanding is correct.	Please follow tender conditions
185						
186	Volume 1			"Time for completion" of the work from the date of commencement of the work (Clause 8.2 of the GCC) 40 months	The time for completion of works given in Appendix 01 is 40 months whereas the project duration provided in the NIT is 36 months. Kindly clarify what will be the exact duration of the project.	Refer UPMRCL S.No 9
187	Volume 1			Substantial Partner should have at least 26% participation, otherwise they will be termed as non-substantial partner and will not be considered for evaluation, which means that their financial soundness and work experience shall not be considered for evaluation of JV/Consortium.	If a lead partner is capable to execute order on it's own then value threshold of qualification should not be limited to substantial partner participation of 26%. Since qualifying partners coming in consortium and are jointly & severally liable, therefore we request you to remove min participation requirement for substantial partner. This will further promote localization from India.	Please follow tender conditions
188	Volume 1			The Tenderer shall submit full details of the identity of the proposed parties who would respectively provide or issue: (a) Performance Security in accordance with Sub-Clause 4.2 of the GCC; (b) Parent company Undertakings in accordance with Clause 4.2 of the GCC; (c) Parent company Guarantees in accordance with Clause 4.2 of the GCC; The Performance Security required in accordance with Clause 4.2 of the GCC shall be for 10% of the Contract Price from the Scheduled commercial Bank (including Scheduled Commercial Foreign Banks) in India in the currency in which the Contract Price is payable. The Performance Security shall be furnished to the Employer within 30 (thirty) days of receipt of the Letter of Acceptance. The form of Performance Security is provided in Schedule -2 of SCC.	We request you to delete the requirement of PCG and PCU. As per our understanding that the bidder is required to provide parent company undertaking & parent company guaranty only in the event of drawing out credentials from the parent company. Therefore in case the bidder is fully qualifying on it's own credentials, PCG & PCU should not be required. Please confirm our understanding. Also please note that such requirement was removed from power supply tender.	Refer Addendum-1
189	Volume 1			PROFORMA FOR BANKING REFERENCE FOR LIQUIDITY BANK CERTIFICATE	Please confirm the word JV means JV/ consortium.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
190	Volume 1			The employer may enter into a variation order for full/part of the similar work for Agra Metro Rail Project (16.2 km of corridor-II with 14 elevated stations including one Depot). The Variation order shall be done at mutually agreed lower rates and maximum up to the awarded rates calculated as per clause C 27.1 and Appendix M of Annexure-2 of ITT. The other key dates shall be accordingly informed while placing the firm order.	Please confirm the timeframe within which the variation order shall be awarded or decided.	Not later than 6 months from stipulated time
191	Volume 1			To qualify for award of Contract, the Tenderer shall submit notarized written power of attorney authorizing the signatory (ies) of the Tender to commit the tenderer of each member of the partnership, consortium or joint venture.	<p>"We request you to accept authorization letter issued by the company instead of Power of Attorney.</p> <p>Reason: Please note that as per the laws regulating the Power of Attorneys in India, PoAs are valid only with physical signatures and not by affixing physical signatures. Considering the Access restrictions to Containment zones of covid-19 affected areas are changing rapidly, it is very difficult to have a physically signed Power of Attorney from all the members as well as Company Directors. Therefore, we request you to accept an authorization letter which is equally binding on the company and empowers the concerned colleagues to represent the company."</p>	Please follow Tender conditions
192	Volume 1			Documents provided under Sub-Clause A4.2 (a)(company registration), (b)(consortium agreement, (c)(POA authorising lead bidder), (d)(division of responsibility & (e) (document evidencing joint and several liability- Form of Tender and the Article of Agreement) shall be confirmed by an appropriate Chamber of Commerce or other similar organization.	<p>Please note that in standard metro bids, the documents mentioned need not to be confirmed from chamber of commerce as these documents are already executed in accordance with applicable laws .Therefore request you to remove this requirement.</p> <p>Furthermore this requirement was not applicable for KNPE -1 &2 tender as well.</p>	Please follow tender conditions
193	Volume 1				As per the schedule of key dates, the submission of final design needs to be completed 48 weeks prior to KD6 which is ROD for each corridor. Please note that ROD for priority section Kanpur is 30.11.2021 and 48 weeks prior to this date comes to be 29.12.2020. Furthermore there is a milestone of completing basic design with the duration of 16 weeks from LoA. In order to complete final design, basic design needs to be completed.Considering 16 weeks before 29.12.2020 comes to be 08.09.2020.Therefore request you to correct the ROD inline with intermitant key dates given in tender.	Please refer addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
194	Volume 1			Please submit the CV of above Key Personals as per Format given below	As this is a design built contract & Required personnel shall be assigned to the project after approval from customer in case of award of contract. Therefore we request you restrict this requirement to key managerial staff only. Also technical staff need not to be deputed at site throughout the project duration. Hence we request you to suitably modify the requirement of deputation at site only for project management & execution team.	Please refer addendum-1
195	Volume 1				As per Our understanding: DLP Spares, Special Tools & Testing Equipment and Contract Spares; Delivery and Installation Testing of Equipment for Centralised OCC at Lucknow for Kanpur and Agra Metro Projects belongs to Cost Center B. Please Confirm our understanding.	Please follow tender conditions
196	Volume 2			The Access Dates shown in the Employer's Requirements are for planning purposes only. The Employer reserves the right to make each site available to the Contractor any time before or after the Access Dates. The Engineer will notify the Contractor of the actual Access Dates in advance for each part of the works. This Notice will specify the area to which it refers is accessible and in a sufficient state of completion to permit the Contractor to begin installation and testing therein. It shall not imply that the Contractor will enjoy exclusive use of the area or that the work of other Contractor's therein is complete. The Contractor shall begin installation in each area by the actual Access Date, and shall complete all installation and testing in each area by the relevant Key Date. Notwithstanding the actual Access Date, whether before or after the stipulated Access Dates, the Employer shall not accept any increase in cost to the Employer.	Based on past experiences, Metro projects are usually delayed due to which the Contractor has to incur additional costs. In view of this, we request you to consider including a provision for extension of time with cost compensation and profit for such delays that are not attributable to the Contractor. In doing so: - Contractors' will not factor in huge risks in pricing on account of delay. Thus, in effect Employer will be able to execute project at lower overall project costs. - Employer and Contractors' will together ensure timely completion of project. Thus, there will be no financial impact on either party. However, maximum limit for cost compensation and profit in such cases may be capped. EOT with cost compensation is included now in many projects following international competitive bidding like Chennai Phase I, Pune Metro and Nagpur Project	Please follow Tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
197	Volume 2			The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions.	Please confirm if the project qualifies as works contract for metro projects and subject to 12% GST Rate.	Contract Price is exclusive of GST, to be reimbursed as per actuals.
198	Volume 2			Any taxes, duties, levies cess, which are required / may be required to be paid by the Employer in the fulfilment of the tender condition including on reverse charge basis should also be included by the tenderer in the Contract Price	<p>Since the contract is exclusive of Output GST on the contract – the clause shall be amended in line with sub-clause (a) as below:</p> <p>“(c) Any taxes, duties, levies cess (except Goods and Services Tax – GST) which are required / may be required to be paid by the Employer in the fulfilment of the tender condition including on reverse charge basis should also be included by the tenderer in the Contract Price.”</p> <p>The above is relevant from the fact that, in case of offshore supply of services by a non-resident consortium member, GST is payable by the employer under reverse charge basis. Similarly, for goods imported into India in the name of customer, GST is payable by / on behalf of the Employer and hence in view of specific exclusion of “output GST as per sub-clause (a)”, it is requested to clarify that no output GST (payable by contractor / payable by Employer) is required to be included in the contract price.</p>	Please follow Tender conditions
199	Volume 2			The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions.	Please confirm if the contract price is inclusive of customs duty and hence payable by contractor and will not be reimbursed by the employer.	Refer Addendum-1
200	Volume 2			"Tenderers shall submit an undertaking that neither they nor their sub-contractors / sub-vendors shall avail the deemed export benefit as the same shall be availed directly by UPMRC and retained. "	<p>(i) Please confirm if the project is covered under Project Import chapter 98.01 of Custom Tariff Act according to which only concessional custom duty is payable.</p> <p>(ii) Also confirm, that the recommendation letter endorsed by Secretary of State Govt. under Project import regulations which is prerequisite for claiming concessional custom duty shall be provided by the employer</p>	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
201	Volume 2			80% of Cost Center C of all sections (Except MS Section) and 80% of Cost Center B for MS Section against Indemnity bond as described in GCC, Balance 20% after acceptance of Installation Test as described in Cost center D of all Sections (Except MS Section) and in Cost center C of MS Section against safe custody Bank Guarantee. Safe Custody Bank Guarantee shall be released after acceptance of Installation Test.	The format for safe custody bank guarantee is not provided in the contract forms. We request for the deletion of this clause.	Refer Addendum-1
202	Volume 2			Retention money equal to 10 percent of the amount due to the Contractor from each on account payment will be retained, so as to maintain a reserve in the hands of the Employer equal to 5 percent of the Contract Price	Considering that the payment against the said project is based on milestones , we request to delete the requirement of Retention money from each interim payment. This is in line with all Metro Signalling project.	Please follow Tender conditions
203	Volume 2			Statutory Requirements The Design & Construction Standards shall be in conformity with the requirements of "Rules for Opening of a Railway or a Section of a Railway for Public Carriage of Passengers" and "Rules for Introduction of New Type of Rolling Stock" and to the satisfaction of the Commissioner of Railway Safety whose sanction is mandatory for commissioning of the System. Sanction of the Commissioner of Railway Safety and other Statutory Authorities will be required for introduction of Train Control & Signalling systems and Telecommunication Systems. The Contractor shall in this regard carry out all statutory tests and trials necessary for obtaining sanction of the Competent Authority for opening the Train Control & Signalling system and Telecommunication Systems for public carriage of passengers and provide assistance and	As per Standard Metro Practices Telecommunication contractor shall be responsible for Telecommunication scope and Signalling & Train Control Contractor shall be responsible for S&TC scope. Therefore we request you to modify the clause as mentioned below: Statutory Requirements The Design & Construction Standards shall be in conformity with the requirements of "Rules for Opening of a Railway or a Section of a Railway for Public Carriage of Passengers" and "Rules for Introduction of New Type of Rolling Stock" and to the satisfaction of the Commissioner of Railway Safety whose sanction is mandatory for commissioning of the System. Sanction of the Commissioner of Railway Safety and other Statutory Authorities will be required for introduction of Train Control & Signalling systems and Telecommunication	It is evident that telecom Contractor will be responsible for Telecom scope
204						
205	Volume 1				Please note that bid preparation involves foreign partners and vendors and also keeping in mind the current Covid scenario collaboration will be difficult. Therefore we request you to extend the bid submission date by 6 weeks from current bid submission date i.e till 7th December 2020	Refer Addendum-1
206	General				Kindly provide location of OCC for Kanpur & Agra Corridor.	Please refer tender drawing KNPDD01-DTD-DP1-ARC-PLN-91513 for

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
207	Volume 1				We understand that bidder can quote in multiple currencies. We request you to kindly clarify if we can add additional column in pricing document for quoting in multiple foreign currency.	Refer Clause 16.1 of ITT
208	Volume 1			Bid capacity evaluation criteria	We request you to provide template format for providing bid capacity calculation	Please refer NIT clause 1.1.4.3
209	Volume 1				As per ITT, Table A, the total number of station mentioned for Kanpur is 30 + 2 depots. Please confirm if the Agriculture university mentioned in TENDER KNPAGS-01, Particular Specifications CHAPTER 11 Appendices, Appendix C is station only so that the count of total number of station remains at 30.	Please refer Appendix C of PS
210	General			Future Stations	Please confirm if the future station need to be considered as a part of BoQ with respect the quantities of RCW, RAU, RCP and RF coverage design. Request you to revise the quantity in the BoQ accordingly.	Future stations will be considered as variation if executed.
211	Volume 4		Volume 4 Chapter 1 General Specification Clause no. 3.6 The site	Telecom Contractor shall liaise and deploy initial setup to provide 3rd Party leased line connectivity with sufficient, dedicated & high availability bandwidth of approximately 1 Gbps from the Kanpur & Agra Metro Rail Projects to centralised OCC at Lucknow.	We understand that contractor shall be responsible for initial setup and recurring cost of lease line till taking over while employer shall be responsible for maintaining & paying recurring cost after taking over. Please confirm our understanding.	Refer UPMRCL S.No 18
212	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-01 GENERAL Clause-3.8	The KNPAGS-01 Contractor shall be provided space of approximately 1500 SQM to set up Project Office and Storage Space. KNPAGS-01 contractor shall be required to setup project office at project location and site office at site location and necessarily have to station at this Project Office and Site Office throughout the contract period. The key personnel for Project management, Procurement, Design, Implementation, Site co-ordination, Interface, Quality & Assurance, Testing and commissioning, maintenance etc. and shall submit a list for the same to review.	As per our understanding two offices viz site office and project office needs to be set up by contractor. Please confirm our understanding. Furthermore kindly clarify if 1500 SQM area will be allotted both in Kanpur as well as Agra. Please also confirm if bidder can decide to setup rented project office during execution	Refer UPMRCL S.No 19

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
213	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.1.2	PAS announcement shall be capable of being originated from designated hand portable radios also to a set of pre-defined PAS zones at each station. It should be possible to make simultaneously Radio to PAS announcement at minimum 30 different stations. This needs to be coordinated and demonstrated with Radio/Telephone sub systems.	PAS interface with Radio base station at OCC level or at each station level expected. Which are the controls available at radio system side for Zone selection. Please clarify.	To be dealt during design phase
214	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.1.2	There shall be facility to enable and disable all types of announcements/music including ATS announcements with configurable cross-connects (through Software Control) at individual station and a group of stations.	Announcement enable/ disable facility expected from OCC or from any location. Please clarify	To be dealt during design phase
215	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.4.2.2	Multi-drop data links (TCP/IP) of adequate bandwidth through FOTS shall be provided to each station, PAS allowing the OCC & CERs to broadcast messages to the following as a minimum: (1) One station; (2) A group of stations; (3) All stations; (4) In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console; (5) One Train and a group of trains via Radio/FOTS Interface	Please clarify the below points: 1. Is train radio system gets interface with PAS system? 2. Should we include PAS components on trains also.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
216	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.4 2.4	Each hard-wired PAS control panel shall be provided along with zone selection & extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	How many zones expected on hard-wired PAS control panel. Please provide the details.	Tender Clause 5.3.1 of PS chapter 5 is self explanatory.
217	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.4 2.6	The time countdown shall be frozen when a train stops proceeding to the next stopping station, due to circumstance detectable by the TC&S System and related to the PAS.	Please clarify, Is time countdown expected from PAS system? Train at arrival track, train at departure track and train at berth/ station, are this signals available from TC&S system? For time countdown such signals are expected.	Please follow tender conditions
218	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.4 4.2	Telecom Contractor has to interface with Fire Detection and Alarm System to automatically broadcast the messages in particular zone/all zones of a concerned location.	Interfacing details required. Interfacing through TCP/ IP or physical potential free contact available from fire detection & alarm system? Please provide the details.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
219	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.4	A PAS Control panel shall also be provided in the Progress Planning and Investigation Office (PPIO) in the depot for selection of PAS functions.	Please confirm, if MiC & Pre-recorded announcement expected from Progress & Planning office?	To be dealt during design phase
220	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.6	Live audio broadcast relating to emergency, fire and evacuation messages from OCC/CER shall be recorded in the Centralized digital recording system at CERs. Similar broadcasts made from SCR/PSB shall be recorded at the TERs in the PAS station server via MMI (at SCR). The CDRS at CERs shall copy these recordings from station servers at configurable intervals. It shall however be possible to retrieve any message so recorded and save same on an external storage device like a memory stick for future reference.	Multiple recording system required for various locations? Please clarify	Please follow tender conditions
221	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.6	The output of the PAS Amplifier should be tapped and recorded automatically locally at local level server and remotely at CERs server, so that record of actual announcement made can be analysed at a later date. The record to be kept for 7 days.	Request you to provide How many zones expected per stations.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
222	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.1 0.1.1.9	Each MMI shall have a set of speakers (at least two nos. of reputed make) for monitoring active messages being broadcast to selected PAS zones and for play-back of the instantly recorded messages	Is there any specific wattage expected for MMI speaker or standard computer speakers will be OK? Please clarify	To be dealt during design phase
223	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.1 0.1.1.9	The MMI at OCC, SCRs & CERs should have capability to Import the Metro Rail 2D/3D Map for making easy Graphic Interface.	UPMRCL going to provide the 2D/ 3D drawings or bidder have to create? Please clarify	Telecom Contractor shall interface with Detailed Design Consultancy (DDC) for the same.
224	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:6.3 1.2	The PAS control equipment shall be provided with suitable redundant modules/cards to prevent single point of failure that affects overall system operation at a particular location including critical components so as to achieve the RAMS requirements laid down.	Redundant modules expected at controller level only or for Amplifier, MIC, power supply side also expected. Please clarify	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
225	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:6.3 1.6	The PAS control equipment shall be equipped with a monitoring speaker to test and verify audio output functions of each amplifier in the PAS equipment racks at all stations and the Depot. This facility can also be provided at SCRs and TERs.	Please clarify the below: Per rack one monitoring speaker expected or one monitoring speaker per amplifier. Are the monitoring speakers considered in BOQ or its extra.	To be dealt during design phase
226	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:5.7 2.2	The number of characters to be displayed per row for LED display boards within the display area without scrolling for the platform/concourse display boards shall be the following as a minimum (For the Destination field): (1) 25 Hindi characters for the biggest font sizes; (2) 25 English characters for the biggest font sizes.	If we consider 2/3 height for font width and with 2.6mm pitch & 25 characters, display length will be 2.7 metre. This is exceeding the maximum display length. We request to reduce the number of characters.	Please follow tender conditions
227	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:5.7 6.5	Platform display boards shall show the estimated time of arrival of the next train by a countdown counter.	Time count down expected at Display level or AVLS will update count down value.	Refer UPMRCL S.No 77

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
228	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:6.3 3.1.6	(5) Module Resolution : 192 x 192 dots, Single module pixel resolution	Can we supply other pixel resolution modules as per lower pitch? Please clarify	Refer UPMRCL S.No 86
229	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:6.3 3.1.6	(1) Viewable picture size : minimum 1500 mm(W) x 500 mm (H)	With 2.6 mm pitch 500 height is possible. If we propose lower pitch than picture height will be lesser than 500mm. Will it be acceptable? Please clarify	Refer UPMRCL S.No 87
230	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:6.3 3.1.6	(16) Each "True Colour LED" display panel shall have an inbuilt 20 watts output loudspeaker for colour video clips with audio.	All display location audio will not be synchronized. Chances of time lagging in display to display for audio.	Refer UPMRCL S.No 88

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
231	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 06 PIDS Clause:6.3 .3.1.6	<p>"True Colour LED" display panel/board shall meet the following minimum specifications:</p> <p>(1) Viewable picture size : minimum 1500 mm(W) x 500 mm (H)</p> <p>(2) Viewing Angle : minimum 1400 horizontal & 1200 vertical</p> <p>(3) Brightness : 2500cd/m2 or better</p> <p>(4) Contrast : 3000: 1 or better</p> <p>(5) Module Resolution : 192 x 192 dots, Single module pixel resolution</p> <p>(6) LED per physical pixel : 3 in 1 SMD LED</p> <p>(7) Protection level : IP 65 or better</p> <p>(8) Input Voltage : 100-240 V -50/60 Hz</p> <p>(9) Humidity : 10-90% RH</p> <p>(10) Operating temperature : -10°C to +45°C</p> <p>(11) Pixel/Pitch : 2.6 mm or lower</p> <p>(12) Refresh rate : ≥ 1920 Hz</p> <p>(13) Unaffected by sever problem of burn in when</p>	<p>PS Chapter 06 PIDS Clause 6.3.3.1.6 should be:</p> <p>"</p> <p>"True Colour LED" display panel/board shall meet the following minimum specifications:</p> <p>...</p> <p>(10) Operating temperature : -10°C to +60°C</p> <p>...</p> <p>"</p> <p>Justification: This clause is in contradiction with PS Chapter 01 PIDS Clause 6.3.2 where it says "All equipment installed outside these areas shall be rated for continuous operation up to + 60°C." .</p>	Refer Addendum-1
232	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 06 PIDS Clause:4.2 .3	<p>The Contractor shall ensure that PIDS equipment supplied under the Contract to comply with the minimum reliability figures herein:</p> <p>PIDS Equipment MTBF (Hours) Control equipment > 50,000 Display equipment/ Display boards/Panel > 35,000</p>	<p>PS Chapter 06 PIDS Clause 4.2.3 should be:</p> <p>"</p> <p>The Contractor shall ensure that PIDS equipment supplied under the Contract to comply with the minimum reliability figures herein:</p> <p>PIDS Equipment MTBF (Hours) Control equipment > 50,000 Display equipment/ Display boards/Panel > 50,000</p> <p>"</p> <p>Justification: Railways equipment should be more robust.</p> <p>- According clause 6.1.3 The service life of the PIDS shall not be less than 15 years</p> <p>- Railway PID equipment are normally more robust and minimum MTBF shall be 50.000hours. Nowadays the</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
233	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:5.1 2.2.1 (7)	Failure of server, amplifier, preamplifier, redundancy equipment, digital equalizer & other critical part of PAS/PIDS System;	Have you Required Redundancy on Microphone ? Please confirm.	Please follow tender conditions
234	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:4.3 2.2.10	Failure of Platform Announcement Equipment;	Platform announcement Equipment; Please Confirm what type of console / Mic You required Wireless or wall mount console with IP 65 Rated Box	Please refer clause 5.4.2.2 (4) of PS Chapter 05
235	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:6.3 11.15	Minimum 40W Metal Column Speaker IP65 Rated EN54/UL Approved or better for Platforms waiting rooms, lobbies, ticketing/enquiry areas & Staircases.	if Column Speaker is going to use in Platforms waiting rooms, lobbies, ticketing/enquiry areas & Staircases then can we able to USE IP 55 RATED indoor - outdoor EN54 approved Column speaker Instead of IP65 Rated. Please clarify	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
236	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:1.2.10	In emergencies or as required it shall, however, be possible, without any additional resources, to view images from any/all cameras and/or record any dynamically selected location on the system.	As I understood from requirement In emergencies it shall be possible to view any /all camera and recorded video dynamically from any location. Please clarify .	Refer UPMRCL S.No 102
237	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:1.2.12	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	What is meant by re constructing complete incident into one timeline? Is it meant for event based frame changes for recording? And if there is any incident on any camera it has to be recorded and playback as and when required till the video is available on NVR as per defined retention time.? please clarify	Refer UPMRCL S.No 104
238	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause: 2.1.2	At the depots, cameras shall be provided inside the depot connected to the NVR located in the TER and thereon to the Monitor in the DCC for display to the Depot Controller and Depot Security Controller. The same shall be connected to the CER through the Layer 3 Network, for both viewing live and recorded video and also for occasional recording. Camera shall also be provided for train entering in the Depot area.	What is Occasional recording , please explain.	Refer UPMRCL S.No 105

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
239	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV System Clause:4.2 .3	The Contractor shall ensure that the CCTV system equipment supplied under the Contract shall comply with the reliability figures herein: CCTV System Equipment MTBF (Power on Hours/POH) per unit Station and central equipment > 250,000 IP Fixed Cameras > 200,000 PTZ cameras >200,000 Video recording equipment > 250,000 Video Display Units (monitors) >150,000 Digital CCTV Keyboard >200,000 Layer-2 Switch > 150,000	Defined MTBF values are to high . Kindly consider the chnages as below as non of the Metro till date has asked this much of MTBF for each equipment. 1-IP Fixed Cameras : > 100000 Hours 2- IP PTZ Cameras : > 100000 Hours 3- Digital CCTV Keyboards : > 50000 Hours	Refer UPMRCL S.No 106
240	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV System Clause:5.2 4	The display of full screen mode of a 1.6m tall person standing upright, within the CCTV camera coverage area, on any monitor shall not be less than one tenth of screen for the fixed cameras at the shortest focal length. CCTV Coverage Testing shall be done through ROTAKIN method.	ROTAKIN standard is used for analog camera picture quality measurement . So kindly remove the same.	Please follow tender conditions
241	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV System Clause:5.2 .5	Advanced video compression techniques, such as MPEG-4, H.264 and H.265, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images. End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 150 m secs under conditions of maximum network traffic.	Kindly consider the chnages as below to align the requirement as per tender equipment specification. Advanced video compression techniques, such as MPEG-4, H.264 or better, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images. End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 240 m secs under conditions of maximum network traffic.	Refer UPMRCL S.No 108

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
242	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.2.4.4	Unless specified otherwise elsewhere in the PS, Cameras, field switches, PF Monitors & other equipment, meant for outdoor installations, shall be suitable to work from 0oC to +60oC with RH up to 90% non-condensing.	Please consider the camera operating tempretue- 0oC to +55oC as defined in tender Camera specification .	Refer UPMRCL S.No 111
243	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.1.8	The CCTV system shall afford viewing simultaneously from the SCR (Station Control Room) at all the stations, Depot Control Centres, Depot Security Control rooms at the Depot and from the OCC, CERs at full frame rate. The viewing and recording for 2 MP cameras shall be at 2 MP at 25 FPS resolution. The normal 2 MP stream at 25 fps for each type of camera shall determine the size of the storage device. The storage capacity shall be calculated keeping in view the spare capacity of 25% of the installed capacity. The primary recording shall be at the Station TER and the recording shall also be mirrored at the adjoining station at the same frame rate and resolution. Telecom Contractor shall ensure adequate bandwidth, ports, channel, forwarding rate etc requirements in the FOTS.	Contradicting with clause 3.2(24), which says all recording are to be stored with 30 fps. Please clarify.	Refer UPMRCL S.No 110
244	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.2.2.5	The housing should support input power of 110 VAC- 230 VAC.	Please remove this clause as clause 6.2.3.3 (8) you have already asked for POE+ power for housing.	Refer UPMRCL S.No 114

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
245	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:1	Pick-up device : 1/2.8" or bigger CCD/CMOS progressive scan image sensor, P-iRIS Sensor.	As we understood camera should have pickup devices 1/2.8 or bigger CCD/CMOS progressive image sensor or P-iRIS Sensor. Please clarify	Refer UPMRCL S.No 115
246	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:12	GBT Standard - The Camera to be provided by the bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings.	Please remove this specification as this is vendor specific specially US based company only provide this options or allow bidders to have option to enable / disable the settings as per requirement.	Refer UPMRCL S.No 116
247	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:15	GBT Standard - The Camera to be provided by the bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings.	Please remove this specification as this is vendor specific specially US based company only provide this options or allow bidders to have option to enable / disable the settings as per requirement.	Refer UPMRCL S.No 116

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
248	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:22	Power Supply Camera power supply need to be considered along with heater & blower.	As I understood from requirement the PTZ camera should have inbuild heater/blower which can be powered on by additional power supply or over POE+ source. Please clarify.	Please follow tender conditions
249	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:	Power consumption 28W(850nm)	As per tender specification considered long range illuminator which require more power .so Kindly change the power consumption 39 W.	Refer UPMRCL S.No 121
250	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:5	Joystick (Keyboard) should support USB Interface 2.0 and should be supplied with required interface units.	As all OEM do not have USB based CCTV keyboards .so kindly consider the chnages as below : Joystick (Keyboard) should support USB Interface 2.0 /RS-232 /RS-485 and should be supplied with required interface units.	Refer UPMRCL S.No 123

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251	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.2 20.4	Deep Neural Learning based analytics Camera should also be capable of advanced deep neural learning Analytics separately. Details are as follows: - Advance People Counting at station entries and others defined area.	Please remove this as it is vendor specific feature and include People Counting at station entries and others defined area.	Deep Neural Learning based analytic is meant for people counting at station entries and other defined areas only.
252	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.2 21.4(T)	The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. The system shall automatically switch to unicast, if the client fails to connect to the multicast stream. The OEM shall provide the Software Development Kit for smooth integration of CCTV system with other telecommunication systems specified in this technical Specification.	As per requirement we would recommend to consider manual switching from multicast to unicast to avoid uncertain load and unwanted fludding of data on network.	Please follow tender conditions
253	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:6.2 21.5(C)	The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	Kindly Remove this requirement as all OEM do not have this feature.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
254	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV System Clause:8	Incident Management System for CCTV	Kindly remove the incident management system from CCTV and include part of T-SCADA system . As till now all the metro have incident management system along with T-SCADA system .	This feature may be provided via interface of other systems including T-SCADA.
255	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 5.1.2	The PAS shall have the necessary facilities to direct different live and recorded announcements, Live and recorded Music to separate zones and group of zones simultaneously within a station.	What kind of music to be played . Please clarify.	Radio FM music etc.
256	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 5.1.3	5.1.3 PAS announcement shall be capable of being originated from designated hand portable radios also to a set of pre-defined PAS zones at each station. It should be possible to make simultaneously Radio to PAS announcement at minimum 30 different stations. This needs to be coordinated and demonstrated with Radio/Telephone sub systems.	As we understand from clause , The announcement at 30 locations will be done by single hand-held portable radio? Please clarify	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
257	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause: PAS 5.4.2.2. (A)	In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console;	To control the all station PA from call station required more Key on call station which is not fisible. So please change as " In a particular zone, group of zones and all zones at stations through Software and from PAS Console station all zone ."	Please follow tender conditions
258	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause: PAS 5.9.2	The PAS shall have the necessary facilities to mute and attenuate selected PAS locations and zones manually & automatically under time mode control in areas where broadcasts may disturb the public.	Please remove this clause as muting of Zone is not recommended as per the IEC 60849 standards	Refer UPMRCL S.No 78
259	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause: PAS 5.10.1.1.11	Each MMI position shall be equipped with a PAS Control Panel including a microphone to enable live broadcast messages to be made even when the Server, MMI, and DVA equipment fail. Hence PAS Control panel shall work as a manual backup to MMI (including the DVA) at all locations i.e., stations and OCC/CERs etc.	Please consider changes as below: Each MMI position shall be equipped with a PAS Control Panel including a microphone to enable live broadcast messages to be made even when the Server, MMI, and DVA equipment fail. Hence PAS Control panel shall work as a manual backup to MMI (including the DVA) at all locations i.e., stations and OCC/CERs for there respective location zone message braodcasting .	Refer UPMRCL S.No 79

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
260	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 6 3 1 6	The PAS control equipment shall be equipped with a monitoring speaker to test and verify audio output functions of each amplifier in the PAS equipment racks at all stations and the Depot. This facility can also be provided at SCRs and TERs.	To be removed as this option is available on analog PA system not Digital PA System.	Refer UPMRCL S.No 82
261	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 6 3 1 0	The audio matrix switch shall be fail safe and shall be capable of being manually/automatically bypassed to maintain all zone broadcast availability, if necessary on failure of the audio matrix switch.	To be removed as this is Vendor specific feature.	Refer UPMRCL S.No 83
262	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 6 3 4 4	The monitor speaker with volume adjustment control on the PAS control panel shall be used for real time monitoring of any message being broadcast to the pre-defined zones.	To be removed as this is Vendor specific feature.	Refer UPMRCL S.No 84

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
263	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PS Clause 6.3.11.2	Loudspeaker output power shall be limited to provide a maximum SPL of 100 dB(A).	Kindly Consider the changes as per below description: Loudspeaker output power shall be limited to provide a maximum SPL of 100 dB. As no OEM has SPL measurement in dB(A).	Please follow tender conditions
264	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 6.3.11.11	All PA speakers shall have a uniform bandwidth from 340 Hz to 18 kHz and shall be equipped with selectable multi power tapings.	Both clause 6.3.11.7 & 6.3.11.11 are contradictory to each other .please change tender clause 6.3.11.11 as below. All Loudspeakers shall have a minimum frequency response for 340 Hz to 14 kHz within - 10 dB.	Refer Addendum-1
265	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-05 PAS Clause:PA S 6.4.2	Station equipment shall be modularly expandable without the need to replace the installed hardware and software for the service life of the PAS. Minimum expansion capacity of 20% by the addition of cards and /or modules shall be included.	Please consider the changes as below : Station equipment shall be modularly expandable without the need to replace the installed hardware and software for the service life of the PAS. Minimum expansion capacity of 20% to be consider as part of design.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
266	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM		SLD(Single Line Diagram) for Power Supply system is required to understand correct configuration. Please provide.	Refer UPMRCL S.No 132
267	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:1.1	This specification describes the electrical, mechanical characteristics and requirements of three phases, on-line, double conversion, Modular Hot Swappable Uninterruptible Power Supply (UPS). The UPS should be having VFI (Voltage Frequency Independent) technology, fully DSP controlled power factor corrected rectifier and IGBT inverter capable of providing high quality AC power for sensitive electronic equipment loads.	Tender calls for Modular Hot Swappable UPS which will have cost increase, not only capital cost but maintenance cost as well . Conventional system can be repaired at site by replacing required cards. In modular system, complete module needs replacement for any problem in module. It can't be repaired at site. It increases dependency on OEM as module can be repaired / supplied by OEM only. OEM will charge higher prices being monopoly items. Hence, request you to consider conventional system.	Refer Addendum-1
268	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:1.2	Output isolation transformer for all subsystems	Generally transformer is used for neutral isolation which is already taken care by input transformer in supply system. Hence, separate output isolation transformer is not required. It'll also reduce overall efficiency of the complete system. We request for its deletion.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
269	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:2.1.2	The complete UPS system, except VRLA cellblocks, shall have a minimum service life of 15 years operating continuously. The service life of all the cables shall not be less than 25 years. All equipment and components supplied under the Contract shall have proven reliability and shall be designed, manufactured and installed to meet the specified and / or relevant international or national standards. The Contractor shall submit to the Engineer for approval, a list of all supplied equipment and components with a declaration of conformance to standards. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	The Service Life of Server/ Workstation is generally 5 - 6 years from the date of supply. We request to consider it.	Please follow tender conditions
270	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:2.1.6	UPS should be configurable for Energy Recycle Mode that enables testing of the unit for load testing without external load to test & verify the UPS	This requirement is OEM specific. Required testing happens while FAT. Hence, this clause shall be deleted.	Refer UPMRCL S.No 136
271	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:2.4.1	The System shall be designed such that the MTTR figures for restoring the operation of the System from fault condition shall not be more than four hours (all inclusive).	Please consider the clause as " The System shall be designed such that the MTTR figures for restoring the operation of the System from fault condition shall not be more than four hours excluding travel time. "	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
272	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:3.1 2	The Hot swappable modular UPS with maximum of 6 modules vertically and 8 frames horizontally.	Load in Metro application is Fixed and UPS System is hardly loaded to 25% of its rating. We could not understand the requirement of this clause. This is OEM Specific. We request to delete the "The Hot swappable modular UPS with maximum of 6 modules vertically and 8 frames horizontally." from clause.	Refer Addendum-1
273	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:3.1 4	The transformer insulation class shall be in accordance with heat they are likely to generate but in no case the insulation Class shall be worse than Class B insulation. The Contractor shall submit detailed calculations to substantiate his design.	Transformers with insulation Class H is recommended for such important and critical application. Hence, clause shall be modified as " The transformer insulation class shall be in accordance with heat they are likely to generate but in no case the insulation Class shall be worse than Class H insulation. The Contractor shall submit detailed calculations to substantiate his design."	Please follow tender conditions
274	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:3.2 6	Overload capacity of each UPS better than > 150 % for 60 seconds > 125 % for 10 minutes > 110 % for 60 minutes	Generally , overload capacity of each UPS is as under: 150 % for 60 seconds 125 % for 10 minutes 110 % for 60 minutes Hence clause shall be modified as "Overload capacity of each UPS shall be 150 % for 60 seconds 125 % for 10 minutes 110 % for 60 minutes "	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
275	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.2 (14)	Efficiency (AC-AC) of complete system (including input and output transformers) :Better than 90% (From 25% load to full load)	Efficiency is a multiplication of all sub-systems efficiencies. If we consider the efficiency of transformer as 95% and UPS System efficiency 95% at 25% load, effective efficiency will be $0.95(\text{input transformer}) \times 0.95(\text{UPS System}) \times 0.95(\text{UPS Output Transformer -1}) \times 0.95(\text{UPS Output transfoerm-2}) = 81.4\%$. Losses of dual UPS System and SCVS is not considered here. Hence request you to amend the clause as " Efficiency (AC-AC) of complete system (including input and output transformers):Better than 80% (From 25% load to full load) "	Refer UPMRCL S.No 141
276	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.2 (15)	Inverter efficiency (including output transformer): Better than 0.95	This requirement is OEM specific. Efficiency is a multiplication of all sub-system efficiencies. If we consider the efficiency of transformer as 95% and UPS System inverter efficiency 95% at 25% load, effective efficiency will be $0.95(\text{UPS System}) \times 0.95(\text{UPS Output Transformer -1}) = 90.25\%$. Hence request you to amend the clause as " Inverter efficiency (including output transformer): Better than 0.90 "	Refer UPMRCL S.No 142
277	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.2 (16)	The UPS system shall have at least the following LED 10" displays: Temperature: STS/Inverter/PFC	This requirement is OEM specific. UPS System comes with LCD display to inform status to customer . LED 10" display and Temperature: STS/Inverter/PFC is OEM specific and shall be deleted from clause.	Refer UPMRCL S.No 143

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
278	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.2.4.4	All alarms and messages generated by the UPS shall be recorded at least for a period of six months and self-clearing of message in FIFO logic	Requirement is unrealistic and OEM specific . We request you to kindly consider as " All alarms and messages generated by the UPS shall be recorded at least for a period of one month, or otherwise the message storage capacity should be at least 500 messages and self clearing of message in FIFO logic. " similar to LMRC	Please follow tender conditions
279	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.6.2.6	f) Rated short-circuit making capacity (Icm): 105 kA at 0.25 power factor (min),	Generally, MCCB's selected are based on Application & fault handling capacity will be selected appropriately based on input source capacity. Please consider it.	Please follow tender conditions
280	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.6.2.7	g) Rated ultimate short-circuit breaking capacity (Icu): 50 kA (min)		No Query by Tenderer

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
281	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.6	h) Rated service short-circuit breaking capacity (Ics): (50 kA). Further, Ics must be equal to 100% Icu for the selected breaker,		No Query by Tenderer
282	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.6	m) All MCCBs should have front adjustable electronic/microprocessor based releases with adjustment in the range of 40 – 100% for nominal overloads and 2 – 10 times of rated current for short circuit faults		No Query by Tenderer.
283	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause:3.1	At Depots, Distribution Board will have one no. of 200A MCCB for S&TC, one no. of 63A MCCB for each Telecommunication & AFC. One no. of suitable MCCB for 15 KVA dedicated load for EM System shall be provided with suitable protection mechanism for E&M external circuitry.	Transformer of 20 kVA capacity is asked for E&M load and 15 kVA feeder is asked here which is contradictory. It shall be corrected accordingly. Also confirm whether the transformer is also required at Depot.	Refer Addendum-1

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
284	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:3.1 2.2.2	At Interlocked stations, Distribution Board will have one no. of 63A MCCB for S&TC, one no. of 63A MCCB for Telecommunication, one no. of 63A MCCB for AFC. One no. of suitable MCCB for 15 KVA dedicated load for E&M System shall be provided with suitable protection mechanism for E&M external circuitry.	Transformer of 20 kVA capacity is asked for E&M load and 15 kVA feeder is asked here which is contradictory. It shall be corrected accordingly.	Refer Addendum-1
285	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:3.1 2.2.2	At Secondary/ Non-interlocked stations, Distribution Board will have one no. of 63A MCCB for S&TC, one no. of 63A MCCB for Telecommunication, one no. of 63A MCCB for AFC. One no. of suitable MCCB for 15 KVA dedicated load for E&M System shall be provided with suitable protection mechanism for E&M external circuitry.	Transformer of 20 kVA capacity is asked for E&M load and 15 kVA feeder is asked here which is contradictory. It shall be corrected accordingly.	Refer Addendum-1
286	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 09 POWER SUPPLY SYSTEM Clause:4	The UPS system shall be designed and equipped with all necessary hardware, software and capacity for future 25% additional load. Modular UPS Frame must have the provision to add required power modules to cater 25% spare capacity	Load in Metro application is Fixed and UPS System is loaded hardly 25% of the rating. Hence, further increasing capacity of system is not recommended. We request to delete the clause.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
287	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-09 POWER SUPPLY SYSTEM Clause 3.2.5.10	(e) Two separate battery banks shall be provided at all stations, OCC and depots. The Battery Backup time for UPS shall be at least 4 Hours. Battery management system shall be provided to manage both the battery banks to function both banks simultaneously and individually as per requirement.	We request you to clarify if 4 hours battery back up time is combined for two batteries or each battery back up time is 4 hours.	Two battery banks , each with 2+2 hours backup. Total 4 hours backup combined.
288	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-02 FOTS Clause:1.4.2.2	The switches to be deployed in the outdoor environment must be gigabit Industrial Grade switches with seamless capability to integrate the FOTS backbone on open standards and the Centralized SDN (Software Defined Networking) provisioning controller of the WAN Nodes of the Core switches at CERs.	Please consider for Industrial Grade switches with SDN Hardware ready also	Please follow tender conditions
289	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-02 FOTS Clause:1.1.0.1.18	Shall provide flexible reporting capabilities including pre-defined and custom reports with scheduled and flexible delivery options. NMS should support Software Defined Network (SDN) Management including Open Flow devices.	Request to consider Open Flow Device integration with NMS via SNMP.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
290	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-02 FOTS Clause:1.10.1(viii)	All the Network Switching Devices/NMS should support Open flow Protocol for SDN technology.	Please also consider Netconf in option with Open Flow, as now because of more API integration device configuration can be easily controlled by Netconf instead of Open Flow. Also, all SDN servers support Netconf protocol.	To be dealt during design phase
291	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 5.2.2	Coverage of CCTV surveillance system for the stations, Depots, OCC, etc shall be developed by the contractor and submitted to the employer for review.	We understood the Camera qty and the coverage has to be taken care by the Contractor and it shall fulfill the functional requirement. To achieve the same, please share us the Layouts of Stations, Depots, TSS/RSS & Admin OCC Building etc.,	Please refer tender drawings in Volume-05 of tender documents.
292	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 5.2.2	Minimum qty of Cameras.	We are not able to match the total camera qty given in BOQ against the location wise qty given in tender (5.2.2). Kindly please share the breakup for the minimum BOQ qty location wise.	The BoQ shown is minimum and indicative. The Tenderer shall design and implement the project.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
293	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 6.2.2.2	Housing Arrangement: IP66, NEMA-4x or better	In general IP66 and NEMA-4X both are equivalent. It is not feasible that both IP66 and NEMA-4X rating required for a component. Kindly revise it to "IP66 or NEMA4x or better"	Please follow tender conditions
294	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 6.2.0	Axis, Pelco, Avigilon, Panasonic, Bosch, Sony, Honeywell.	Kindly make the Make list open for all the OEMs who has experience in Metros / Railways / Airports / Similar Govt tenders.	Please follow tender conditions
295	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 6.2.0	SD Card support: Built in SD Card slot with support upto 2 TB with Class 10 Speed	In general, Camera SD Card slot supports maximum of 256GB only. Kindly revise the same.	Refer UPMRCL S.No 117

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
296	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.6	Compression Technology: Two independently configurable H.264 or better streams: Stream 1: 1080p @ 30/25 FPS, Stream 2: 720p @ 30/25 FPS	The advanced Compression technique H.265 is commonly available in most of the OEMs. Kindly revise the same to H.264 or H.265.	Please follow tender conditions
297	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.10	Axis, Pelco, Avigilon, Panasonic, Bosch, Sony, Honeywell.	Kindly make the Make list open for all the OEMs who has experience in Metros / Railways / Airports / Similar Govt tenders.	Please follow tender conditions
298	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.10	SD Card support: Built in SD Card slot with support upto 2 TB with Class 10 Speed	In general, Camera SD Card slot supports maximum of 256GB only. Kindly revise the same.	Refer UPMRCL S.No 117

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
299	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.10	Compression Technology: Two independently configurable H.264 or better streams: Stream 1: 1080p @ 30/25 FPS, Stream 2: 720p @ 30/25 FPS	The advanced Compression technique H.265 is commonly available in most of the OEMs. Kindly revise the same to H.264 or H.265.	Refer UPMRCL S.No 296
300	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.2	Housing Arrangement: IP66, NEMA-4x or better	In general IP66 and NEMA-4X both are equivalent. It is not feasible that both IP66 and NEMA-4X rating required for a component. Kindly revise it to "IP66 or NEMA4x or better"	Please follow tender conditions
301	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.15	Workstation for Viewing & Monitoring Intel Xeon Processor E5-2600 series, 2.4 GHz, Hyper threading, 10MB L3 Cache, 1600 MHz memory or better as per latest available.	Based on the given parameters, we are not able to finalize the Hardware configuration and also the given parameters are for Server and not for Workstation. As per OEM standard, i7 Processor is sufficient for the CCTV workstation. Kindly allow the contractor to frame the Workstation configuration.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
302	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.15	0	.Please clarify the no. of core required in the Processor.	Please follow tender conditions
303	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.17.1	Management Server Hardware Specification: Intel® Xeon® Silver 4210 Scalable Processor (10 Cores, 20 Threads, 2.20 GHz) scalable up to 2 Processors, configured with Redundant Power Supplies or better as per latest available.	We shall propose only 1 Processor now (10Core). In case if 2nd processor requires in future, it can be expanded with additional cost for the 2nd Processor. Please confirm.	To be dealt during design phase
304	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 08 CCTV SYSTEM Clause 6.2.17.2	Network Video Recorder Server Hardware Specification: Each NVR (Primary/Secondary) shall have 20TB minimum usable storage capacities for CCTV video recordings with a provision of expansion of up to 25%	We understood that the storage to be provided for each Recording server is 20TB+25% spare = 25TB usable storage after RAID6	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
305	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 6.2.17.2	Network Video Recorder Server Hardware Specification: Each NVR (Primary/Secondary) shall have 20TB minimum usable storage capacities for CCTV video recordings with a provision of expansion of up to 25%	The storage shall be finalized by the OEM as 20TB may not be correct for all the locations. Some locations may require lower or higher storage as well. Please confirm.	Please follow tender conditions
306	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM Clause 8c	It shall be responsibility of supplier/OEM of the Incident Management System to provide Software Development Kit for above software and to integrate the Incident Management system with CCTV system as specified in Technical specification. Also, it is responsibility of OEM/Supplier to demonstrate below features.	Please share the details about Incident Management system and its functionalities.	To be dealt during design phase
307	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM BOQ S.No.22 & 22	GI Conduit & GI Flexible Conduit - Lumpsum	Please share the tentative qty or the layouts to arrive the Conduit qty.	Tender Drawings have been shared for more clarification. The BoQ quantity is minimum and indicative.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
308	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM BOQ S.No 5	Video Analytics for Cameras as per the requirements of Particular specifications (PS). - Lumpsum	Please clarify the qty of Cameras which requires Analytics Features. We assume that Analytics is not required for all the 2158 Nos of Cameras given in BOQ. Kindly clarify.	Min. 30 types of analytics at minimum 16 CCTVs of each station and Depot.
309	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM BOQ S.No 6	NVR Server with RAID 6 to record all cameras of each station (including RSS), Adminbuilding, Depot, etc as per the requirements of particular specification (PS) complete with all hardware, softwares, licenses etc. - 64 for Kanpur / 28 for Agra	The Recording Server shall not be same for all the locations, as the camera qty varies for different locations. For example the Camera qty in Depot will be higher compared to Station. So kindly allow us to configure the Server ans storage sizing as per the Camera qty.	Please follow tender conditions
310	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM BOQ S.No 7	Redundant Servers with complete Hardware, Software and with all associated accessories for central management at CERs as per the requirements of particular specification (PS). - 2 Nos	We assume that this is Database Server for loading the Video management Software and it will be located @ OCC Admin building only. (1 is Main Server and 1 is Redundant Server). Please confirm.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
311	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-08 CCTV SYSTEM BOQ S.No. 9	Network Management System alongwith servers, workstations and associated accessories as per the requirements of PS at CERs for CCTV System.	Network Management System (NMS) is applicable for IT Infra Networking components such as Switches, Servers and IP devices etc., We assume that the NMS which is referred here is Video management software only for CCTV. Please confirm.	Please follow tender conditions
312	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS BOQ S.No. 7	Local level Access Controllers with enclosures & Power Supply units and alongwith all required accessories for stations, depots, admin buildings, OCC, RSSs, etc as per the requirements of PS.	The qty for both Kanpur & Agra is 36 Nos. Please clarify the breakup for the same as the no. of stations are different in both the cases.	Refer Addendum-1
313	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS BoQ S.No. 1 & 2	NMS software & Configuration software	The Access Control software shall be only one common software which acts as the GUI for all the functions related to ACID. There is no separate NMS for the same. Also the NMS is applicable only for the overall Networking system. Please confirm.	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
314	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS BoQ S No 12	Electro Magnetic (EM) Lock to meet UPMRC's functional & operational requirements for stations, depots, admin buildings, OCC, RSSs, etc as per PS	Please clarify the no. of Single Leaf doors and no. of Double Leaf doors.	To be dealt during design phase
315	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS Clause 5.7	Access Control within Sites	The location wise qty given is not matching with the overall BOQ qty. Please share the detailed location wise qty for both Kanpur & Agra individually.	The BoQ shown is minimum and indicative. The Tenderer shall design and implement the project.
316	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS Clause 5.3.4 Clause 5.3.5	Access Point Egress Button Isolator Unit / Emergency Door Release Unit	Please clarify the difference between these 2 components. Both are placed @ Door Exit. Why 2 components required at Exit which does the same functionality.	Egress button is for emergency door exit. Either of them will be installed. To be dealt at design stage.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
317	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10ACS Clause 5.10	HMI Functions	We understood that ACID Servers (Main+Redundant) will be located only @ OCC. Each station will be having 1 Workstation which acts as HMI for the respective station. Please confirm our understanding.	ACS HMI will be provided at central locations while at stations and Depot , ACS HMI will be integrated with CCTV HMI.
318	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-06 PIDS Clause:5.7	Specifying the use of 'True Colour' in various places in the document	Is there a specific definition of 'True Colour LED'? Is it specifying particular type of LED, technology or source?	Refer UPMRCL S.No 88
319	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 4 Clause 4.1.11	The Access Control facilities shall jointly detect any breach of security or unauthorized intrusion and raise an audio and visual alarm.	The Audio Visual alarm is built in the reader. Please confirm if any other Audio Visual alarm to be provided	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
320	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 5 Clause 1.2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Please share details of AFC card.. For ACS, AFC card to be used. Please confirm	To be dealt during design phase
321	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 6 Clause 1.2.2	It shall be able to display all the operational status and send the alarm signals to the ACS server and HMI. It shall also be able to detect sensor failure and the damage to the connecting cables.	Please clarify if connecting cable damage, alarm is required between controller and reader as we see there will 100s of reader in the system (if this is required then we have to keep the provision for this.)	Please follow tender conditions
322	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 7 Clause 2.2.	Central and Redundant ACS server at CERs. System functionality shall be achieved with central server in redundant mode.	Our understanding is this is 1 + 1 Configuration. 1 Primary Server & 1 Secondary/failover server. Please confirm our understanding.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
323	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 7 Clause 2.2.	Switches, egress equipment and power supply equipment. All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Request you to change tamper proof to tamper resistant.	Please follow tender conditions
324	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 7 Clause 2.2.	The writing system for the contactless smart cards	Please clarify the requirement on writing system for the contactless cards. Since ACS requirement is not very critical for writing into the sectors of the cards. CSN reading is OK and works for the ACS.	To be dealt during design phase
325	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 11 Clause 4.4	It shall be able to perform its function standalone in case of communication failure with the ACS central server in the CERS. The system shall be able to detect sensor failure and damage of connecting cables.	Please clarify if connecting cable damage, alarm is required between controller and reader as we see there will 100s of reader in the system (if this is required then we have to keep the provision for this.)	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
326	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 12 Clause 4.9	Smart Cards used for the Access control System shall be compatible with the Automatic Fare Collection system such that the card can serve the dual purpose of Access control as well as Employee Pass for travel on the metro System.	Please provide the details of the AFC readers.	To be dealt during design phase
327	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 14 Clause 5.3.1	Access Point Controllers shall be IP based and installed at TER/CER or entry side of access point (door) either individually for each door or for a group of doors (as per detailed design of the Contractor, in such a way so as to meet all prescribed functional & performance requirements	The access controller installed on the entry side of the door is security threat. It is recommended that the access controller to be installed insider/secured area. Request you to modify the clause accordingly	To be dealt during design phase
328	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 14 Clause 5.3.2	Access Point Controllers:	You have asked the IT components as IPv6 Compliant, It is recommended that the controllers are also compliant to IPv6. It should be SNMP compliant for integration with SCADA & other 3rd party system directly. Request you to modify accordingly.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
329	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 14 Clause 5.4	All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Request you to change tamper proof to tamper resistant.	Please follow tender conditions
330	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 15 Clause 5.3	The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.	The Electromechanical locks are powered locks. The fail close mode can not be achieved in case of power failure.	Please follow tender conditions
331	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 20 Clause 5.9	A local alarm sounder shall be activated at the operator's HMI and locally at the door, gate to alert security personnel to the location of the forced entry. Reset of the forced entry shall be security protected.	The Audio Visual alarm is built in the reader. Please confirm if any other Audio Visual alarm to be provided	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
332	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 10 (ACCESS CONTROL) Page 26 Clause 8	Summary of Interfaces	It is recommended the Software should be independent of the hardware and it should be open platform to integrate with multiple makes of hardwares and integration with any 3rd party systems.	Please follow tender conditions
333	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 10 (ACCESS CONTROL)	Additional Items Required	Please clarify if there is any intrusion detection to be considered for the depot perimeters and tunnel portal / tunnel ramp areas.	Please follow tender conditions
334	Volume 4		EMPLOYE RS REQUIRE MENTS: PARTICUL AR SPECIFIC ATIONS: CHAPTER- 10 (ACCESS CONTROL) Page 10 Clause 26.4	The system shall be immune to be hacked and shall provide end to end security and authentication of data.	Please clarify level of encryption. Market trend is 128 bit between card and reader, 256 bit in controller, controller to server, server to client communication.	To be dealt during design phase

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
335	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 12 Clause 4.9	Smart Cards used for the Access control System shall be compatible with the Automatic Fare Collection system such that the card can serve the dual purpose of Access control as well as Employee Pass for travel on the metro System	Request you to provide technical details of AFC Card	To be dealt during design phase
336	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 14 Clause 5.3.1	Access Point Controllers shall be IP based and installed at TER/CER or entry side of access point (door) either individually for each door or for a group of doors (as per detailed design of the Contractor, in such a way so as to meet all prescribed functional & performance requirements	Access point controller is installed in safe zone that is Exit side of the door please clarify.	To be dealt during design phase
337	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 14 Clause 5.3.2	(e) Degraded mode of operation shall be defined and finalized during the design stage, whereas for clarity, Controller may be treated as Control Sever where local controller should work as independently in case of degraded mode of operation. Access point Controller should be POE, POE+ or 12 Volt enabled, supply may be accepted enabled, capable of battery charging, powering up readers etc. may be accepted. In case of non-POE and non-PoE+, contractor should provide appropriate Power Supply equipment for Controller & its Extension and for other associated equipment of Access Control System (ACS).	POE+ & 12v PSU you have given option Please clarify both option are technologically different what is UPMRC preference since you are asking for UL certified controller so the PSU also need to be UL (NOTE: if the PSU is not UL then the system will not be UL)	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
338	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 16 Clause 5.8.5	The Card readers for Access Control System shall be compatible with EMV Cards.	Please provide more details	To be dealt during design phase
339	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 19 Clause 5.8.5	Under the following fault conditions, the access control system shall continue to function, without disruption, when operating in conjunction with the access control data, most recently available prior to occurrence of the fault: (a) Failure of station level equipment; (b) Failure of the communications links from the central servers to each site	Please clarify sub controller will not work if main controller fails so as per 5.8.5 a) we should go for IP based architecture or Main & Sub controller architecture?	To be dealt during design phase
340	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page 41 Clause 6.2.2	Unless otherwise specified, all telecommunication equipment installed under this Contract inside rooms with controlled environment shall be designed for operation in temperatures of +5oC to +35oC. All equipment installed outside these areas shall be rated for continuous operation up to + 600 C.	You are asking for IP65 rated enclosure for controller installed outsides and operating temperature is Up to 50 deg C. Please clarify if any electronic equipment housed in IP65 enclosure at a location where maximum ambient Temperature is Up to 45deg C.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
341	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 1.1.12.2	Management of Authentication The Access Control System shall provide the authentication function with IC card. The IC card shall be register in database of Security Access Control System.	Please share details of IC card	To be dealt during design phase
342	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 1.1.12.4	Management of Integration Function with Other systems The Access Control System shall have the function to interface with other systems such as the CCTV system, fire alarm system and seismic sensor provided by SCADA (Traction/E&M).	Please share details of Fire alarm system and how many IO interface need to be considered and also details of seismic sensor	To be dealt during design phase
343	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause1.1.12.5	Middle Security Zone	Please provide functionality in middle security zone	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
344	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 4.2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Please share details of AFC card.. For ACS, AFC card to be used. Please confirm	Please follow tender conditions
345	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 2.2	The supply shall include all necessary hardware, software, firmware, accessories, materials and Documentation. Contract Scope of Services to be performed by the Contractor shall include, but not be limited to, the following a). Training for Employer's Training Instructors, operations staff, maintenance staff and engineering staff as specified in the PS b). Recommendation and provision of contract spares, tools and test equipment c). Quality and safety management. d). Prototypes, mock-ups, emulation and simulation as required. e). Project management of the implementation of the System. f). Presentations, reviews and audit support as specified in the Specification. g). Preparation and submission of documentation. h). Overall site supervision and management. i). Operation and maintenance support services. j). Manpower resources. k). Main earth extension from Earthling strip in TER to Rack l). Design, Supply and Installation of Base Frame, False Floor & under False Floor Cable Trays with required risers for wall mounted units in TER of Stations/Depot and under false floor cable trays in SCR. m). Design, manufacture, delivery, system assurance, installation testing and commissioning of Access Control	Please clarify below details: Is enclosure required for smart card reader separately? Is override keyswitch required only for equipment rooms and not all access control doors..? For indoor use, IP 54 enclosure is not necessary please clarify For door sensor and buzzer kindly clarify if IP 54 rating is necessary as they are installed on door frame. EML is excluded in this already and as per (m), Door contact is inbuilt in EML and hence, door contact and buzzer can also be removed	Refer UPMRCL S. No. 159

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
346	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause3.2.2	MTBF shall be the average operating time accumulated by the total population of identical items between failures. MTBF shall be sustainable throughout the DLP and substantiated by actual performance over the same. The data sheets from the OEM of the ACCESS CONTROL system and other equipment for the indoor and outdoor shall be specifically conforming to the same, including temperature and humidity requirements.	Please provide humidity requirements	Please follow tender conditions
347	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause3.3.2	For up-dating of access control configuration, it will include the stand-alone Workstation, LAN, Central Server at CERs, FOTS and the site LAN up to the access point controller	what is meaning of standalone in "standalone workstations". Are standalone workstations connected on network..? Please clarify	Please follow tender conditions
348	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 3.6.2	Suitable encryption and associated electronic safeguards shall be provided to prevent any cloned Proximity ID Cards gaining access to the system and entry to controlled locations.	As per our understanding cards are provided by AFC, this will be in AFC scope. Please confirm our understanding. If cards need to be provided under this contract please clarify level of encryption. Market trend is 128 bit between card and reader, 256 bit in controller, controller to server, server to client communication.	Access control cards will be provided by Telecom Contractor.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
349	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 3.6.2	Any card reading equipment removed from site, by unauthorized means, shall be automatically barred from future access to the system	As card reader is only card reading equipment and does not store any data, barring this from future access is a manual process. Please clarify	Please follow tender conditions
350	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 4.4	It shall be able to perform its function standalone in case of communication failure with the ACS central server in the CERs. The system shall be able to detect sensor failure and damage of connecting cables	For Door contact, failure option is not available, kindly clarify what is meant by sensor	Please follow tender conditions
351	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 4.8	Within the CERs, interfaces shall be provided to a locally installed stand-alone Work-station, to create new cards, store, retrieve, and photograph and print out cardholder details including programming and cancelling details of people, cards and access rights.	Kindly clarify regarding programming required on cards, As AFC cards will be used, only card number will be added in ACS system and additional programming is not required. Kindly clarify	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
352	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 4.14	The employee master database of UPMRC shall be synchronized with the Access Control system data base for authentication.	Kindly share the details of master database and what details are to be synchronised	To be dealt during design phase
353	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 5.1.2	Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	Is station HMI required? If communication is failed, station HMI will not work as alarms and status is routed by ACS server and is contradicting with 5.2.2 where station controller will work in conjunction with central server. Kindly clarify	Please follow tender conditions
354	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause 5.3.1	General (a) At each access point (door) the equipment detailed below shall be provided, as appropriate (b) All access point facilities shall be vandal resistant and tamper proof. (c) These units shall be mounted at suitable locations for operation by staff, maintenance, those with disabilities and, where appropriate, delivery personnel and those who require access to various locations throughout the premises of the Metro railway. Due care shall be exercised to ensure an ergonomic design. (d) The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	Please clarify which equipments does all access point facilities cover	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
355	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.3.2	<p>Electrical Locks (EML)</p> <p>(a) Provision and installation of electro-mechanical/magnetic locks on the doors to be provided with access control, is the responsibility of Contractor and not of other project Contractors.</p> <p>(b) The type of lock mechanism will depend upon the type of access point and shall be finalized during the Detailed Design phase.</p> <p>(c) The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.</p> <p>(d) Access points, which provide an exit in an emergency, shall be equipped with power-locked devices.</p> <p>(e) These devices shall operate in conjunction with an emergency release mechanism (break-glass unit and input from the fire alarm system), which is independent of the access control system.</p>	Kindly confirm, For fail safe locks, Door compatability is required	Please follow tender conditions
356	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.3.4	<p>Access Point Egress Button</p> <p>(a) Each access point shall be fitted with a manually activated egress button, at the exit location.</p> <p>(b) On initiation, the access point controller shall release the lock to allow users to exit.</p>	As per 1.1.13, 1.2.1.3, exit reader is required, where as here, Egress button is asked. Kindly clarify if exit reader is required or egress button is required	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
357	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.3.6.4	Consideration shall be given as to the distances over which a proximity ID is required to operate to cover pedestrian access at gates and door access, such as based on ISO 14443 for communications at distances up to 10 cm.	As AFC cards are to be used, card read distance will be less because of encryption technologies used in AFC card, Kindly request you to this clause	Please follow tender conditions
358	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.3.6.5	The Card readers for Access Control System shall be compatible with EMV Cards.	Kindly clarify if EMV is a chip based card or contactless cards	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
359	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.9	<p>Access Point Controller facilities</p> <p>The access point controller shall, as a minimum, include the following facilities:</p> <p>(a) Automatic self-test facility, automatic detection and automatic configuration</p> <p>(b) Validate an individual card together with its time group and validity dates to grant or deny access when a card is presented at the card reader.</p> <p>(c) For granting access, multiple and selectable periods shall be available which may be allocated in various combinations.</p> <p>(d) If access is granted, the electrical locks shall automatically release.</p> <p>(e) When the lock release button is operated on the exit side of doors the electrical locks shall release automatically for a pre-set duration. The pre-set time shall be adjustable.</p> <p>(f) The open/closed sensor shall detect when a door or gate has been opened and if a pre-set allowable time threshold has been exceeded an alarm shall be raised locally at the access point and at the operator's HMI. The pre-set time shall be adjustable.</p> <p>(g) A forced entry shall be detected by the status of the door open/closed sensor and triggered alarm of the Access Control system.</p> <p>(h) A local alarm sounder shall be activated at the operator's HMI and locally at the door, gate to alert security personnel to</p>	As there are many sensors connected to controller, first time configuration is required and its not automatic kindly clarify what is meant by reset of forced entry shall be security protected and from which HMI security can acknowledge this..?	Please follow tender conditions
360	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.1	<p>CERs Specific Functions</p> <p>(a) Control and monitor the entire Access Control System.</p> <p>(b) Respond to event alarms on occurrence of a security breach at unmanned sites such as Receiving sub-stations</p> <p>(c) Control shall be transferred to the CERs by responding the event alarms at the stations when the stations are closed or when the local SCR is unmanned.</p>	Is HMI required at all stations? Please clarify	ACS HMI will be provided at central locations while at stations and Depot , ACS HMI will be integrated with CCTV HMI.

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
361	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Clause5.1	High level alarms shall/may be shown on the Central Telecom Fault Reporting System (T-SCADA) Workstations	Does TSCADA system accept alarms on OPC protocol..? Please clarify	Please follow tender conditions
362	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 3 Clause	The Master Clock System shall be compliant with ITU-T G.811. It will serve as Primary Reference Clock (PRC) for all clock functions of the UPMRC. The Master Clock shall provide synchronised time signals received by radio communication from orbiting GPS satellites. The Master Clock shall derive Coordinated Universal Time (UTC) from received GPS satellite signals and shall convert this to local Indian Standard Time. The Telecom Contractor shall provide the Master Clock for Date & Time signal also so that it can act as NTP server for the Master Clock System of UPMRC network.	We understand that as per ITU-T G.811 standard, PRC E1 / 2.048 MHz output is required for frequency synchronization in addition to the time & date synchronization functions. Please confirm our understanding.	Please follow tender conditions
363	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 3 Clause	Master Clock system to be provided under Telecom Contract shall consist of following major components: (1) GPS Master Clock Unit working in active-active Redundant mode at CERs levels.	We understand that the redundant GPS Master Clock Unit working in active-active mode consist of two Master clocks interlinked to each other to achieve full redundancy specially for the case when primary GPS antenna fails, the primary Master Clock acquires the GPS time- of-day from secondary GPS antenna through redundant link and vice versa. Please confirm our understanding.	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
364	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 4 Clause 24	Visual Time-of-day The MCS shall provide time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations. At stations and important locations, digital slave display clocks shall be provided for benefit of passengers and operational staff.	We understand that time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations are required. Please confirm if at stations platform and important locations like concourse area, Outdoor clock (Digital & Analogue) shall be provided for benefit of passengers and operational staff.	Please follow tender conditions
365	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 8 Clause 24	The Sub-Master Clock system shall provide appropriate clock output interfaces for master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	There seems to be some ambiguity in this clause, kindly review and please amend this clause. Suitable clause could be: The Master Clock system shall provide appropriate clock output interfaces for Sub-master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	Refer Addendum-1
366	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 9 Clause 27	Digital Slave Clocks to be built to Open Protocol (like AFNOR, VNTP V4 or latest one etc.) and to work on this Open Protocol only. In this reference following points must comply:	We understand that Digital Slave Clocks to be built to Open Protocol (like AFNOR, NTP V3/V4 or latest one etc.) and to work on this Open Protocol only including remote administration, configuration & maintenance of digital clocks through MMI software. Please confirm our understanding.	Refer UPMRC Sr No 94

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367	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 9 Clause 5.7(4)	(4) Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 66 standard and those used in indoor environment (Rooms) with IP54 standard.	<p>We understand that the digital outdoor clocks at head end and tail end of each platform shall be necessary for the use of the train driver as well as passengers, however such clocks quantity is neither specified in the specification nor in the BoQ, kindly indicate the same as well. Secondly, As per industry norms, the outdoor display clocks are installed & tested to survive the IP 65 ingress protection degree whereas IP 66 compliance are not sought. Kindly review and please amend this clause.</p> <p>Suitable clause could be: Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 65 ingress protection degree and those used in indoor environment (Rooms) with IP54 ingress protection degree as standard. Further, the quantity of outdoor slave clocks are neither specified in the specification nor in the BoQ, kindly indicate the same as well.</p>	Refer UPMRCL Sr No 95
368	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 9 Clause 6.2	<p>Technical System Performance The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal quartz oscillator. This oscillator ensures that the Master Clock accuracy is better than 1x10⁻¹² (Seconds per 24 Hours) in free running mode without the input of GPS signal.</p>	<p>We understand that as per ITU-T G.811 standard, accuracy of a PRC clock when synchronised with GPS should meet 10e-11 (Seconds per 24 Hours) whereas free running accuracy asked in specification is 1x10e-12 (seconds per 24 hours) is contradictory because in free running mode (after the holdover period of 24 hours or as applicable loss of synchronization, without the input of GPS signal) the accuracy of internal quartz oscillator will start degrading and it must be comparatively lower than the PRC accuracy. Moreover, overall Master clock system accuracy has been asked +/-0.01 second per 24 hour, which can be achieved by any Masterclock having accuracy less than 1 x 10e-9 (Seconds per 24 Hours) in free running mode without the input of GPS signal. Hence Please review, omit the accuracy specified here under this clause and please amend this clause.</p> <p>Suitable clause could be: The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal Rubidium atomic oscillator. This</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
369	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 10 Clause 6.2.4.6	The master clock system shall work from 48 V +/- 20% DC and 240 AC UPS with an internal battery backup of at least 4 hours for continuous display of date and time without interruption.	We understand that the UPS power back up shall be made available at site by the respective sub contractor for continuous operation of Masterclock system during failure of the mains power supply. In addition to this internal battery backup of at least 4 hours shall be provided to keep running the internal RTC time in case power fails. Please confirm our understanding.	
370	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-07 (MASTER CLOCK) Page 10 Clause 6.2.4.6	The sub-master and slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date and time without interruption.	We understand that the UPS power back up shall be made available at site by the respective sub contractor for continuous operation of Masterclock system during failure of the mains power supply. In addition to this internal battery backup of at least 4 hours shall be provided to keep running the internal RTC time in case power fails. Please confirm our understanding.	Please follow tender conditions
371	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 4 Clause 4.2.2	The Telephone System shall interface to the Radio System to enable radio users to initiate and receive calls from EPABX extension or from the PSTN telephones and vice versa.	Request to provide following details: Number of Radio users .For Telephone interface SIP extn or SIP Trunk is required.?	Please follow tender conditions

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372	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 5 Clause 4.1.1.4	The Telephone System shall be interfaced with a Centralised Digital Recording System for recording of designated telephone lines including emergency telephone lines.	Does Help Point to be recorded .? Please clarify	Help Point shall be recorded.
373	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 6 Clause 4.1.1.5	In addition to the above, the detailed specification of CDRS has been provided in Chapter-4 (Radio System along with CDRS) of the PS	Please provide Number of Radio system users to be recorded.?	Please follow tender conditions
374	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 12 Clause 4.1.1.3	Minimum requirement is mentioned for Depot	Please provide configuration details in terms of PRI ,Analog Extn ,Digital Extn , for CER at Main mode and at CER for Backup node?	To be dealt during design phase

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
375	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 14 Clause 4.1.4.10	Network Features -Voice mail	20% of telephone users. Please provide which locations to be considered. Also Please provide the details of Existing make of the system if network to be considered in future.	To be dealt during design phase
376	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 17 Clause 4.1.4.10	The EPABX switch network shall be connected to the Radio system to provide switching and connection for user to make telephone call connection through the hand portable/train mobile radios and call to hand portable/train mobile radios through telephone extension	Please provide the details: Number of radio system users and number of the channels	To be dealt during design phase
377	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) Page 43 Clause 6.6	Power Supply system	Can we use AC power supply for OCC,DCC ,Depot and for the stations EPABX? Kindly confirm.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
378	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) 4.1.1.13.1 (7)	A minimum of 20 memory keys with 10 keys for speed dialling and 10 keys for programmable system features which shall include but not be limited to, call pickup, call forward, call back, system speed dial, call park, direct pickup, cancel call forward, cancel call back, personal speed dial and one spare key;	we request you to modify the clause with maximum 10 keys as analog phone does not come with 20 keys.	Refer UPMRCL S. No. 48
379	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-03 (TELEPHONE) 4.1.1.13.1 (17)	The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling.	The digital Phone can dial or receive a call from any trunk signaling, but as phone works on (2b+d) signalling. And does not required and support in side the digital phone as (30b+d) signalling. We request you to kindly amend the clause accordingly.	Refer UPMRCL S. No. 49
380	Volume 4		EMPLOYEES REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-01 Clause 13.1.1.4	The training courses shall normally be conducted at manufacturers' place and at the site(s).	All the expenses related to travel,Lodging,boarding & Local travel of customer's representative for training at manufacturer's place shall be borne by customer. Please confirm if understanding is correct.	Tenderer understanding is correct, please follow tender condition

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
381	Volume 4		EMPLOYERS REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-01 Clause 8.3.1	The Contractor shall carry out factory acceptance tests at the place of manufacturing in the presence of the Employer's Engineer. The test shall include, but not be limited to, visual, environmental, electrical and functional tests on each individual equipment and associated Subsystems as well as simulation before delivery of the equipment to the Site.	All the expenses related to travel, Lodging, boarding & Local travel of customer's representative for Factory acceptance test at manufacturer's place shall be borne by customer. Please confirm if understanding is correct.	Please refer clause 7.9 of GCC, page no-60.
382	Volume 4		EMPLOYERS REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-01 Clause 6.6	6.6.1 Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, convergence Time, Latency, Synchronization, Interfaces & Integration etc.	Please clarify the POC shall be done for each individual subsystem at Buyer's Location. We understand that Integrated test of all the subsystem is not required in the POC set up. Please confirm the understanding.	POC shall be done at employer's location.
383	Volume 4		EMPLOYERS REQUIREMENTS: PARTICULAR SPECIFICATIONS: CHAPTER-01 Clause 6.3.7	The use of radio frequency spectrum in India is regulated by the Wireless Planning & Coordination Wing (WPC) Wing of the Ministry of Communications, Government of India. The employer may be authorised the use of the frequency band 380-400 MHz for mobile train radio communication. However, a separate clearance for the use of specific frequencies is to be obtained. Based on the frequency plan proposed by the Contractor, approval from WPC shall be obtained by the Contractor and all the expenses including License fees etc. shall be borne by the contractor till ROD of last section. The Contractor, if so, required by the WPC, shall incorporate specific changes in the frequency plan, after mutual discussions.	Costs for liaisoning with authorities for the required licenses from DoT/WPC shall be borne by Tenderer. All the License fee is paid by the Licensee to WPC/DoT. We understand that the same shall be paid by the Buyer (UPMRC). Please confirm the understanding.	Refer UPMRC S.No 56

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
384	Volume 4		EMPLOYEES REQUIREMENTS: Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 20 of 123, Clause 5.3.4.4	5.3.4.4 Central Equipment Rooms (Telecommunication) at Depots/Admin Buildings One RCW with restricted access shall also be located in each Central Equipment Room for Telecommunication Systems at both Depots/Admin Buildings. This unit shall be used for maintenance monitoring and shall work as spares for RCWs in the OCC.	Please confirm the RCW for maintenance monitoring is already considered in MMI distribution in Appendix H of PS as an RCW in CER. Also please confirm if RAU is also be provided as back up to these RCW. Request you to update the BoQ accordingly.	Refer UPMRCL Sr. No. 62
385	Volume 4		EMPLOYEES REQUIREMENTS: Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 123, Clause 5.8.3.3	5.8.3.9.3 The maintenance radio's call shall be routed to the maintenance controller RCW.	The maintenance controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if maintenance controller for RCW needs to be considered. If not, request you to please remove the maintenance controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 62

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
386	Volume 4		EMPLOYEES REQUIREMENTS: Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143 Clause 5.8.3.9.4	5.8.3.9.4 The security radio's call should be routed to the security controller RCW.	The security controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if Security controller for RCW needs to be considered. If not, request you to please remove the Security controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 63
387	Volume 4		EMPLOYEES REQUIREMENTS: Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143	5.8.3.9.5 The Traction supply radio's call should be routed to traction supply controller RCW.	The traction supply controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if traction supply controller for RCW needs to be considered. If not, request you to please remove the traction supply controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 64
388	Volume 4		EMPLOYEES REQUIREMENTS: Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 81 of 123 Clause 6.9.7	6.9.7 Controllers RCW in OCC, DCC & other locations shall be provided a RAU in addition to RCW to work as a back-up/ all other controllers shall be provided only RAUs. One extra RAU complete with all accessories shall be provided and installed at each of the terminal stations also.	Please confirm if the number of terminal stations to be considered is 1 for each corridor. As the RAU quantity is not included in MMI distribution in Appendix H of PS, request you to please add the same in Appendix H. Request you to revise the BoQ accordingly.	RAU shall be provisioned as per Appendix-H of Chapter-11 of PS. One extra RAU for terminal station shall be installed in Crew Control Room. Crew Control Room quantity for Kanpur=xx nos and for Agra=XX nos.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
389	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 4 RADIO SYSTEM (With CDRS), Page 87 of 123, Claus e 6.10.9.1.2	6.10.9.1.2 The antenna network for the Underground section shall be LCX in tunnels and a combination of LCX and low-profile antenna if required at stations. The coverage in the tunnel, under craft, platform and concourse area shall primarily be by use of LCX cables. The LCX cable shall be able to support optimally train radio services in the TETRA frequency bands 380-400 MHz and also support signals up to 1 Ghz, for future. LCX shall be supported by stand-offs installed at regular interval as per guidelines issued by EIAStandard RS 422 and new wind tunnel vibration tests. A common LCX cable for transmission and reception of RF signals shall be used. Contractor shall install minimum one LCX cable in each tunnel, tunnels leading out of the underground up till out in open and minimum two LCX cables throughout in underground station areas all along the Cable containment, for future expansion and use for the TETRA services and Fire/Police services.	Reuquest you to clarify why there is a requirement of minimum two LCX cables throughout in the underground station. This should be left for the bidders to design the IBS in Underground station as per requirements stated in the PS.	Refer UPMRCL S.No 66
390	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 4 RADIO SYSTEM (With CDRS), Page 88 of 123, Clause 6.10.9.1.5	6.10.9.1.5 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	Please confirm that the clause is only asking about the failure of repeater of one tunnel and not about the failure of LCX cable. Providing redundancy in LCX cable is not a standard set up in any Metros.	Refer UPMRCL Sr. No. 67

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
391	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123, Clause 8.4	8.4 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	The IBS for cellular communication will be dependent on the Cellular communication design including frequency, power, location of cellular BTS, cellular coverage available, etc. Further 100% overlapping of signals is not possible in Cellular network due to technology challenges and the system performance. It is recommended to have the overlapping only at the hand over zones, please consider the revision of the requirement	Refer UPMRCL Sr. No. 67
392	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123, Clause 5.1.5	5.1.5 The CER in Depot/Admin Building shall be equipped with all control and monitoring equipment. The central control system shall be fault tolerant, and in a hot-standby configuration at CERs or based on a distributed architecture with full redundancy.	The location of CER/OCC/BCC is not mentioned. Please confirm the location of CER and if the CER is within the OCC and BCC/Depot.	OCC & CER shall be in Admin Building of Depot. For Agra, second CER may be at the other location as provided but the first CER will be in Admin Building. There is no BCC.

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393	Volume 4		EMPLOYERS REQUIREMENTS Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123, Clause 5.2.2	5.2.2 The Radio System shall cover, but not be limited to:10) All parts of OCC and Depot, DCC's and UPMRC Headquarters	Please provide the locaton and coordinates of OCC, BCC and UPMRC headquarter	Refer UPMRL Sr. No. 59.
394	Volume 4		Employers Requirements Particular Specifications CHAPTER 11 Appendices, Appendix H	RCW quantity	As per Appendix H, the quantity of RCW is coming out to be 17 (9 for Kanpur and 7 for Kanpur). As per technical specification chapter 4 radio system clause 5.8.3.9.3, 5.8.3.9.4 , 5.8.3.9.5 and 5.3.4.4, additional RCWs are required. please confirm if the controllers are required to be considered. Please update the quantity in the BoQ accordingly. If not, request you to please delet the same from the specification.	RCW shall be provisioned as per Appendix-H of Chapter-11 of PS.

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395	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123, Clause 8.8	8.8. No repeater equipment shall generally be installed in the tunnels. Nevertheless, if it is unavoidable then intermediate repeaters can be allowed to install adhering to the schedule of dimensions. Power for the same has to be extended by the Telecom Contractor from the S&T UPS. Any co-axial cable, optical fibre cable, power cable, etc has to meet the FRLSZH (Fire Retardant Low Smoke Zero Halogen) criteria for underground environment and has to be provided by the Telecom Contractor along with associated equipment for receiving signals of mobile service providers. In this regard, certificates and test reports of the manufacturer are to be submitted to employer representative for review. Further, if required to install more active components to cover the stations areas, such locations of active components can be decided during detailed design phase. The installation of passive equipment has to be done inside the false ceiling and aesthetics of areas to be maintained. Location of such installation is to be approved by employer representative.	Cellular system works in a wider spectrum with various technologies 2G,3G & 4G. The higher frequencies and latest technologies are working with user shared output power, The reference power distinguish the coverage level is much lower and require to install the amplifiers a frequent interval inside tunnel to meet the coverage requirement. This madates the requirement of installation of BDA inside the tunnel wall also. Request you to please confirm the same.	To be dealt during design phase
396	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 4 RADIO SYSTEM (With CDRS), Page 17 of 123, Clause 5.2.3	5.2.3) The Design requirements required to be submitted are given in Chapter 1 of this PS and clause 6 of this Chapter. Contractor shall however submit to the Employer's Representative for review, the coverage calculations and coverage plots (both up-link & down-link) to confirm that the required RF coverage stated above can be achieved using the Contractor's proposed antenna locations.	The design of UG station and tunnel shall be done through design tool and the simulation plots are available for the downlink.The link budget calculations shall be done based on the distance /losses for the uplink direction.	Please follow tender conditions

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397	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:6.2 10	High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)- Point 26 - Privacy Mask/Zones 32 individually configurable Privacy Masks/Zones	Number of privacy masks/zones varies across OEMs and is not a standard. Based on typical operational requirement and as a industry practice met by all the CCTV OEMs named in the tender, we request that this be modified to 16 or more privacy masks/zones, individually configurable to encourage wider OEM participation.	Refer UPMRCL S.No 120
398	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:6.2 11	Digital CCTV Keyboard Keyboard shall be with user-friendly menu displayed on LCD with dynamic menu and easy to read display	For LCD display in keyboard, we support display on monitors. Like when we press a camera number on keyboard, the keyboard display shows the number, but on VMS the camera or monitor number is displayed on monitor that eliminates the need for LCD display on keyboard which is more user friendly . So request you to accept the same.	Refer UPMRCL S.No 122
399	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:6.2 20	Requirements for CCTV Video Analytics for CCTV System. Additional Suggested Specifications in Video Analytics	In Critical infrastructure like Metro, it is highly recommended to use Machine Learning based Analytics which will give you 90% + accuracy and it will not give you false alarm rate due to shadows, lighting conditions etc. which is the case with edge based VA technology. Hence, we request that Server based VA technology be accepted for desired outcome.	Refer UPMRCL S.No 125

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400	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:6.2.21.4	A. The viewing client shall enable operators to connect to the management server for initial authorization. Upon authorization, the viewing client shall be able to connect to the recording server(s), for access to live and recorded videos. Once authorized, the viewing client shall run independently of the management server and shall continue to operate even if the management server is offline. However, in the downgraded mode (when the connectivity between central server and the station is not available), the viewer client shall be able to login the system and the video recording & the local viewing shall not be affected.	Each OEM has its own architecture for the VMS. Based on the requirement for such critical operation and as per RFP, N+N redundancy is to be configured for the complete system & network. This mean if primary server goes down, failover server is going to automatically become active and hence such scenario will not take place. The specification for downgraded mode is aligned to certain OEM architecture. We request to update this specification to encourage wider OEM participation.	Refer UPMRCL S.No 130
401	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:6.2.2.6.2.0	2 MP (Full High Definition) IP Fixed Box Camera (Day/Night),2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night): 17. Shutter speed- 2 MP (Full High Definition) IP Fixed Box Camera(Day/Night): 1 to 1/10,000 or better 20. Shutter speed- 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night): 1 to 1/10,000 or better	Camera Shutter Speed and Aperture both are paired together to balance the enough light into the scene for better image quality. Technically having faster speed more than 1/8000s will relatively allow less light hits the sensor, which can lead to a loss in image quality where as having shutter speed less than 1/8s will create motion blur effect in the picture during night Conditions. We request you to kindly accept optimal shutter range and modify the clause with 1/8 to 1/8000s or better	Please follow tender conditions
402	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM Clause: 1.1.16	The FOTS networks serving the metro rail subsystems shall not be connected to the internet. However, infrastructure for the FOTS shall be provided to connect to the Internet through a strong Firewall System capable to secure the privacy & security of the FOTS network. The Telecom contractor should provide suitable Firewall System comprises of Router & Firewall along with UTMS (Unified Threat Management System) to cater the requirements specified in the Employer Requirements.	We understand that provision of internet is not in scope under this contract.Please confirm our understanding.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
403	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM Clause:3.1.1.1	<p>The Telecom-SCADA is the system used for remote supervision of Telecommunications equipment of Uttar Pradesh Metro Rail Corporation (UPMRC) for Kanpur and Agra Metro Projects. The system should have the ability to provide fault indication and diagnostic facilities.</p> <p>The following systems will be monitored through Telecom-SCADA system:</p> <p>(a) Public Address System; (b) Public Information Display System; (c) Master Clock System; (d) Telephone System; (e) Radio System including IBS & CDRS; (f) Closed Circuit Television System; (g) Fiber Optic Transmission System; (h) Access Control System</p>	The employer mentions (i) Power Supply System as one system to be supervised by SCADA. What is meant by power supply system? Is it the UPS system, which is also part of this tender or is the general power supply rail electrification system, which needs to be supervised, which we call Power SCADA?	Telecom SCADA (T-SCADA) and Power SCADA are separate. T-SCADA is in the scope of tenderer.
404	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM Clause:3.1.2	The SCADA shall also provide relevant data / information, which would enable the maintenance staff to assess the need for unscheduled Preventive Maintenance based on the degradation of normal operating parameters.	SCADA systems are usually no preventive maintenance systems. Usually the SCADA system interfaces to a computerized maintenance management system and provides relevant data / information. Is such a maintenance system and interface foreseen? In 3.3.19 such a system is described.	Please follow tender conditions
405	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM Clause:3.2.1	The Network Management Systems (NMS) from the Telecommunication systems, as faults/warnings occur, inform T-SCADA Application Software (role of which is to collect information for maintenance staff to monitor the needs for intervention). T-SCADA Application Software centralizes all the alarms/warnings from all systems allowing the maintenance of all assets in UPMRC for Kanpur and Agra Projects.	SCADA system usually centralizes all alarms and warnings and is used for monitoring of status of different equipment. However, it is not recommended to do maintenance with SCADA. Is it necessary to provide maintenance functionalities with SCADA, because in 3.3.19 such a maintenance system is described.	Please follow tender conditions

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406	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 1 FOTS SYSTEM Clause:3.3 .1	The indications shall ensure that the Fault and Works Coordination & maintenance Offices are alerted to enable any appropriate action to be implemented to minimize disruptions to the train service and inconvenience to passengers. The Contractor / System Integrator shall perform and submit a detailed study report to Employer for approval within 3 months of Commencement Date elaborating the telecom system related incidences scenarios and their mitigation / management. Each of the incidences shall be elaborated further (by way of preparing appropriately detailed proposal) during the course of contract execution period, duly keeping the Employer apprised (and obtaining approval of Employer wherever deemed necessary) and implemented appropriately through T-SCADA system. Multiple iterations may be expected, for which Contractor shall be resourced to	What are the customer expectation regarding such a study what kind of mitigation shall be implemented into SCADA?	Please follow tender conditions
407	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 1 FOTS SYSTEM Clause:1.3 4.5	Kanpur Metro project have two corridors, two CERs & one OCC, two depots, two Administrative Buildings and three RSSs. Total nos. of Stations for Kanpur Project are 30. While Agra Metro Project have one corridors, two CERs & one OCC, one depots, one Administrative Buildings and two RSSs. Total nos. of Stations for Agra Project are 13.	As per understanding of this clause and PS document, redundant switches will be CERs. Please clarify CERs will act as OCC and BCC for network redundancy point of view. Also please help to understand role of separate OCC as mentioned in clause.	Refer UPMRCL S.No 27
408	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 1 FOTS SYSTEM Clause 1.3.1. C)	The equipment shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks.	As per our understanding the Core switches, Distribution switches and Access switches will be installed in temperature controlled areas hence all switches will not be rugged (Industrial grade with high temperature 75 degree for outdoor/closed high temperature areas like tunnel, open area) switches. For open area only, industrial grade switches can be proposed. Please modify it as "The equipment for open area shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks".	Refer UPMRCL S.No 28

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409	Volume 4		EMPLOYERS REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM 1.4.3.1 b)	Ability to integrate with Non-IP based equipment and networks.	Switches are based on IP/Ethernet protocols with open standard. Integrate to any other system will require IP/Ethernet / Open standard. Please clarify for the clause.	Refer UPMRCL S.No 29
410	Volume 4		EMPLOYERS REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM 1.18.3	A summary alarm indication shall be provided at the top of each rack to indicate the summary alarm status of the equipment within the rack.	Switches have dedicated LED indication for their health and for detailed observation for network alarms, it is recommended to check switch logs and NMS. Requesting to please remove the clause as mentioned above.	Refer UPMRCL S.No 33
411	Volume 4		EMPLOYERS REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM 1.20.10 S.No 1	24- ports-10/100/1000-Base-T-PoE/PoE+ and 4x1G/10G-SFP+ slots:- PoE/PoE+ ports are required for PoE/PoE+ access switches; for Non-PoE Access switches PoE/PoE+ ports are not required. 40G-Stacking ports/clustering ports will be considered additional,in addition to the above port requirement.	AS access switches will have sufficient stacking bandwidth with total 20G (aggregated 40G). Request to change the clause to "24- ports-10/100/1000-Base-T-PoE/PoE+ and 4x1G/10G-SFP+ slots:- PoE/PoE+ ports are required for PoE/PoE+ access switches; for Non-PoE Access switches PoE/PoE+ ports are not required. 40G-Stacking ports/clustering ports(aggregated) will be considered additional,in addition to the above port requirement. "	Please follow tender conditions
412	Volume 4		EMPLOYERS REQUIREMENTS Particular Specifications CHAPTER 1 FOTS SYSTEM 1.20.10 S.No 11	Certifications- UL, EN 60950, ROHS, EN55032, EN55024	EN55032 covers multiple standards (multi-media(ITE,Audio/Video,Broadcast receivers & Combinations) which comprise of three catatory EN55013(sound and television broadcast receivers), EN55022(information technology equipment, EN55103-1(electromagnetic capability - family standard for audio video, etc). Hence request to change the clause to "Certifications- UL, EN 60950, ROHS, EN55022/EN55032, EN55024" as (EN55022) is specific to switches.	Refer UPMRCL S.No 26

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413	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:1.10.1.18	NMS should support Software Defined Network (SDN) Management including Open Flow devices.	Software Defined Network (SDN) enables programmability in the network through open interfaces which shouldn't be limited to open flow only. Open flow based implementation is being adopted in Data Centers in a very limited manner. We request for allowing the Bidder to implement SDN Management for realizing the required functionalities in the network. Hence we request for deletion of " open flow" reference and modification of the clause as "NMS should support Software Defined Network (SDN) Management "	Refer UPMRCL S.No 31
414	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:1.10.1	All the Network Switching Devices/NMS should support Open flow Protocol for SDN technology.	Software Defined Network (SDN) enables programmability in the network through open interfaces which shouldn't be limited to open flow only. Open flow based implementation is being adopted in Data Centers in a very limited manner. We request for allowing the Bidder to implement SDN Management for realizing the required functionalities in the network. Hence we request for deletion of " open flow" reference and modification of the clause as "NMS should support Software Defined Network (SDN) Management "	Refer UPMRCL S.No 34
415	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 8 CCTV SYSTEM Clause:1.20	Interface on Core switch as " 40G optical Uplink Interface"	With increasing trend, Modular Core Switches are available with 100G Optical interfaces. Hence we request to allow 100G uplink interfaces on the Core Switches and modify the clause as " 40G or 100G optical interface".	The clause says about minimum requirement.
416	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:1.28	1.2.8 The following major types of messages shall be provided by the PAS as a minimum: (1) Fixed digital recording; (2) Pre-formatted with data to be added; (3) Instantly recorded; (4) Live audio broadcast; and (5) Live & recorded music etc	As per past metro requirement experience live & recorded music is not used in any other metro project. Please confirm for the requirement of Live & recorded music. Also please confirm what will be the source of the live and recorded music ?	To be dealt during design phase

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417	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:3.3 1	The requirements on the scope of services are given in General Requirement (Chapter 1) of this PS. For implementation of PAS, Telecom Contractor shall be required to provide Integrated PAS/PIDS servers at stations, Depot TERs and CERs to interface with ATS (signalling) and should co-ordinate/interface with the TC&S Contractor.	Please confirm PAS shall have both local and central level interfaces with ATS or only central level interface with ATS.	To be dealt during design phase
418	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:		As per past metro experience the station and depot PAS requirement can be achieved by using integrated workstations also with suitable configuration. Request to please change the requirement with Integrated PAS/PIDS Workstation at station and Depot TER.	To be dealt during design phase
419	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:3.4	Works excluded from this Chapter of Contract Train-borne Public Address System shall not be supplied as part of this contract but interfacing with Train-Borne PA System shall be done by Telecom Contractor.	Telecom PAS system always implemented on static stations, Depots, OCC and have not been interfaced with Train borne PAS system in any other metro projects. It is requested to kindly modify this clause as below. Train-borne Public Address System shall not be supplied as part of this contract.	Please follow tender conditions
420	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:4.4 1	The Mean Time To Restore (MTTR) of the PAS to full normal operation following a failure shall be less than four hours, excluding the time required to travel to Site. The travel time should not be more than one hour.	Travel time can be more than 1 hour as it includes other factors- distance, traffic congestion etc. It is requested to kindly modify this clause as below. The Mean Time To Restore (MTTR) of the PAS to full normal operation following a failure shall be less than four hours, excluding the time required to travel to Site.	Please follow tender conditions

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421	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:4.4.2	The service life of the PAS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD)	As technology in IT hardware industry changes very frequently and new processors and configuration of workstation and server introduces in market very rapidly. So, request you to kindly modify this clause and allow service life of 5 years for Server/Workstation.	Please follow tender conditions
422	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.3.1	(7) Coverage shall be uniform with +/-3 dB on platforms (95+/-3dB) and within +/- 6 dB on concourse areas (90+/- 6dB) of stations.	Kindly modify this clause and please provide +/- 6 dB uniform coverage on non-public areas (including RSS) (80 +/- 6 dB).	Please follow tender conditions
423	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.3.1	(9) The SPL shall not exceed 100 dB (A) in all public and non-public areas.	In Clause 5.3.1 (9) requirement is SPL should not exceed 100dB and in Clause 4.1.7 (j) SPL requirement should not exceed 95dB. Both clause contradictory to each other. Kindly modify the requirement in clause 4.1.7 (j) with SPL should not increase 100dB as this also satisfies the requirement in clause 5.3.1 (6) & (7)..	Please follow tender conditions
424	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:4.1.7	j) The peak SPL of the system shall not exceed 95 dB and the lowest value shall not fall below 70 dB.		No Query by Tenderer.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
425	Volume 4		5.4.1.5	In order to allow for the worst-case ambient noise levels, the PAS shall generate SPL 90 dB (A) for non-public areas.	In clause 5.3.3.2 and 5.3.3.3 SPL requirement mentioned is 90dB for non- public area and in clause 5.3.1 & 6.2.1.1.1 SPL requirement mentioned is 80dB for non-public area (Including RSS). Both clause contradictory to each other. Kindly modify the requirement in clause 5.3.3.2 & 5.3.3.3 with PAS shall generate SPL 80 dB (A) for non-public area with coverage shall be uniform within +/- 6 dB (80+/- 6dB) of all areas of the depot.	Please follow tender conditions
426	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.3.3.3	Coverage shall be uniform within +/- 6 dB (90+/- 6dB) of all areas of the depot.		No Query by Tenderer.
427	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.3.1	(6) In order to allow for the worst-case ambient noise levels, the PAS shall generate SPLs in 95% of the area (but without sacrificing important locations) of 90 dB (A) for concourse and 95 dB (A) for platform areas and 80 dB (A) for non-public (including RSS) areas.		No Query by Tenderer.
428	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.4.1.5	Each PSB/PSP shall be provided with a hard-wired PAS control panel along with zone & selection extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	PAS control panel comes with zone selection keys, Extension keypad require only when PAS control panel have short of selection keys compare to number of zones. So kindly modify the clause as below. Each PSB/PSP shall be provided with a hard-wired PAS control panel along with zone selection keys and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
429	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.4 2.2	(4) In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console;	Hardwired PAS console is an analogue console microphone which can't communicate from OCC to remote stations, It is provided along with each HMI and act as a backup console of HMI to make local live announcements within OCC when OCC HMI fails and within Station when station HMI fails. To make remote stations from OCC in case of HMI fails, operator should use a backup HMI. So kindly modify this clause as below. (4) In a particular zone, group of zones and all zones at stations through Software.	To be dealt during design phase
430	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.4 2.2	(5) One Train and a group of trains via Radio/FOTS Interface	Supply of train borne PAS system is not a part of Telecom contract. Hence, it should also removed from PAS system requirement. Request to Kindly delete this requirement.	Please follow tender conditions
431	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.4 2.4	Each hard-wired PAS control panel shall be provided along with zone selection & extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	PAS control panel comes with zone selection keys, Extension keypad require only when PAS control panel have short of selection keys compare to number of zones. So kindly modify the clause as below. Each hard-wired PAS control panel shall be provided along with zone selection keys and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	Please follow tender conditions
432	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.7	The PAS at stations shall have two external audio input ports for providing background Music to selected public zones. These shall be able to be programmed to be enabled & disabled in selected zones and configurable during day-night hours.	External audio input ports do not required if PAS have sufficient input port to cater required audio input sources. So, request to kindly remove these clause.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
433	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:6.3 1.11	The two external audio input ports for non-operational broadcasting of each station PAS shall be screened with 600 Ohm impedance.		No Query by Tenderer.
434	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.9 2	The PAS shall have the necessary facilities to mute and attenuate selected PAS locations and zones manually & automatically under time mode control in areas where broadcasts may disturb the public.	Muting of selected PAS locations is not possible as particular location speakers can not be muted, only muting of available zones in a location is possible. Time mode control muting is not recommended for emergency purpose. Request to Kindly modify clause as below. The PAS shall have the necessary facilities to mute and attenuate selected PAS zones manually or automatically under time mode control in areas where broadcasts may disturb the public.	To be dealt during design phase
435	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.1 0.3.2	The PAS control panel shall be equipped with a lamp which shall be illuminated when the respective platform PAS zone is in use. Whenever a live announcement is made via the PAS control panel, a busy signal for that PSB shall be indicated back to the MMI at SCR, CERs and OCC to indicate that the channel is busy.	Channel term is always use for the zone where audio is broadcasting. Getting a zone busy indication on MMI is more recommended instead of PAS control panel busy indication, as no audio announcement made from SCR, CER's, OCC will go through PAS control panel to required zone, so seeing Control panel is busy or free is of no use. Hence kindly modify the clause as below. The PAS control panel shall be equipped with a lamp which shall be illuminated when the respective platform PAS zone is in use. Whenever a live announcement is made via the PAS control panel, a busy signal for that zone shall be indicated back to the MMI at SCR, CERs and OCC to indicate that the channel is busy.	Please follow tender conditions
436	Volume 4		EMPLOYEES REQUIREMENTS Particular Specifications CHAPTER 5 PAS Clause:5.1 2.3.1	(11) Loss of interface link with Radio system.	PAS do not have direct interface with radio system. Radio system shall be interfaced with PAS via telephony system. Hence Loss of interface link with radio system shall be monitored in Telephony system. Kindly delete this clause from PAS requirement.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
437	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:6.1 4	The service life of the PAS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	As technology in IT hardware industry changes very frequently and new processors and configuration of workstation and server introduces in market very rapidly. So, request you to kindly modify this clause and allow service life of 5 years for Server/Workstation.	Please follow tender conditions
438	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:Ge neral		Please confirm, At each location- Station, OCC, CER, Depot and for NMS both Workstation and Server shall be provided. Or Server shall be provided only in OCC & CER and at other location station, Depot, NMS shall have workstation only.	To be dealt during design phase
439	Volume 4		EMPLOYE RS REQUIRE MENTS Particular Specificati ons CHAPTER 5 PAS Clause:5.1 1.1	The PAS system shall have the following GUI based system management functions as a minimum: (1) Loading and creating fixed and pre-formatted messages; (2) Downloading of system software and configuration parameters;	It is not foreseen that the system software can be downloaded. However, configuration can be downloaded. Please delete requirement for system software download. Otherwise please explain why it is necessary to download system software?	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
440	Volume 4		EMPLOYE RS REQUIRE MENTS: Particular Specificati ons CHAPTER 4 RADIO SYSTEM (With CDRS) Clause 4.6	The Radio system supplier shall have previously demonstrated working radio interoperability tests between their radio equipment and the equipment of another radio vendor. The radio system supplier must submit documentation that has demonstrated interoperability. This test certification must be issued by only Accredited Test Houses of TETRA. The Inter-Operability Profile (IOP) certificates have to be submitted for the Switching Infrastructure Equipment. Copy of IOP Certificates issued for compliance to each of the following TETRA summary features for the Switching Infrastructure Equipment to be necessarily submitted as part of the Bid i. Core System ii. Short Data Service (minimum SDSTL). iii. Individual Address Dynamic Group Number Assignment iv. Packet Data v. Air Interface Encryption (minimum Class 3) vi. Authentication. vii. End to End Encryption. viii. Inter System Interface (ISI) In case of non-compliance or non-availability for any of the above important summary features, the Bid shall be considered as technically non-compliant.	Interconnection between TETRA system with another TETRA system or with other wireless communication technologies may be done through ISI or Suitable gateways hence Clause 4.6/VIII i.e Inter System Interface (ISI) should be accepted as "It is required to interface and communication between TETRA network with other TETRA network (existing or to be planned in future) or TETRA System with UHF / GSM / CDMA services with inter System Interface (ISI) OR through network Gateways."	Please follow tender conditions
441	General				Kindly provide location of OCC for Kanpur & Agra Corridor.	Please refer tender drawing KNPDD01-DTD-DP1-ARC-PLN-91513 for Kanpur and Drawing no AGCC01-11718A-TDR-DPT-AR-PLN-11406 for Agra.
442	General		Future Stations		Please confirm if the future station need to be considered as a part of BoQ with respect the quantities of RCW, RAU, RCP and RF coverage design. Request you to revise the quantity in the BoQ accordingly.	Refer UPMRCL S.No 210

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
443	Volume 2		clause 4.30 page 42	The Contractor shall not publish or otherwise circulate alone or in conjunction with any other person, any articles, photographs or other materials relating to the Contract, the Site, the Works, the Project or any part thereof, nor impart to the Press, or any radio or television network any information relating thereto, nor allow any representative of the media access to the Site, Contractor's Works Areas, or off-Site place of manufacture, or storage except with the permission, in writing, of the Employer. The Contractor shall ensure that his sub-contractors of any tier shall be bound by a like obligation and shall, if so required by the Employer, enforce the same at his own expense. The provisions of this Sub-Clause shall not exempt the Contractor from complying with any statutory provision in regard to the taking and publication of photographs.	Please amend as follows: The Contractor may make public announcements with prior intimation to the customer.	Please follow tender conditions
444	Volume 2		clause 5.2 page 44	The Contractor warrants that the Contractor's Proposals meet the Employer's Requirements and is fit for the purpose thereof. Where there is any inadequacy, insufficiency, impracticality or unsuitability in or of the Employer's Requirements or any part thereof, the Contractor's Proposal shall take into account, address or rectify such inadequacy, insufficiency, impracticality or unsuitability at Contractor's own cost.	Please amend as follows: The Contractor warrants that the Contractor's Proposals meet the Employer's Requirements and is fit for the purpose as per the scope of work and proposal . Where there is any inadequacy, insufficiency, impracticality or unsuitability in or of the Employer's Requirements or any part thereof, the Contractor's Proposal shall take into account, address or rectify such inadequacy, insufficiency, impracticality or unsuitability at Contractor's own cost.	Please follow tender conditions
445	Volume 2		clause 5.3.2 page 48	payment of any such Cost-plus profit, which shall be included in the Contract Price.	Request to be reinstated	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
446	Volume 2		clause 8.5 page 67	Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% of the contract value per one-week delay with an upper limit of generally 10% of the contract value.	Please amend as follows: Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% of the contract value per one-week delay with an upper limit of generally 5% of the contract value.	Please follow tender conditions
447	Volume 2		clause 14.1.b page 95	loss of, or damage to, or destruction of any property (other than the Works) including consequential loss of use; and	Please delete this clause as consequential losses , damage to third party property will lead to uncapped liability to MSI hence request you to delete the same.	Please follow tender conditions
448	Volume 2		clause 14.6 page 98	Except as provided otherwise in these Conditions, neither party shall be liable to the other party for loss of use of any Works, loss of profit, loss of any Contract or any other indirect or consequential loss or damage which may be suffered by the other party in connection with the Contract. The total liability of the Contractor to the Employer under the Contract shall not exceed the Contract Price. Except that this Sub-Clause shall not limit the liability of the Contractor: (a) under Sub-Clauses 4.18, 4.19 and 14.1 (b) under any other provisions of the Contract which expressly impose a greater liability, (c) in cases of fraud, wilful misconduct or illegal or unlawful acts, or (d) in cases of acts or omissions of the Contractor which are contrary to the most elementary rules of diligence which a conscientious Contractor would have followed in similar circumstances.	Please amend as follows: Neither party shall be liable to the other party for loss of use of any Works, loss of profit, loss of any Contract or any other indirect or consequential loss or damage which may be suffered by the other party in connection with the Contract. The total liability of the Contractor to the Employer under the Contract shall not exceed the Contract Price. Except that this Sub-Clause shall not limit the liability of the Contractor: (a) under Sub-Clauses 4.18, 4.19 (c) in cases of fraud, wilful misconduct or illegal or unlawful acts, or	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
449	Volume 2		clause 16.1 page 101	Force Majeure	Please include : Vandalism as it is beyond the control of MSI and SLA should not be triggered during this period & include clause as follows: Notwithstanding anything to the contrary, in light of the COVID-19 pandemic, the effects of which cannot be foreseen, the parties agree that MSI shall be entitled to an equitable extension of time to deliver or perform its work and appropriate additional compensation to the extent MSI's delivery or performance, or the delivery or performance of its suppliers and/or subcontractors, is in any way delayed, hindered or otherwise affected by the COVID-19 pandemic.	Please follow tender conditions
450	Volume 2		clause 17.5 page 105	Two Stages for Dispute Resolution	Please delete conciliation in entirety	Please follow tender conditions
451	Volume 2		clause 17.9 page 109	Arbitration	Please amend as follows: Appointment of arbitrator :each party will appoint an arbitrator and such appointed arbitrators would appoint 3rd arbitrator	Please follow tender conditions
452	Volume 2		clause 11 page 39	Clause 11 Special Provisions	Please Amend as follows: Agrrement would be signed between MSI & UPMRCL, MSI would not be responsible for any delay not attributed to approval of funding agency. Agreement would be signed in 3 copies.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
453	Volume 2			Additional provision - Intellectual Property Rights	<p>Please include as follows:</p> <p>SI hereby grants to Authority a non-exclusive, non-sub licensable and perpetual license and right to use the deliverables, formats, material and the documentation solely for Authority's own internal business operations as set forth under the this Agreement. SI's software license under this Agreement does not include the right to (a) sell, lease, exchange, mortgage, pledge, license, sub-license, assign or in any other way convey, transfer or alienate MSI property in favour of any person (either for commercial consideration or not (including by way of transmission) and/or (b) reverse compile or in any other way arrive at or attempt to arrive at the source code of the SI property. All the software licenses and warranties pertaining to any software and/or hardware supplied under this agreement shall be as per SI's license terms and conditions and/or End User License Agreement.</p>	Please follow tender conditions
454	Volume 2			Additional provision - Remote services	<p>Please include as follows:</p> <p>Customer agrees that Honeywell may enhance system operations or provide some or all of the Services remotely using an Internet connection and may install additional software and related communication and/or diagnostic devices on Customer's applicable systems (the "Systems") to enable such connection, enhancement and/or remote Services. Notwithstanding any other provision of the Agreement, such software and devices will remain the property of Honeywell and shall be removed from the Systems and returned to Honeywell promptly at Honeywell's request. Customer agrees to fully cooperate with Honeywell's installation and commissioning of such software and devices on the Systems. To the extent required by Honeywell, Customer will enable and consents to Internet connectivity, with appropriate protection(s), between its applicable Systems and Honeywell's applicable computer server(s)/system(s) and/or the Honeywell cloud platform(s) throughout the term of the Agreement. Honeywell and its affiliates may, in any country in which they or their agents or suppliers conduct business, collect, transmit, receive, process, maintain and use for the purpose of providing the Services all data obtained in connection with the Agreement. Customer represents and warrants that Customer is the owner of the premises that are</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
455	Volume 1		NIT, 1.1.4.2 Minimum Eligibility Criteria, page 5	<p>NOTES:</p> <p>1. Explanation to Item at S.No. 01 (Specific Construction Experience): "Similar Work**": "Similar works" for this tender for the work of telecommunication work shall be Design, Manufacture, Supply, Installation, Testing, Commissioning and Interfacing of telecom sub system(s) in Metro/LRT/Mono Rail /Airport/Railway/large infrastructure projects. It is clarified that only telecom portion of the composite works shall be considered for evaluation purpose.</p>	<p>We understand below scope qualifies as similar works of telecom subsystem(s), please confirm: Integrated Command Control centre, Datacentre & Disaster Recovery including hardware & software & other works, Fibre Optic cable laying, Variable message sign boards/ Passenger information displays, Automatic vehicle Location system, GIS system, Public Address System. Emergency Call box, Access Control System, CCTV surveillance including Intelligent Transit Management systems & mobile van surveillance, Master clock system, Power supply systems (UPS), Radio tower, Web portal, mobile App, e-Governance, ERP, etc.</p>	Please follow tender conditions
456	Volume 1		NIT, 1.1.4.2 Minimum Eligibility Criteria, page 5	<p>NOTES:</p> <p>1. Explanation to Item at S.No. 01 (Specific Construction Experience): "Similar Work**": "Similar works" for this tender for the work of telecommunication work shall be Design, Manufacture, Supply, Installation, Testing, Commissioning and Interfacing of telecom sub system(s) in Metro/LRT/Mono Rail /Airport/Railway/large infrastructure projects. It is clarified that only telecom portion of the composite works shall be considered for evaluation purpose.</p>	<p>We understand smart city/safe city projects can be considered as Large Infrastructure projects, please confirm</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
457	Volume 1		NIT, 1.1.4.2 Minimum Eligibility Criteria, page 5, 6	<p>NOTES:</p> <p>2. The tenderer shall submit details of work executed by them, in the Performa of Annexure-1 for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted. The offers submitted without this documentary proof shall not be evaluated. In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by C.A. (Chartered Accountant), T.D.S (Tax Deducted at Source) certificates for all payments received and copy of final/ last bill paid by client shall be submitted.</p> <p>3. Value of successfully completed portion of any ongoing work up to 30.06.2020 will also be considered for qualification of work experience criteria.</p>	<p>We understand ongoing projects can be considered, please confirm.</p> <p>Request you to amend as follows:</p> <p>NOTES:</p> <p>2. The tenderer shall submit details of work executed by them, in the Performa of Annexure-1 for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work or in case of ongoing projects, CA certificate mentioning % CAPEX completed should be submitted. The offers submitted without this documentary proof shall not be evaluated. In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by C.A. (Chartered Accountant), T.D.S (Tax Deducted at Source) certificates for all payments received and copy of final/ last bill paid by client shall be submitted.</p> <p>3. Value of successfully completed portion of any ongoing work up to 30.06.2020 bid submission date will also be considered for qualification of work experience criteria.</p>	Please follow tender conditions
458	Volume 1		NIT,1.1.4.3, page 7	<p>1.1.4.3</p> <p><input checked="" type="checkbox"/> Value of existing commitments for on-going construction works during period of 36 months w.e.f. 01.07.2020 has to be submitted by the tenderer in Annexure- 3B(i) and 3B(ii). These data shall be certified by the Chartered Accountant with his stamp and signature.</p>	Request you to allow to mention only major ongoing project names as other details are to kept confidential.	Please follow tender conditions
459	Volume 1		NIT,1.1.4.3, page 7	<p>1.1.4.3</p> <p><input checked="" type="checkbox"/> Value of existing commitments for on-going construction works during period of 36 months w.e.f. 01.07.2020 has to be submitted by the tenderer in Annexure- 3B(i) and 3B(ii). These data shall be certified by the Chartered Accountant with his stamp and signature.</p>	Please provide format - Annexure- 3B(i) and 3B(ii)	Please refer page nos. 31 & 32 of NIT.
460						No Query by Tenderer.
461						No Query by Tenderer.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
462	Volume 1		Tender Guarantee, C18, page no.26	The Tenderer shall submit with his Tender a Tender Guarantee in a separately identified envelope for the sum mentioned in NIT in the form of: (a) an irrevocable bank guarantee in the form given in Annexure 4 to these Instruction to Tenderers, issued by a Scheduled Commercial bank (including scheduled Commercial Foreign Banks) in India	Please confirm it is to be submitted in INR or INR as well as foreign currency.	Please follow tender conditions
463	Volume 2		2.3 Permits, Licenses or Approvals,	It shall be Contractor's exclusive responsibility to get approvals, permits or license required for the Contract. However, the Employer shall (where he is in a position to do so) provide reasonable assistance to Contractor at the request and cost of the Contractor in getting Permits, License or Approvals required during the Contract.	Please provide clarity what Permits or licenses required to be taken for this project & all documents required	Please follow tender conditions
464	Volume 2		2.3 Permits, Licenses or Approvals,	The rendering of such assistance by the Employer shall not be interpreted as a pretext by the Contractor as condoning of any delay or non-performance of any of the Contractors obligations. The following-up of all such applications shall be the responsibility of the Contractor.	Please provide clarity what Permits or licenses required to be taken for this project & all documents required	Please follow tender conditions
465	Volume 2		4.2.1, GCC, Performance security Amount (4.2)	Within 30 days of receipt of the Letter of Acceptance, the successful Tenderer shall furnish Performance Security in the form of a bank guarantee from a scheduled Indian/Foreign bank in India acceptable to the Employer for an amount of ten per cent (10%) of the Contract value in types and proportions of currencies in which the Contract Price is payable. The approved form provided in the 'Instructions to Tenderers' documents or any other form approved by the Employer shall be used for Bank Guarantee. The Bank Guarantee shall be valid up to 6 months beyond the Defect Liability Period. In case the contract value exceeds beyond 25% of the original contract value, the contractor shall have to submit additional performance security.	Please confirm if Bidder can submit PBG in INR for contract value in foreign currency.	Please follow tender conditions
466	Volume 2		Labour Laws, 6.4 (f), page 53	The contractor shall ensure the registration of all his eligible workers (inclusive of sub contractors and petty contractors) with BOCW Board.	Request to include BOCW compliance by employer only and labour cess to paid to Govt directly by employer	Please follow tender conditions
467	Volume 2		Delay, 8.3 page 65	In case of delay on the part of the Contractor, the Contractor shall be liable to pay liquidated damages and any other compensation for the damages suffered by the Employer as per clause 8.5. This is without prejudice to the right of the Employer to rescind the Contract.	We understand LD should be levied on delayed & undelivered portion of contract and not on complete contract value. Also it should be basic contract value without Tax. Please confirm	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
468	Volume 2		Liquidated Damages for Delay, 8.5 page 67	Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally be 0.5% of the contract value per one-week delay with an upper limit of generally 10% of the contract value.	We understand LD should be levied on delayed & undelivered portion of contract and not on complete contract value. Also it should be basic contract value without Tax. Please confirm	Please follow tender conditions
469	Volume 2		SCC 10, GCC Clause 4.2	Unless otherwise stated in the Special Conditions of Contract the Contract Price, subject any to any adjustment thereto in accordance with the Contract shall be all inclusive (including all taxes, duties, royalties etc.) except: Goods and Services Tax (GST) paid under GST act where work is done in Uttar Pradesh and also Goods and Services tax (GST) paid under other State Govt GST act if work is done in that state.	As per this clause is GST is extra as applicable, but this cover only GST. We understand that any statutory variation for all clause to cover implementation of new taxes, duties, cess, changes in rates, exemptions, concessions, removal of exemptions, concessions etc. will be in customer scope Please confirm.	Refer Addendum-1
470	Volume 2		RISK AND RESPONSIBILITY, 14, 14.1. to 16	Please refer this clause.	Please confirm if we can have any deviation on accepting these clause in totality.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
471	Volume 2		SCC 10, GCC Clause 4.2, Page 5,6	The performance security in the form of Bank Guarantee shall be valid up to 28 days beyond the Defect Liability Period or completion of outstanding works whichever is later. Guarantees, Warranties& Undertakings The forms of Performance security, Parent Company Undertaking, Parent Company Guarantee, Contractors Warranty, Sub Contractor's warranty, Advance Payment Guarantee and Designers Warranty shall be in the formats given in the Schedules 2, 3, 4, 5, 6, 7 and 8 respectively to these Special Conditions of Contract. All these Guarantees and Undertakings should be submitted before signing of the contract agreement except Sub Contractor's Warranty, Advance Payment Bank Guarantee, Indemnity Bond and Safe Custody Bank Guarantee which will be required as per contract conditions. Even if not described or stated in the Employer's Requirements and the Contractor's Technical Proposals, the Contractor shall carry out and complete the design of the Works, including the selection of specifications for the kind and standard	Please confirm if we submit BG in INR for contract value in foreign currency or separate BG needs to be submitted	Please follow tender conditions
472	Volume 2		Sub Clause 11.1.1	(a) The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions.	Request you to amend as: GST is exclusive. Pleas einclude statutory variation clause included in T&C for changes in rates of taxes & duties and also introduction any new taxes , duties , Cess etc. and also removal of any exemption , concessions etc.	Refer Addendum-1

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
473	Volume 2		SCC - Clause 35, replaced Sub Clause 11.1.1 (i) of GCC (A)	(b) Goods and Services Tax (GST) is excluded in the contract price. The contractor shall maintain details of GST paid to 'Trade and Taxes' department and the same shall be reimbursed by UPMRC based on submission of:(i) Monthly Return of GST (GSTR-3B) of the contractor for the relevant period/periods along with detailed statement (GSTR 1 & GSTR 2) and copy of challans in regard to deposit of taxes for UPMRC project. (ii) Certificate of the Chartered Accountant in regard to turnover of the contractor relating to UPMRC project and GST paid/adjusted through Input Tax Credit.	We understand Customer will hold the GST till we submit the documents as per this clause as we pay GST as per rule to Govt and customer can see this on-line on Govt portal, please confirm Request to delete this clause.	Please follow tender conditions
474	Volume 2		SCC - Clause 35, replaced Sub Clause 11.1.1 (i) of GCC (A)	(c) Any taxes, duties, levies cess, which are required / may be required to be paid by the Employer in the fulfilment of the tender condition including on reverse charge basis should also be included by the tenderer in the Contract Price.	The taxes , duties which are applicable to employer has to be paid by him. It can not be reverse charges or it will be cost to us.	Please follow tender conditions
475	Volume 2		SCC - Clause 35, replaced Sub Clause 11.1.1 (i) of GCC (A)	(e) Tenderers shall submit an undertaking that neither they nor their sub-contractors / sub-vendors shall avail the deemed export benefit as the same shall be availed directly by UPMRC and retained.	There is no clarity on this in GCC/SCC. Need to have clarity.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
476	Volume 2		SCC - Clause 35, replaced Sub Clause 11.1.1 (i) of GCC (B), Record of Taxes Duties etc.	The Contractor shall maintain complete records in respect of payments made by them for taxes, duties, octroi, and other levies payable to various authorities (except Income Tax or Corporate Tax) and advise the Employer the summary of such payment every month in a format advised records are incomplete or otherwise, may separately determine the amount payable/ recoverable from the contractor in accordance with the conditions of the tender, which shall be final and binding. The Contractor shall also maintain records of the imported components supplied to local manufacturers and actual utilization of the same in the manufacture of complete equipment. The Contractor shall be fully responsible for any loss or misuse of these components in manufacture of equipment. by the Employer during execution of the contract. The detailed records shall however remain open for inspection by the Employer/ Engineer at any time and copies of the records shall be furnished as required by the Engineer. The amount payable/recoverable from the Contractor in accordance with the conditions of the tender will generally be calculated based on these records. However Employer at his sole discretion, if	We will Keep records to GST as currently only GST is applicable. Duties, octroi other levies are subsumed under GST and currently not applicable. If any new levy & tax is introduced we will have the records of the same, please confirm. Request you to include statutory variation clause .	Refer Addendum-1
477	Volume 2		SCC 44, GCC Clause 11.17	Withholding And Lien For Sums Claimed In addition to the entitlement of the employer as per Clause 11.17 of GCC, the employer shall have lien over all or any money that may become due and payable to the Contractor under the Contract, and / or over the deposit of Performance Security or other amount or amounts made under the Contract and which may become payable to the contractor	Request you to delete this clause	Please follow tender conditions
478	Volume 2		SCC 61, Additional clause BOCW (Building and Other Construction Works) Cess	Bidders need to judge the applicability of BOCW for the work. Any liabilities on account of BOCW at any stage shall be on part of bidder and the quoted price shall be inclusive of BOCW charges. If same is not applicable, the bidder needs to submit required undertaking/certificates. The UPMRC shall make the deduction accordingly and deposit the amount to the concerned authorities.	BOCW compliance has to done by customer only and pay labour to govt. Deduction of Cess & charges will be cost to us	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
479	Volume 2		SCC63, Additional Clause Retention Money	Retention money equal to 10 percent of the amount due to the Contractor from each on account payment will be retained, so as to maintain a reserve in the hands of the Employer equal to 5 percent of the Contract Price. The Retention money shall be held by the Employer without obligation to invest them or account for interest thereon or to place them in a designated account. No interest of whatsoever nature and type will be payable by the Employer in respect of Retention monies. Retention money shall become due to the Contractor on the date of issue of the Final Taking Over Certificate of works in respective sections/corridors.	Please confirm if PBG submitted to avoid upfront deductions towards Retention	Please follow tender conditions
480	Volume 2		General		If 98.01 ie project import license is applicable, then we understand customer shall transfer that license in the of Bidder, ie allow & support Bidder to apply for it in the name of Bidder, Please confirm	Please follow tender conditions
481	Volume 2		GCC ,pg no 67	Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% of the contract value per one-week delay with an upper limit of generally 10% of the contract value.	Request you to amend as follows: Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% of the weekly contract value per one-week delay with an upper limit of generally 10% of the weekly contract value.	Please follow tender conditions
482	Volume 3		GS-01, pg no 106, 12.3.1	The Contractor shall provide supervisory maintenance staff who are experts in the first and third line fault-finding, maintenance and repair of the various systems supplied <u>under the Contract</u>	Please elaborate on Number of supervisory maintenance staff required along with qualifications and required man months during operations and maintenance period.	Please follow tender conditions
483	Volume 6		HSE KNPASG 01 (Page. No.106- Appendix-05)	Minimum manpower requirement of SHE organization based on contract value.	As per contract document bidder need to fulfill the requirement of SHE organization during execution of project. Please confirm the deployment of SHE organization based on the manpower requirement & not as per contract value.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
484	Volume 4		2.2.1	EPABX Network (4) Digital telephone sets	Request to amend the clause "IP Telphonesets" in place of digital phones. IP Phones will provide all the features available in digital phone and following are the additional benefits: 1.Standardise the cabling 2. Easy for end user portability 3. Wide area coverage of end user connectivity 5. Reduction in hardware 6. Easy maintenance 7. Other than OEM phones can be installed by using necessary license	Please follow tender conditions
485	Volume 4		4.1.1.11.3	The EPABX shall provide analogue and digital subscriber line cards to support analogue and digital telephone sets. (2) The digital subscriber line card shall support digital telephone sets and digital terminals for voice and data services. The digital subscriber line card shall provide, but not be limited to the following:	Request to ammend the clause as below: The EPABX shall provide analogue and IP subscriber line cards to support analogue and IP telephone sets. (2) The IP interface card shall support IP telephone sets for voice and data services.	Please follow tender conditions
486	Volume 4		4.1.1.13.2	Digital Feature Telephone	Request to amend the clause "IP Feature Telephone"	Please follow tender conditions
487	Volume 4		4.2.3	Direct Line Telephones: Direct Line Telephones shall be standard Telephones connected to Direct Line Console at OCC, DCCs and CERs through single push button selection. At each defined locations of Stations, OCC, CERs, Depots and RSSs, 1 Nos. of such telephone with 40 lines shall be provided. It shall be possible for the SCR to make normal and emergency direct line calls to the designated controllers in OCC & other locations. Different audio and visual indications shall be provided for incoming direct line calls on the Direct Line Telephones for normal and emergency calls.	Please confirm to propose the Direct Line Telephones as IP phones.	Please follow tender conditions
488	Volume 4		6.3.3.1.6 - Page No.36	"True Colour LED" display panel/board shall meet the following minimum specifications:		No Query by Tenderer.
489	Volume 4		(4)	Contrast 3000:1 or better	Generally Contrast Term will be used in LCD/LED Display Panels. Contrast ration in LED Display board will be infinity (Contrast ratio means ratio of the brightness colour (white) to that of the darkest colour (black)). In LED, the darkest colour brightness will be Zero. So we will get Infinity contrast in LED Display Board.	Please follow tender conditions
490	Volume 4		(5)	192 x 192 dots, single module pixel resolution	Please provide single module dimension	Please follow tender conditions
491	Volume 4		(16)	Each "True colour LED" display panel shall have an inbuilt 20 watts output loud speaker for colour clips with audio	This is 10 watts x 2 or single speaker with 20 watts	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
492	Volume 4		1.2.1	The Master Clock System shall be compliant with ITU-T G.811. It will serve as Primary Reference Clock (PRC) for all clock functions of the UPMRC. The Master Clock shall provide synchronised time signals received by radio communication from orbiting GPS satellites. The Master Clock shall derive Coordinated Universal Time (UTC) from received GPS satellite signals and shall convert this to local Indian Standard Time. The Telecom Contractor shall provide the Master Clock for Date & Time signal also so that it can act as NTP server for the Master Clock System of UPMRC network.	We understand that as per ITU-T G.811 standard, PRC E1 / 2.048 MHz output is required for frequency synchronization in addition to the time & date synchronization functions. Please confirm our understanding.	Refer UPMRCL S.No 89
493	Volume 4		1.2.2	Master Clock system to be provided under Telecom Contract shall consist of following major components: (1) GPS Master Clock Unit working in active-active Redundant mode at CERs levels.	We understand that the redundant GPS Master Clock Unit working in active-active mode consist of two Master clocks interlinked to each other to achieve full redundancy specially for the case when primary GPS antenna fails, the primary Master Clock acquires the GPS time- of-day from secondary GPS antenna through redundant link and vice versa. Please confirm our understanding.	Refer Addendum-1
494	Volume 4		2.1	Visual Time-of-day The MCS shall provide time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations. At stations and important locations, digital slave display clocks shall be provided for benefit of passengers and operational staff.	We understand that time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations are required. Please confirm if at stations platform and important locations like concourse area, Outdoor clock (Digital & Analogue) shall be provided for benefit of passengers and operational staff.	Please follow tender conditions
495	Volume 4		5.4	The Sub-Master Clock system shall provide appropriate clock output interfaces for master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	There seems to be some ambiguity in this clause, kindly review and please amend this clause. Suitable clause could be: The Master Clock system shall provide appropriate clock output interfaces for Sub-master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
496	Volume 4		5.7	Digital Slave Clocks to be built to Open Protocol (like AFNOR, VNTP V4 or latest one etc.) and to work on this Open Protocol only. In this reference following points must comply:	We understand that Digital Slave Clocks to be built to Open Protocol (like AFNOR, NTP V3/V4 or latest one etc.) and to work on this Open Protocol only including remote administration, configuration & maintenance of digital clocks through MMI software. <i>Please confirm our understanding.</i>	Refer UPMRCL Sr No 94
497	Volume 4			(4) Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 66 standard and those used in indoor environment (Rooms) with IP54 standard.	We understand that the digital outdoor clocks at head end and tail end of each platform shall be necessary for the use of the train driver as well as passengers, however such clocks quantity is neither specified in the specification nor in the BoQ, kindly indicate the same as well. Secondly, As per industry norms, the outdoor display clocks are installed & tested to survive the IP 65 ingress protection degree whereas IP 66 compliance are not sought. Kindly review and please amend this clause. Suitable clause could be: Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 65 ingress protection degree and those used in indoor environment (Rooms) with IP54 ingress protection degree as standard. Further, the quantity of outdoor slave clocks are neither specified in the specification nor in the BoQ, kindly indicate the same as well.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
498	Volume 4		6.2	<p>Technical System Performance</p> <p>The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal quartz oscillator. This oscillator ensures that the Master Clock accuracy is better than 1x10⁻¹² (Seconds per 24 Hours) in free running mode without the input of GPS signal.</p>	<p>We understand that as per ITU-T G.811 standard, accuracy of a PRC clock when synchronised with GPS should meet 1*10⁻¹¹ (Seconds per 24 Hours) whereas free running accuracy asked in specification is 1x10⁻¹² (seconds per 24 hours) is contradictory because in free running mode (after the holdover period of 24 hours or as applicable loss of synchronization, without the input of GPS signal) the accuracy of internal quartz oscillator will start degrading and it must be comparatively lower than the PRC accuracy.</p> <p>Moreover, overall Master clock system accuracy has been asked +/- 0.01 second per 24 hour, which can be achieved by any Masterclock having accuracy less than 1 x 10⁻⁹ (Seconds per 24 Hours) in free running mode without the input of GPS signal. Hence Please review, omit the accuracy specified here under this clause and please amend this clause.</p> <p>Suitable clause could be: The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal Rubidium atomic oscillator. This oscillator ensures that the</p>	Please follow tender conditions
499	Volume 4		6.3.1.6	The master clock system shall work from 48 V +/- 20% DC and 240 AC UPS with an internal battery backup of at least 4 hours for continuous display of date and time without interruption.	<p>We understand that the UPS power back up shall be made available at site by the respective sub contractor for continuous operation of Masterclock system during failure of the mains power supply.</p> <p>In addition to this internal battery backup of at least 4 hours shall be provided to keep running the internal RTC time in case power fails. Please confirm our understanding</p>	Please follow tender conditions
500	Volume 4		6.3.1.9	The sub-master and slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date and time without interruption.	<p>We understand that the UPS power back up shall be made available at site by the respective sub contractor for continuous operation of Masterclock system during failure of the mains power supply.</p> <p>In addition to this internal battery backup of at least 4 hours shall be provided to keep running the internal RTC time in case power fails. Please confirm our understanding</p>	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
501	Volume 4		Page No: 7, CHAPTER 3, TELEPHONE SYSTEM, 2.2.2 Direct Line Telephone Communica tion	2.2.2, (3) Appropriate subscriber telephone sets (Digital).	We request you to kindly accept both Digital phone and IP Phone as all the mentioned features can be achieved from IP Phone as well. IP Phone has more advanced features like color display, gigabit connectivity which comes with additional ethernet port to connect with PC. It may also be noted that Digital phone is a proprietary product whereas In IP Based VoiP Solution any standard sip supported IP Phones can be used which gives flexibility to the customer in future to remain independent of OEM for additional IP Phones requirement.	Please follow tender conditions
502	Volume 4		Page No:12, CHAPTER 3, TELEPHONE SYSTEM,4.1 .1.3 Minimum Requiremen ts of EPABX Telephone System are given in Table 5-1 below.	2. Wired Ports including the License therein station : 96 Depot: 512 7. MDF including protection devices No. of pairs station : 100 Depot: 256	Kindly ammend the mdf box requirement for dept from 256 to 512 as the wired port asked is 512 port.	Please follow tender conditions
503	Volume 4		Page No:12, CHAPTER 3, TELEPHONE SYSTEM,4.1 .1.3 Minimum Requiremen ts of EPABX Telephone System are given in Table 5-1 below.	4. Digital Phones Station: 02 Depot: 50	We request you to kindly accept both Digital phone and IP Phone as all the mentioned features can be achieved from IP Phone as well. IP Phone has more advanced features like color display, gigabit connectivity which comes with additional ethernet port to connect with PC. It may also be noted that Digital phone is a proprietary product whereas In IP Based VoiP Solution any standard sip supported IP Phones can be used which gives flexibility to the customer in future to remain independent of OEM for additional IP Phones requirement.	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
504	Volume 4		Page No:17, CHAPTER 3, TELEPHONE SYSTEM, 4.1.1.11 Line Interfaces	4.1.1.11. (2) Digital trunks ETHERNET	It should be am mended to " SIP Based IP Trunk "	Refer UPMRCL Sr No 46
505	Volume 4		Page No:18, CHAPTER 3, TELEPHONE SYSTEM, 4.1.1.11 Line Interfaces	4.1.1.11.3, (2) The digital subscriber line card shall support digital telephone sets and digital terminals for voice and data services.	Digital phone works on ISDN (2B+D) protocol which has speed of 128 Kbps. Data services at this speed in todays gigabit age is of no use .Hence data services features should be removed.	Please follow tender conditions
506	Volume 4		Page No:19, CHAPTER 3, TELEPHONE SYSTEM, 4.1.1.13.1 Basic Telephones	The digital feature telephone shall be equipped with, but not be limited to, the following facilities: (1) Handset; (2) 12 push-button keypads; (3) Adjustable volume control for speaker and ringer; (4) A minimum of 10 programmable function keys for assignment of features or additional extension circuits; (5) A minimum of 20 memories for speed dialling; (6) Hands-free operation through built-in speaker and microphone; (7) Powered by the EPABX switch; (8) Visual display of details for incoming and outgoing calls; (9) Display of call duration; (10) Dial by name, dictionary (11) Intercom facility; (12) System clock display; (13) On-hook dialling; (14) Programmable for multi-lines operations with more than one extension number assigned; and (15) Support "boss-secretary" combination with intercommunication between the two parties via the depression of a single button (16) Lamp for message waiting; and (17) The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling. (18) The digital feature telephone shall be programmable for multi-lines with more than one extension number assigned.	The digital/IP Phone feature telephone shall be equipped with, but not be limited to, the following facilities: (1) Handset; (2) 12 push-button keypads; (3) Adjustable volume control for speaker and ringer; (4) A minimum of 10 programmable function keys for assignment of features or additional extension circuits; (5) A minimum of 20 memories for speed dialling (Dual color LED based Key for busy/Idle/Ringing status); (6) Hands-free operation through built-in speaker and microphone; (7) Powered by the L2/L3 POE switch; (8) Visual color display of details for incoming and outgoing calls; (9) Display of call duration; (10) Dial by name, dictionary using LDAP features (11) Intercom facility; (12) System clock display; (13) On-hook dialling; (14) It should have minimum 6 VoIP Accounts (15) Support "boss-secretary" combination with intercommunication between the two parties via the depression of a single button (16) Lamp for message waiting; and Voicemail (17) The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling. (18) The digital/ SIP Phone feature telephone shall be programmable for multi-lines with more than one extension	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
507	Volume 4		Page No:22, CHAPTER 3, TELEPHONE SYSTEM,4.2 .2 Direct Line Console	4.2.2.2 The Direct Line Console shall be configured as a desktop model/flush mounted in a desk ergonomically matching with the control room furniture.	PC Based Operator Console will also be allowed which will give all features as asked in the tender along with IP Phones with 90 DSS keys/Lines	Please follow tender conditions
508	Volume 4		Page No:22, CHAPTER 3, TELEPHONE SYSTEM,4.2 .2 Direct Line Console	4.2.2.4 The Direct Line Console shall provide selection facilities, in the form of push button and/or soft keys with visual display unit for user to perform, but not be limited to, the following functions as a minimum:	PC based Direct Line Console will fulfill all technical parameters, specification so supply of PC Direct Line Console should be allowed	Please follow tender conditions
509	Volume 4		Page No:23, CHAPTER 3, TELEPHONE SYSTEM,4.2 .2.5 The Direct Line Console shall be equipped with, but not be limited to, the following Facilities:	(6) Powered by the Central communications processor;	CPU is basically a server that control all the communication and powering up can be done by switches which will be installed at all location and ip phone should be asked as it have multiple features which is more robust and more reliable	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
510	Volume 4		Page No:28, CHAPTER 3, TELEPHONE SYSTEM,4.4 .2 Fault and Alarm Managemen t	(iv) It should give an extremely high level of remote support for SIP IP Phones. With Phone Remote Control, it should be able to view IP phone button presses, control key end points and execute test calls to help identify the cause of an issue quickly and assist the end user remotely. Additionally, it should support the Bulk Call feature helps you to save time by generating simultaneous calls between IP Phones in multiple locations to help in diagnosing the issue in minutes and hours instead of days and weeks	The clause specifies IP Phone feature but IP Phones locations are not mentioned anywhere in the tender. Please specify the total quantity of IP Phone required at various station/Depots/OCC/BCC/HQ along with locations of the IP Phone	Please follow tender conditions
511	Volume 4		Page No:28, CHAPTER 3, TELEPHONE SYSTEM,4.4 .3 Voice Mail System (VMS)	4.4.3.1 General, (xii) The IP PBX and IP phones should be of same make.	Kindly clarify the quantity and specification of IP phone as the same not mentioned anywhere in the tender	Please follow tender conditions
512	Volume 4		Page No:33, CHAPTER 3, TELEPHONE SYSTEM, 6.2 Technical System Performance	6.2.1 EPABX Switch Network, 6.2.1.2 Redundancy for the important interfaces/modules such as power supply, processor, control card, etc. shall be provided. The EPABX network shall be designed such that there is redundancy and diversity in terms of the communication links for call routing and call establishment.	It may be noted that the server is main controller of the complete telephony system so kindly mentioned detail server specification. Sample server specification are mentioned below taken from one of the metro tender. This will maintain the deliverable of the server among the bidder with correct specification MINIMUM SERVER SPECIFICATION 1 Processor Intel Xeon processor-E5-4000 series or latest version, 2.1 GHz Cache - 20 MB or better 2 RAM Minimum 4x16GB DDR4 DIMMs ECC 3 Hard disks (hot swappable minimum 2 x 500 GB RAID 1 or 5) 4 Drive Controller Integrated RAID Controller, 1GB Cache or better 5 Power Supply Dual, Hot-plug, Redundant Power Supply (1+1) 6 LAN Port Redundant LAN Port / NIC Card 7 Connectivity 04 USBports (3.0 connectivity) 8 Accessories Keyboard (numeric) and optical mouse	Please refer Appendix-F for the Specification of Servers, Workstation, Notebook, Cameras of ACS, etc.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
513	Volume 4		Page No:39, CHAPTER 3, TELEPHONE SYSTEM, 6.4 Telephone Network Management System (EPABX and Direct Line System)	6.4.1 General, a. For testing and simulation of RTP and RTCP packets etc, manual creation and terminate RTP sessions, independent of call-signalling protocols such as SIP, H323, and MGCP.	There are no endpoint user terminals available in open market with H323 and MGCP protocols . Hence this protocol should be removed from tender specifications. However H323 protocol is sometimes being used for trunk side connectivity. Kindly amend the tender specification accordingly.	Refer UPMRCL S. No. 54
514	Volume 4		5.7	PIDS Display Boards/Panels ("True Colour LED" type)	Must defined where they need LED Borad nad LED Display Panel	Board and Panel are same
515	Volume 4		5.7.1.1	PIDS display boards shall be provided at the following locations as a minimum:	Must be clearly defined where they need LED Board and where they need LED Display Panel for PIDS	Board and Panel are same
516	Volume 4			(1) Concourses at all stations;		No Query by Tenderer.
517	Volume 4			(2) Platforms at all stations;		No Query by Tenderer.
518	Volume 4		5.7.5.5	Two numbers of single sided display boards ("True Colour LED" type) shall be provided for concourse at each elevated & underground station to display train related information. The size of the "True Colour LED" display panel shall be 1500 mm x 500 mm (minimum). The length of the display board shall be limited to a maximum of 2.5 Meters.	Size of the LED Display panel must be defined as Diagonal Size such as 42" 55" /65"/	Please follow tender conditions
519	Volume 4		5.7.6.3	One numbers of Double-sided display boards ("True Colour LED" Type) shall be provided at each platform of underground station to display train related information. The length and width of these LED type display board shall be minimum 1.5 metre and 0.5 metre respectively.	Size of the LED Display panel must be defined as Diagonal Size such as 42" 55" /65"/	Please follow tender conditions
520	Volume 4		5.9.1.3	Each management Workstation shall be equipped with a 30" inches colour LED display with at least "1280 x 1024" pixels resolution to provide graphical presentation and display of the PAS/PIDS	LED Display size must be 32" Or above with Ultra HD 3840X2160 resolution which is the latest solution	Please follow tender conditions
521	Volume 4		6.3.1.12	Storage capacity shall be provided to store the local and central message logs for all the instantaneous messages manually triggered by the PIDS operators.	Stragge Capacity in terms GB must be defined along with CPU specification for each PIDS	Please follow tender conditions
522	Volume 4		6.3.3.1.6	"True Colour LED" display panel/board shall meet the following minimum specifications:		No Query by Tenderer.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
523	Volume 4			(1) Viewable picture size : minimum 1500 mm(W) x 500 mm (H)	Size of the LED Display panel must be defined as Diagonal Size such as 42" / 55" /65".....as per current size given it is coming for 65"LED PIDS Panel which is too big we must consider minimum 55" only which is the Global standard at all the platform beat elevated / UG or concourse station etc.	Please follow tender conditions
524	Volume 4			(2) Viewing Angle : minimum 140 degree horizontal & 120 degree vertical	Viewing Angle should be 160 degree either horizontal or Vertical that is the least must be stated	Please follow tender conditions
525	Volume 4			(5) Module Resolution : 192 x 192 dots, Single module pixel resolution	Must be minimum Full HD 1920X1080p	Please follow tender conditions
526	Volume 4			(6) LED per physical pixel : 3 in 1 SMD LED	Must be 3 Color LCD LED for running Text / Picturers/Graphic/Data etc.	Please follow tender conditions
527	Volume 4			(11) Pixel/Pitch : 2.6 mm or lower	must be stated even lower 0.63 mm or lower for minimum full HD resolution	Please follow tender conditions
528	Volume 4			(19) Video input for playing video streams / audio streams shall be plugged into the PIDS equipment in the TER or CER. Hence video/audio input port shall be available in the PIDS equipment for feeding standard video/audio format.	Must be clearly defined which all port needed and how many such as HDMI /DVI/DP etc.	Please follow tender conditions
529	Volume 4		5.12.3.1 (7)	Failure of server, amplifier, preamplifier, redundancy equipment, digital equalizer & other critical part of PAS/PIDS System;	Have you Required Redundancy on Microphone ?	Please follow tender conditions
530	Volume 4		7.7	Interfaces with Radio System and Telephone System	Kindly confirm telephone line Protocol Analog/IP Paging ?	Please follow tender conditions
531	Volume 4		6.3.7	Power Amplifier	what type amplifier requirement is there Analag or Digital - Class-D?	Please refer Appendix-J (Minimum BoQ) for Type of Amplifier.
532	Volume 4		4.3.2 (10)	Failure of Platform Announcement Equipment;	platform announcement Equipment Please Confirm what type of console / Mike You required Wireless or wall mount console with IP 65 Rated Box	To be dealt during design phase
533	Volume 4		6.3.11.15	Minimum 40W Metal Column Speaker IP65 Rated EN54/UL Approved or better for Platforms waiting rooms, lobbies, ticketing/enquiry areas & Staircases.	if Column Speaker is going to use in Platforms waiting rooms, lobbies, ticketing/enquiry areas & Staircases then can we able to USE IP 55 RATED indoor - outdoor EN54 approved Coolum speaker Instead of IP65 Rated	Please follow tender conditions
534	Volume 4		1.1.11	The Access Control facilities shall jointly detect any breach of security or unauthorized intrusion and raise an audio and visual alarm.	The Audio Visual alarm is built in the reader. Please confirm if any other Audio Visual alarm to be provided	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
535	Volume 4		1.2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Normally the AFC card are critical, which has the sectors and payments which are secured. The Security and Encryptions are as per the guidelines of RBI and NPCI, These are Qspark cards. For the Access Control application only the CSN no. is to be read without reading the sectors which are secured and encrypted. Therefore it is recommended that AFC vendor to provide these cards and access control can integrate these cards for ACS application. Or there should be separate cards for both.	Please follow tender conditions
536	Volume 4		1.2.3	It shall be able to display all the operational status and send the alarm signals to the ACS server and HMI. It shall also be able to detect sensor failure and the damage to the connecting cables.	The system detects the sensor failure not the cable damage. It is recommended to remove the cable damage detection.	Please follow tender conditions
537	Volume 4		2.2. Scope.. c	Central and Redundant ACS server at CERs. System functionality shall be achieved with central server in redundant mode.	Our understanding is this is 1 + 1 Configuration. 1 Primary Server & 1 Secondary/failover server.	Please follow tender conditions
538	Volume 4		2.2. Scope.. f	Switches, egress equipment and power supply equipment. All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Hence please change this to tamper resistant.	Please follow tender conditions
539	Volume 4		2.2. Scope.. K	The writing system for the contactless smart cards	Please clarify the requirement on writing system for the contactless cards. Since ACS requirement is not very critical for writing into the sectors of the cards. CSN reading is OK and works for the ACS.	Please follow tender conditions
540	Volume 4		4.4	It shall be able to perform its function standalone in case of communication failure with the ACS central server in the CERs. The system shall be able to detect sensor failure and damage of connecting cables.	The system detects the sensor failure not the cable damage. It is recommended to remove the cable damage detection.	Please follow tender conditions
541	Volume 4		4.8	Smart Cards used for the Access control System shall be compatible with the Automatic Fare Collection system such that the card can serve the dual purpose of Access control as well as Employee Pass for travel on the metro System.	Please provide the details of the AFC readers.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
542	Volume 4		5.1.1	Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	The RFQ calls for central architecture and the Station HMI works as client to the central server. The Station HMI will be operation till the communication with central server is on, However the access control system will work in stand alone mode even if the communication with the central fails. All the events and alarms will be stored in the controller and uploaded to central server once the communication is restored. In case the RFQ clause is to be met then there is need of local server at every station, In which case it will be distributed architecture. Please confirm. We recommend to go with central architecture, the access control system works in stand alone operation even if there is no communication with central.	Please follow tender conditions
543	Volume 4		5.2.1	Access Point Controllers shall be IP based and installed at TER/CER or entry side of access point (door) either individually for each door or for a group of doors (as per detailed design of the Contractor, in such a way so as to meet all prescribed functional & performance requirements	The access controller installed on the entry side of the door is security threat. It is recommended that the access controller to be installed insider/secured area.	Please follow tender conditions
544	Volume 4		5.2.2	Access Point Controllers:	You have asked the IT components as IPv6 Compliant, It is recommended that the controllers are also compliant to IPv6. It should be SNMP compliant for integration with SCADA & other 3rd party system directly. The communication between the reader and controller should be secured and it should be on OSDP (Open Supervised Device Protocol), The encryption recommended is 256 bit. In future in case of Biometric reader the template should be stored in the controller which is in secured area, this is to enhance the security	Please follow tender conditions
545	Volume 4		5.2.2 d	Temperature range shall be 0°C to 45°C for indoor installation, and same shall be 0 to 50°C outdoor installation.	The controller with PS and Battery is put inside the enclosure. Where in the temp. is normally higher than ambient temp. Therefore it is recommended that the controller operating temperature should be considered 0-70 Deg. C	Refer Addendum-1
546	Volume 4		5.3 b	All access point facilities shall be vandal resistant and tamper proof.	These equipments are vandal resistant and tamper resistant. Hence please change this to tamper resistant.	Please follow tender conditions
547	Volume 4		5.3 d	The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	The access card readers are just antennas for reading the card credentials, does not have any memory. The data is stored in the controller which has the memory. In case of fal back mode the controller stores the data and all the event , alarms.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
548	Volume 4		5.3.2 C	The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.	The Electromechanical locks are powered locks. The fail close mode can not be achieved in case of power failure.	Please follow tender conditions
549	Volume 4		5.9 h	A local alarm sounder shall be activated at the operator's HMI and locally at the door, gate to alert security personnel to the location of the forced entry. Reset of the forced entry shall be security protected.	The Audio Visual alarm is built in the reader and a local alarm sounder can be provided at the HMI. Please confirm if any other Audio Visual alarm to be provided.	Please follow tender conditions
550	Volume 4		6	Relevant Codes and Standards	It is recommended the ACS Software should be VAPT certified and as per ISO27001, so that it is not prone to be hacking/cyber attacks.	Please follow tender conditions
551	Volume 4		7	System Expansion and Spare Capacity	It is recommended the Software OEM should provide the Source Code for the future of future use and maintenance by the UPMRC.	Please follow tender conditions
552	Volume 4		8	Summary of Interfaces	It is recommended the Software should be independent of the hardware and it should be open platform to integrate with multiple makes of hardwares and integration with any 3rd party systems.	Please follow tender conditions
553	Volume 4			Additional Items Required	Please clarify if there is any intrusion detection to be considered for the depot perimeters and tunnel portal / tunnel ramp areas.	Please follow tender conditions
554	Volume 4		1.4.2.2 Ethernet Switches (Access Switches)	The switches to be deployed in the outdoor environment must be gigabit Industrial Grade switches with seamless capability to integrate the FOTS backbone on open standards and the Centralized SDN (Software Defined Networking) provisioning controller of the WAN <u>Nodes of the Core switches at CERs</u>	Please consider for Industrial Grade switches with SDN Hardware ready also	Please follow tender conditions
555	Volume 4		1.10.1.18	Shall provide flexible reporting capabilities including pre-defined and custom reports with scheduled and flexible delivery options. NMS should support Software Defined Network (SDN) Management including Open Flow devices.	Request to consider Open Flow Device integration with NMS via SNMP.	Refer UPMRCL S.No 289
556	Volume 4		1.19.1(viii)	All the Network Switching Devices/NMS should support Open flow Protocol for SDN technology.	Please also consider Netconf in option with Open Flow, as now because of more API integration device configuration can be easily controlled by Netconf instead of Open Flow. Also, all SDN servers support Netconf protocol.	Refer UPMRCL S.No 290

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
557	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 12 , clause no 5.1.3	PAS announcement shall be capable of being originated from designated hand portable radios also to a set of pre-defined PAS zones at each station. It should be possible to make simultaneously Radio to PAS announcement at minimum 30 different stations. This needs to be coordinated and demonstrated with Radio/Telephone sub systems.	PAS interface with Radio base station at OCC level or at each station level expected. Which are the controls available at radio system side for Zone selection.	Please follow tender conditions
558	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 12, clause no 5.1.8	There shall be facility to enable and disable all types of announcements/music including ATS announcements with configurable cross-connects (through Software Control) at individual station and a group of stations.	Announcement enable/ disable facility expected from OCC or from any location.	Please follow tender conditions
559	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 15, clause no 5.4.2.2	Multi-drop data links (TCP/IP) of adequate bandwidth through FOTS shall be provided to each station, PAS allowing the OCC & CERs to broadcast messages to the following as a minimum: (1) One station; (2) A group of stations; (3) All stations; (4) In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console; (5) One Train and a group of trains via Radio/FOTS interface	1. Is train radio system gets interface with PAS system? 2. Should we include PAS components on trains also.	Please follow tender conditions
560	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 15, clause no 5.4.2.4	Each hard-wired PAS control panel shall be provided along with zone selection & extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	How many zones expected on hard-wired PAS control panel.	To be dealt during design phase
561	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 16, Clause no 5.4.3.6	The time countdown shall be frozen when a train stops proceeding to the next stopping station, due to circumstance detectable by the TC&S System and related to the PAS.	Is time countdown expected from PAS system? Train at arrival track, train at departure track and train at berth/ station, are this signals available from TC&S system? For time countdown such signals are expected.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
562	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 17, clause no 5.4.4.2	Telecom Contractor has to interface with Fire Detection and Alarm System to automatically broadcast the messages in particular zone/all zones of a concerned location.	Interfacing details required. Interfacing through TCP/ IP or physical potential free contact available from fire detection & alarm system?	To be dealt during design phase
563	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 17, clause no 5.4.5.2	A PAS Control panel shall also be provided in the Progress Planning and Investigation Office (PPIO) in the depot for selection of PAS functions.	MIC & Pre-recorded announcement expected from Progress & Planning office?	Please follow tender conditions
564	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 18, clause no 5.6.5	Live audio broadcast relating to emergency, fire and evacuation messages from OCC/CER shall be recorded in the Centralized digital recording system at CERs. Similar broadcasts made from SCR/PSB shall be recorded at the TERs in the PAS station server via MMI (at SCR). The CDRS at CERs shall copy these recordings from station servers at configurable intervals. It shall however be possible to retrieve any message so recorded and save same on an external storage device like a memory stick for future reference.	Multiple recording system required for various locations?	Please refer Chapter-4 of PS for Centralised Digital Recording System.
565	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 18, clause no 5.6.6	The output of the PAS Amplifier should be tapped and recorded automatically locally at local level server and remotely at CERs server, so that record of actual announcement made can be analysed at a later date. The record to be kept for 7 days.	How many zones expected per stations.	To be dealt during design phase
566	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 20, clause no 5.10.1.1.9	Each MMI shall have a set of speakers (at least two nos. of reputed make) for monitoring active messages being broadcast to selected PAS zones and for play-back of the instantly recorded messages	Is there any specific wattage expected for MMI speaker or standard computer speakers will be OK?	To be dealt during design phase

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
567	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 21, clause no 5.10.1.1.18	The MMI at OCC, SCRs & CERs should have capability to Import the Metro Rail 2D/3D Map for making easy Graphic Interface.	UPMRC going to provide the 2D/ 3D drawings or we have to create?	Telecom Contractor shall interface with Detailed Design Consultancy (DDC) for the same.
568	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 28 clause no 6.3.1.2	The PAS control equipment shall be provided with suitable redundant modules/cards to prevent single point of failure that affects overall system operation at a particular location including critical components so as to achieve the RAMS requirements laid down.	Redundant modules expected at controller level only or for Amplifier, MIC, power supply side also expected.	To be dealt during design phase
569	Volume 4		PUBLIC ADDRESS SYSTEM (PAS), Page no. 28, clause no 6.3.1.6	The PAS control equipment shall be equipped with a monitoring speaker to test and verify audio output functions of each amplifier in the PAS equipment racks at all stations and the Depot. This facility can also be provided at SCRs and TERS.	Per rack one monitoring speaker expected or one monitoring speaker per amplifier. Are the monitoring speakers considered in BOQ or its extra.	To be dealt during design phase
570	Volume 4		PUBLIC ADDRESS SYSTEM (PAS)		Noise sensor, Amplifier BOQ not provided.	Please refer Appendix-J (Minimum BoQ)
571	Volume 4		PASSENGER INFORMATION DISPLAY SYSTEM (PIDS). Page no. 17, clause no 5.7.2.3	The number of characters to be displayed per row for LED display boards within the display area without scrolling for the platform/concourse display boards shall be the following as a minimum (For the Destination field): (1) 25 Hindi characters for the biggest font sizes; (2) 25 English characters for the biggest font sizes.	If we consider 2/3 height for font width and with 2.6mm pitch & 25 characters, display length will be 2.7 metre. This is exceeding the maximum display length. We request to reduce the number of characters.	Please follow tender conditions
572	Volume 4		PASSENGER INFORMATION DISPLAY SYSTEM (PIDS). Page no. 19, clause no 5.7.6.5	Platform display boards shall show the estimated time of arrival of the next train by a countdown counter.	Time count down expected at Display level or AVLS will update count down value.	Refer UPMRC S.No 77

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
573	Volume 4		PASSENGER INFORMATION DISPLAY SYSTEM (PIDS). Page no. 36, clause no 6.3.3.1.6	(5) Module Resolution : 192 x 192 dots, Single module pixel resolution	Can we supply other pixel resolution modules as per lower pitch?	Refer UPMRCL Sr. No. 86
574	Volume 4		PASSENGER INFORMATION DISPLAY SYSTEM (PIDS). Page no. 36, clause no 6.3.3.1.6	(1) Viewable picture size : minimum 1500 mm(W) x 500 mm (H)	With 2.6 mm pitch 500 height is possible. If we propose lower pitch than picture height will be lesser than 500mm. Will it be acceptable?	Refer UPMRCL Sr. No. 87
575	Volume 4		PASSENGER INFORMATION DISPLAY SYSTEM (PIDS). Page no. 36, clause no 6.3.3.1.6	(16) Each "True Colour LED" display panel shall have an inbuilt 20 watts output loudspeaker for colour video clips with audio.	All display location audio will not be synchronized. Chances of time legging in display to display for audio.	Please follow tender conditions
576	Volume 4		4.1.11.1 page No. 9	All the loudspeakers shall be able to withstand operation at its rated noise power for 100 hours in accordance with IEC 60268-5 Power Handling Capacity standards.	the products considered for supply shall be as per EN 54 compliant and BS 5859 compliant however the ceiling speaker is EN 54-24 compliant tested for indoor application as well.	Please follow tender conditions
577	Volume 4		5.10.1.3 page no. 21		Backup MMI required for OCC & BCC or not.	Please follow tender conditions
578	Volume 4		6.3.7.5	The amplifiers shall have the following minimum performance: Input sensitivity : 775m V into 10K ohms for rated power output	Not mentioned in the data sheet and is not required in our case since the input signal of the amplifier is getting monitored and controlled by the DSP instead of getting directly fed by the microphone	Please follow tender conditions
579	Volume 4		6.3.11.11	All PA speakers shall have a uniform bandwidth from 340 Hz to 18 kHz and shall be equipped with selectable multi power tapings:	However in your specification 6.3.11.7 the response is 340 Hz to 15 kHz to which we are compliant similar response is also mentioned across the specification.	Please follow tender conditions
580	Volume 4		6.3.11.12	Minimum 10W Ceiling speakers EN54/UL approved for concourse & other false Ceiling areas or better, discrete tapings shall be provided.	We have 6W ceiling speaker with that we are capable of matching all the performance criterion of STIPA and SPL thus request you to approve the 6W speaker as well.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
581	Volume 4		6.3.11.15	Minimum 40W Metal Column Speaker IP65 Rated EN54/UL Approved or better for Platforms waiting rooms, lobbies, ticketing/enquiry areas & Staircases.	We are providing Aluminum body EN 54 compliant system and IP66 rating which is also a form of metal.	Equivalent or Better specification shall be acceptable.
582	Volume 4		6.2.8 2 MP (Full High Definition) IP Fixed Box Camera (Day/Night) : Page no 26	Sensitivity at 2 MP (@ F1.8, 30 IRE or better)	Please allow for Sensitivity at 2 MP (@ F1.9, 30 IRE or better) as per industry standrd and availability with major OEM and maximum participation.	Equivalent or Better specification shall be acceptable.
583	Volume 4		6.2.8 2 MP (Full High Definition) IP Fixed Box Camera (Day/Night) : Page no 26	Pick-up device 1/2.8" or bigger CCD/CMOS progressive scan image sensor, P-iRIS Sensor.	Please allow for Pick-up device 1/2.8" or bigger CCD/CMOS progressive scan image sensor, P-iRIS/Auto IRIS/DC Sensor.	To be dealt during design phase
584	Volume 4		6.2.8 2 MP (Full High Definition) IP Fixed Box Camera (Day/Night) : Page no 26	SD Card Support Built in SD Card slot with support upto 2 TB with Class 10 Speed	2TB SD card is not available in Market .. as per industry standrd and availability with major OEM and maximum participation. please allow for 128 GB SD card	Refer UPMRCL S.No 117
585	Volume 4		6.2.9 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night) Page no 27	Sensitivity at 2 MP @ F1.5, 30 IRE or better	Please Sensitivity at 2 MP @ F1.6, 30 IRE or better as per industry standrd and availability with major OEM and maximum participation.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
586	Volume 4		6.2.9 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night) Page no 27	Enclosure IP66, NEMA Type 4X or better	Please allow for Enclosure IP67/NEMA Type 4X or better as per industry standrd and availability with major OEM and maximum participation	Equivalent or Better specification shall be acceptable.
587	Volume 4		6.2.9 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night) Page no 27	SD Card Support Built in SD Card slot with support upto 2 TB with Class 10 Speed	2TB SD card is not available in Market .. as per industry standrd and availability with major OEM and maximum participation. please allow for 128 GB SD card	Refer UPMRCL S.No 119
588	Volume 4		6.2.9 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night) Page no 27	Interoperability Conformance The camera shall be ONVIF (Open Network Video Interface forum) Standards with Profile S, G & T.	Please allow for ONVIF Standard S and G Only for maximum participation	Please follow tender conditions
589	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	Housing Arrangement IP 66, NEMA 4x or better.	Please allow for Enclosure IP67/NEMA Type 4X or better as per industry standrd and availability with major OEM and maximum participation	Equivalent or Better specification shall be acceptable.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
590	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	SD Card Support Built in SD Card slot with support upto 2 TB with Class 10 Speed	2TB SD card is not available in Market .. as per industry standrd and availability with major OEM and maximum participation. please allow for 128 GB SD card	Please follow tender conditions
591	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	Interoperability Conformance The camera shall be ONVIF (Open Network Video Interface forum) Standards with Profile S, G & T.	Please allow for ONVIF Standard S and G Only for maximum participation	Please follow tender conditions
592	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The system shall automatically switch to unicast, if the client fails	Please change to Syste must support both unicast and Multicast Stream's	Reference mentioned does not match with query.
593	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The system shall include a universal driver that shall support any generic network camera. The driver must be able to handle standard video streaming formats including MPEG4 and H.264, H.265 or latest.	Please change to "The system shall include a universal driver/ONVIF Profile S that shall support any ONVIF network camera's. The driver must be able to handle standard video streaming formats including MPEG4 and H.264, H.265 or latest."	Reference mentioned does not match with query.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
594	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The system shall support an unlimited number of recording servers.	Please change to The system shall support an Sufficient number of recording servers.	Reference mentioned does not match with query.
595	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	Please remove this clause	Reference mentioned does not match with query.
596	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	Map function shall allow the real-time status monitoring for VRM server/storage devices	Please change to " Map function shall allow the real-time status monitoring for CCTV Cameras devices "	Reference mentioned does not match with query.
597	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	It shall be possible to access and view cameras and views on a Smartphone or a tablet (a mobile device).	Please remove	Reference mentioned does not match with query.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
598	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	Any attempt to delete or edit of video clips shall generate the alarm in the system which can be sent to the administrator	Please remove	Reference mentioned does not match with query.
599	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The video management system shall offer centralized management of all devices, servers and users for centralized monitoring, reporting, and alarm management, software configuration uploads and downloads to client stations, firmware and software upgrades. These functionalities shall be implemented on two workstations in each CER.	Please change to "The video management system shall offer centralized management of all devices, servers and users for centralized monitoring, reporting, and alarm management, firmware and software upgrades. These functionalities shall be implemented on two workstations in each CER.	Reference mentioned does not match with query.
600	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The map function shall be able to use standard graphical file formats.	Please remove	Reference mentioned does not match with query.
601	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	It shall be possible to assign sounds to alarm priorities.	Please remove	Reference mentioned does not match with query.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
602	Volume 4		6.2.10 High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)	The operator shall be able to drag and drop a camera from a map onto a video tile for live viewing in the same browser without using a new browser.	Please change to "The operator shall be able to drag and drop a camera from a map onto a video tile for live viewing "	Reference mentioned does not match with query.
603	Volume 4		PARTICULAR SPECIFICATIONS: CHAPTER-08 (CCTV) Page no 11, Clause no 4.2.3	4.2.3 The Contractor shall ensure that the CCTV system equipment supplied under the Contract shall comply with the reliability figures herein:	Please change MTBF as below for CCTV Product's	
604	Volume 4			CCTV System Equipment MTBF (Power on) Hours/POH) per unit	CCTV System Equipment MTBF (Power on) Hours/POH) per unit	
605	Volume 4			Station and central equipment > 250,000	Station and central equipment > 100,000	Refer UPMRCL S.No 106
606	Volume 4			IP Fixed Cameras > 200,000	IP Fixed Cameras > 100,000	Refer UPMRCL S.No 106
607	Volume 4			PTZ cameras > 200,000	PTZ cameras > 100,000	Refer UPMRCL S.No 106
608	Volume 4			Digital CCTV Keyboard > 200,000	Digital CCTV Keyboard > 100,000	Refer UPMRCL S.No 106

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
609	Volume 4		PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page no 8 2.2 Scope of Services & Supply (g)	(g) Card reader, door sensor and Buzzer will have IP rating of IP54 for indoor installation and having IP rating of IP 65 for installation at outdoor /exposed to rain & sunlight.	Please remove IP65 for reader's	Please follow tender conditions
610	Volume 4		PARTICULAR SPECIFICATIONS: CHAPTER-10 (ACCESS CONTROL) Page no 25, 5.16 ACS Network Management System (A)	The ACS NMS workstations shall provide support for SNMP v3, SNMP v2 and SNMP v3.	Please allow for "The ACS NMS workstations shall provide support for SNMP.	Please follow tender conditions
611	Volume 4		6.3.3.1.6	"True Colour LED" display panel/board shall meet the following minimum specifications:		No Query by Tenderer.
612	Volume 4			(2) Viewing Angle : minimum 140 horizontal & 120 vertical	160 / 160	Please follow tender conditions
613	Volume 4			(3) Brightness : 2500cd/m2 or better	Please keep Peak Brightness : 2500cd/m2 and Minimum Calibrated 1000c/m2	Please follow tender conditions
614	Volume 4			(4) Contrast : 3000: 1 or better	5000:1	Please follow tender conditions
615	Volume 4			(5) Module Resolution : 192 x 192 dots, Single module pixel resolution	Allow as per OEM. As it is different from OEM to OEM - 84x168	Equivalent or Better specification shall be acceptable.
616	Volume 4			(7) Protection level : IP 65 or better	to be amended With Enclosure	Please follow tender conditions
617	Volume 4			(9) Humidity : 10-90% RH	Please Kep 10%~80% RH	Please follow tender conditions
618	Volume 4			(11) Pixel/Pitch : 2.6 mm or lower	Please keep pixel pitch 2.97 mm or lower	Please follow tender conditions
619	Volume 4			(12) Refresh rate : ≥ 1920 Hz	Increase refresh rate to 2880Hz or better	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
620	Volume 4		1.2.8	1.2.8 The following major types of messages shall be provided by the PAS as a minimum: (1) Fixed digital recording; (2) Pre-formatted with data to be added; (3) Instantly recorded; (4) Live audio broadcast; and (5) Live & recorded music etc	As per past metro requirement experience live & recorded music is not used in any other metro project. Please confirm for the requirement of Live & recorded music. Also please confirm what will be the source of the live and recorded music ?	Please follow tender conditions
621	Volume 4		3.3.1	The requirements on the scope of services are given in General Requirement (Chapter 1) of this PS. For implementation of PAS, Telecom Contractor shall be required to provide Integrated PAS/PIDS servers at stations, Depot TERs and CERs to interface with ATS (signalling) and should co-ordinate/interface with the TC&S Contractor	Please confirm PAS shall have both local and central level interfaces with ATS or only central level interface with ATS.	Please follow tender conditions
622	Volume 4				As per past metro experience the station and depot PAS requirement can be achieved by using integrated workstations also with suitable configuration. Request to please change the requirement with Integrated PAS/PIDS Workstation at station and Depot TER.	Reference mentioned does not match with query.
623	Volume 4		3.4	Works excluded from this Chapter of Contract Train-borne Public Address System shall not be supplied as part of this contract but interfacing with Train-Borne PA System shall be done by Telecom Contractor.	Telecom PAS system always implemented on static stations, Depots, OCC and have not been interfaced with Train borne PAS system in any other metro projects. It is requested to kindly modify this clause as below. <u>Train-borne Public Address System shall not be supplied as part of this contract.</u>	Please follow tender conditions
624	Volume 4		4.4.1	The Mean Time To Restore (MTTR) of the PAS to full normal operation following a failure shall be less than four hours, excluding the time required to travel to Site. The travel time should not be more than one hour.	Travel time can be more than 1 hour as it includes other factors- distance, traffic congestion etc. It is requested to kindly modify this clause as below. <u>The Mean Time To Restore (MTTR) of the PAS to full normal operation following a failure shall be less than four hours, excluding the time required to travel to Site.</u>	Please follow tender conditions
625	Volume 4		4.4.2	The service life of the PAS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD)	As technology in IT hardware industry changes very frequently and new processors and configuration of workstation and server introduces in market very rapidly. So, request you to kindly modify this clause and <u>allow service life of 5 years for Server/Workstation.</u>	Please follow tender conditions
626	Volume 4		5.3.1	(7) Coverage shall be uniform with +/-3 dB on platforms (95+/- 3dB) and within +/- 6 dB on concourse areas (90+/- 6dB) of stations.	Kindly modify this clause and please provide +/- 6 dB uniform coverage on non-public areas (including RSS) (80 +/- 6 dB).	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
627	Volume 4		5.3.1	(9) The SPL shall not exceed 100 dB (A) in all public and non-public areas.	In Clause 5.3.1 (9) requirement is SPL should not exceed 100dB and in Clause 4.1.7 (j) SPL requirement should not exceed 95dB. Both clause contradictory to each other. Kindly modify the requirement in clause 4.1.7 (j) with SPL should not increase 100dB as this also satisfies the requirement in clause 5.3.1 (6) & (7)..	Please follow tender conditions
628	Volume 4		4.1.7	j) The peak SPL of the system shall not exceed 95 dB and the lowest value shall not fall below 70 dB.		No Query by Tenderer.
629	Volume 4		5.3.3.2	In order to allow for the worst-case ambient noise levels, the PAS shall generate SPL 90 dB (A) for non-public areas.	In clause 5.3.3.2 and 5.3.3.3 SPL requirement mentioned is 90dB for non- public area and in clause 5.3.1 SPL requirement mentioned is 80dB for non-public area (Including RSS). Both clause contradictory to each other. Kindly modify the requirement in clause 5.3.3.2 & 5.3.3.3 with PAS shall generate SPL 80 dB (A) for non-public area with coverage shall be uniform within +/- 6 dB (80+/- 6dB) of all areas of the depot.	Please follow tender conditions
630	Volume 4		5.3.3.3	Coverage shall be uniform within +/- 6 dB (90+/- 6dB) of all areas of the depot.		No Query by Tenderer.
631	Volume 4		5.3.1	(6) In order to allow for the worst-case ambient noise levels, the PAS shall generate SPLs in 95% of the area (but without sacrificing important locations) of 90 dB (A) for concourse and 95 dB (A) for platform areas and 80 dB (A) for non-public (including RSS) areas.		No Query by Tenderer.
632	Volume 4		5.4.1.5	Each PSB/PSP shall be provided with a hard-wired PAS control panel along with zone & selection extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	PAS control panel comes with zone selection keys, Extension keypad require only when PAS control panel have short of selection keys compare to number of zones. So kindly modify the clause as below. <u>Each PSB/PSP shall be provided with a hard-wired PAS control panel along with zone selection keys and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.</u>	Please follow tender conditions
633	Volume 4		5.4.2.2	(4) In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console;	Hardwired PAS console is an analogue console microphone which can't communicate from OCC to remote stations, It is provided along with each HMI and act as a backup console of HMI to make local live announcements within OCC when OCC HMI fails and within Station when station HMI fails. To make remote stations from OCC in case of HMI fails, operator should use a backup HMI. So kindly modify this clause as below. <u>(4) In a particular zone, group of zones and all zones at stations through Software.</u>	Please follow tender conditions
634	Volume 4		5.4.2.2	(5) One Train and a group of trains via Radio/FOTS Interface	Supply of train borne PAS system is not a part of Telecom contract. Hence, it should also removed from PAS system requirement. Request to Kindly delete this requirement.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
635	Volume 4		5.4.2.4	Each hard-wired PAS control panel shall be provided along with zone selection & extension keys pads and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.	PAS control panel comes with zone selection keys, Extension keypad require only when PAS control panel have short of selection keys compare to number of zones. So kindly modify the clause as below. <u>Each hard-wired PAS control panel shall be provided along with zone selection keys and microphone. The PAS control panel shall have the facilities to make live broadcast to a particular zone and all zones.</u>	Please follow tender conditions
636	Volume 4		5.7	The PAS at stations shall have two external audio input ports for providing background Music to selected public zones. These shall be able to be programmed to be enabled & disabled in selected zones and configurable during day-night hours.	External audio input ports do not required if PAS have sufficient input port to cater required audio input sources. So, request to kindly remove these clause.	Please follow tender conditions
637	Volume 4		6.3.1.11	The two external audio input ports for non-operational broadcasting of each station PAS shall be screened with 600 Ohm impedance.		No Query by Tenderer.
638	Volume 4		5.9.2	The PAS shall have the necessary facilities to mute and attenuate selected PAS locations and zones manually & automatically under time mode control in areas where broadcasts may disturb the public.	Muting of selected PAS locations is not possible as particular location speakers can not be muted, only muting of available zones in a location is possible. Time mode control muting is not recommended for emergency purpose. Request to Kindly modify clause as below. <u>The PAS shall have the necessary facilities to mute and attenuate selected PAS zones manually or automatically under time mode control in areas where broadcasts may disturb the public.</u>	Please follow tender conditions
639	Volume 4		5.10.3.2	The PAS control panel shall be equipped with a lamp which shall be illuminated when the respective platform PAS zone is in use. Whenever a live announcement is made via the PAS control panel, a busy signal for that PSB shall be indicated back to the MMI at SCR, CERs and OCC to indicate that the channel is busy.	Channel term is always use for the zone where audio is broadcasting. Getting a zone busy indication on MMI is more recommended instead of PAS control panel busy indication, as no audio announcement made from SCR, CER's, OCC will go through PAS control panel to required zone, so seeing Control panel is busy or free is of no use. Hence kindly modify the clause as below. <u>The PAS control panel shall be equipped with a lamp which shall be illuminated when the respective platform PAS zone is in use. Whenever a live announcement is made via the PAS control panel, a busy signal for that zone shall be indicated back to the MMI at SCR, CERs and OCC to indicate that the channel is busy.</u>	To be dealt during design phase
640	Volume 4		5.12.3.1	(11) Loss of interface link with Radio system.	PAS do not have direct interface with radio system. Radio system shall be interfaced with PAS via telephony system. Hence Loss of interface link with radio system shall be monitored in Telephony system. Kindly delete this clause from PAS requirement.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
641	Volume 4		6.1.4	The service life of the PAS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	As technology in IT hardware industry changes very frequently and new processors and configuration of workstation and server introduces in market very rapidly. So, request you to kindly modify this clause and allow service life of 5 years for Server/Workstation.	Please follow tender conditions
642	Volume 4		General		Please confirm, At each location- Station, OCC, CER, Depot and for NMS both Workstation and Server shall be provided. Or Server shall be provided only in OCC & CER and at other location station, Depot, NMS shall have workstation only.	Please follow tender conditions
643	Volume 4		1.2.4	The PIDS shall be accessed from the following locations as a minimum: (1) From the Station Control Room (SCR) to the PIDS at the station; (2) From the TERs to the PIDS at one station (3) From the OCC, CERs to a group of stations (4) From the OCC, CERs to all stations.	It is requested to please correct Point (2), as PIDS shall be accessed from OCC and CERs. (2) From the OCC, CERs to the PIDS at one station	Please follow tender conditions
644	Volume 4		3.4.1	Train-borne Public Information Display System shall not be supplied as part of this contract but interfacing with Train-Borne PID System shall be done by Telecom Contractor.	Telecom PIDS system always implemented on static stations and have not been interfaced with Train borne PIDS system in any other metro projects. It is requested to kindly modify this clause as below. Train-borne Public Information Display System shall not be supplied as part of this contract.	Please follow tender conditions
645	Volume 4		General		Please confirm, at each location- Station, OCC, CER and for NMS both Workstation and Server shall be provided. Or Server shall be provided only in OCC & CER and at other location station, NMS shall have workstation only.	1. Central PAS/PIDS Integrated Servers (in Redundant configuration to be provided at CERs. 2. Local PAS/PIDS Integrated Servers to be provided at stations. 3. Network Management System alongwith servers, workstations to be provided at CERs for PAS/PIDS.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
646	Volume 4		4.4.1	The Mean Time To Restore (MTTR) of the PIDS to full normal operation following a failure shall be less than 4 hours (excluding time of Travel). The travel time should not be more than one hour.	Travel time can be more than 1 hour as it includes other factors- distance, traffic congestion etc. It is requested to kindly modify this clause as below. <u>The Mean Time To Restore (MTTR) of the PIDS to full normal operation following a failure shall be less than 4 hours (excluding time of Travel).</u>	Please follow tender conditions
647	Volume 4		4.4.2 & 6.1.3	The service life of the PIDS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	As technology in IT hardware industry changes very frequently and new processors and configuration of workstation and server introduces in market very rapidly. So, request you to kindly modify this clause and <u>allow service life of 5 years for Server/Workstation.</u>	Please follow tender conditions
648	Volume 4				As per general industrial norms the service life of equipment should start when it left its manufacturing unit or distribution place. Service life of all equipments should be counted from date of supply, It is requested to kindly modify the clause accordingly.	Please follow tender conditions
649	Volume 4		5.2.1	(1) Time mode as initiated by the PIDS internal system clock via a Time-table & message scheduler provided as part of the MMI facilities at OCC, Depots, CERs and SCR of Each Station.	PIDS Shall not be accessed from Depots. Kindly modify the clause as below. <u>(1) Time mode as initiated by the PIDS internal system clock via a Time-table & message scheduler provided as part of the MMI facilities at OCC, CERs and SCR of Each Station.</u>	Please follow tender conditions
650	Volume 4		5.3.2.2	Data communication links shall be provided to each station allowing the OCC, Depot & CERs to convey messages to the following as a minimum: (1) One station; (2) A group of stations; (3) All stations; (4) One or more display boards at one station; and (5) Any combination of display boards in any combination of stations	PIDS Shall not be accessed from Depots. Kindly modify the clause accordingly.	Please follow tender conditions
651	Volume 4		5.3.3.6	Upon receiving train information from the TC&S System at the Stations, Depots and CERs, the PIDS shall display the train information to the designated display boards/panels within 2 seconds.	PIDS display panels not required in Depots. So Kindly modify the clause accordingly. <u>Upon receiving train information from the TC&S System at the Stations and CERs, the PIDS shall display the train information to the designated display boards/panels within 2 seconds.</u>	Please follow tender conditions
652	Volume 4		5.10.1.4	(2) Provide on-line help to maintenance personnel; and provide self-test facilities and built-in diagnostic routines to enable malfunctions to be automatically displayed	Please confirm our understanding is correct or not. Here on-line help referring to remote support by using remote desktop tools such as Team-Viewer/Anydesk etc. from the Display OEM technical support team.	

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
653	Volume 4		6.3.2.6	All Workstation displays shall support high resolution (1280x1024) colour graphics, and shall be a minimum 24" TFT/LED screen for the desktop for stations MMI and 30" for OCC and CERs MMI.	As per clause 5.9.1.3 requirement mentioned each workstation shall have 30" Colour LED display and in clause 6.3.2.6 & 6.3.4.2-24" Colour LED Display mentioned. Please confirm which need to consider 30" Display for all workstation or 24" for Stations and 30" for OCC and CSRs MMI.	Monitor size is 30".
654	Volume 4		5.9.1.3	Each management Workstation shall be equipped with a 30" inches colour LED display with at least "1280 x 1024" pixels resolution to provide graphical presentation and display of the PAS/PIDS.		No Query by Tenderer.
655	Volume 4		6.3.4.2	Each management Workstation shall be equipped with a 24" inches colour LED display with at least "1280 x 1024" pixels resolution to provide graphical presentation and display of the PIDS/PAS.		No Query by Tenderer.
656	Volume 4		6.3.4.5	The Contractor shall provide a PIDS management system for the overall control, supervision, maintenance and configuration of the entire PIDS. It is envisaged that one NMS and a corresponding workstation shall be provided at both locations of OCC and BCC. The NMS at OCC and BCC shall have jurisdiction over whole Phase-1A stations. The NMS should not be available for access in other than CSS/CER. The PAS & PIDS NMS shall be on the same server and workstation	Please confirm BCC location is available or not. In MMI Provision schedule BCC details not available. If BCC is available, please provide the details and if not available, kindly modify the clause accordingly.	BCC is not available
657	Volume 4		General	Being a design based job please provide CAD drawing for designing quantity.	Please provide same.	To be dealt during design phase
658	Volume 4			Scope is for three corridors: Kanpur Metro (Corridor-I & Corridor-II) and Agra Metro (Corridor-I)	We understand all three corridors Kanpur Metro (Corridor-I & Corridor-II) and Agra Metro (Corridor-I) will be standalone of each other. Please confirm.	Please follow tender conditions
659	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 5/60; 1.2 Overview of Closed-Circuit Television System	1.2.10 In emergencies or as required it shall, however, be possible, without any additional resources, to view images from any/all cameras and/or record any dynamically selected location on the system.	We understand that this requirement is only at Central Management Server location. Please confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
660	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 8/60; 3.2 Scope of Supply for Closed Circuit Television System	(14) CCTV Management System at CERs.	Need clarity on location of CERs of all three corridors.	CER shall be in Admin Building of Depot. For Agra, second CER may be at the the other location as provided but the first CER will be in Admin Building.
661	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 8/60; 3.2 Scope of Supply for Closed Circuit Television System	(14) CCTV Management System at CERs.	We understand that CCTV Management System will be at CERs. Both Primary & Redundant CCTV Central Management System will be at same location in CER. Please confirm our understanding.	Please follow tender conditions
662	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg21/60; 5.6 Fault and Alarm Management	5.6.1 All alarm status of the CCTV system equipment including CCTV cameras, video recorders, video management system, other related equipment, etc as necessary and approved by the Employer's representative shall be monitored by CCTV Management System/Network Management System in the CERs and shall automatically generate an audio/visual alarm on the CCTV Management System.		No Query by Tenderer.
663	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg22/60; 6. DESIGN/APPLICATION ENGINEERING REQUIREMENTS	6.1.6 The CCTV central management system in all CERs shall be installed on servers within a cluster of two servers or more. In case a server in the cluster fails, another server in the cluster shall automatically take over the failed server's job running the management system.		No Query by Tenderer.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
664	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 14/60; 5. FUNCTIONAL REQUIREMENTS	The CCTV system shall have control equipment located in the TER at all stations, CERs & Depots/OCC. CCTV control equipment for TSSs/RSSs/ Signalling point crossings shall be installed in the TER of adjacent station/depot.	Need clarity on expectation from control equipment.	Please follow tender conditions
665	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg19/60; 5.2.5 CCTV Standards	5.2.5 CCTV Standards The TV standard to be employed shall be ITU-T, PAL, 768 scan lines per frame, 30 frames per second with progressive scan. The CCTV standard to be employed shall be latest as per industries requirements.	Modify to: 25 Frames as PAL supports 25 Frames The TV standard to be employed shall be ITU-T, PAL, 768 scan lines per frame, 25 frames per second with progressive scan. The CCTV standard to be employed shall be latest as per industries requirements.	Please follow tender conditions
666	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg20/60; 5.3 Monitoring of Entraining and Detraining of	5.3.4 The video signals of these CCTV cameras monitoring the platform and train shall be available to the following equipment simultaneously at all stations: (d) NVR for Recording.	Remove NVR as standard servers shall be used for recording	Please follow tender conditions
667	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg20/60; 5.3 Monitoring of Entraining and Detraining of	5.3.4 The video signals of these CCTV cameras monitoring the platform and train shall be available to the following equipment simultaneously at all stations: (1) OCC Traffic Controller and Chief Controller; (2) OCC Security Controller; (3) CERs/CSSs (Communication system Supervisor) (4) SCR and Police Booths (PCR) for surveillance of that station. (5) NVR for recording.	We understand that NVR means standard off shelf server with required recording software for recording purpose. Please confirm	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
668	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg21/60; 5.4 Video Recording and Retrieving	5.4.6 Video recording shall be tampered proof so as even the administrator shall not be able to delete any video clip from any camera. Any attempt to delete or edit of video clips shall generate the alarm in the system which can be sent to the administrator.	We understand that the appropriate users only shall be able to delete if needed and all such actions shall be part of the logs.	Please follow tender conditions
669	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 22/60; 6. DESIGN/APPLICATION ENGINEERING REQUIREMENTS	6.1.5 6 Nos. Laptop computers with preloaded CCTV system software shall be supplied as part of Telecom Contract so that the Technician can connect and do the maintenance. Technical Specification of Laptop /Engineering Computer Terminal Shall be minimum as below	6.1.5 6 Nos. Laptop computers with preloaded CCTV system software shall be supplied as part of Telecom Contract so that the Technician can connect on same secure network and do the maintenance. This will ensure that the system is not misused	Please follow tender conditions
670	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg38/60; 6.2.20 Requirements for CCTV Video Analytics for CCTV System	Analytics can be enabled or disabled on each unit individually without degrading video performance on the system	We understand that the video analytics shall be server based. Please confirm.	Please follow tender conditions
671	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg38/60; 6.2.20 Requirements for CCTV Video Analytics for CCTV System	6.2.20 Requirements for CCTV Video Analytics for CCTV System.	Need quantity Analytic license to consider.	Refer UPMRCL S.No 308

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
672	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg38/60; 6.2.20	<p>Intelligent Video Analytics shall be implemented on the proposed cameras. Different types of Video analytics features shall include but not limited to:</p> <p>The Video Analytics functionality shall have mechanisms to continue alarm generation in case of failure of the Server. The Video Analytics shall not be bound to the MAC address of the device and hence any video analytics feature shall be possible to be deployed on any camera.</p>	We understand that the video analytics shall be server based and edge based analytics are not acceptable	Please follow tender conditions
673	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 40/60; 6.2.21.1 GENERAL SYSTEM DESCRIPTION	<p>H. The video management system shall support high availability of recording servers.</p> <p>A failover option shall provide standby support for recording servers with automatic synchronization to ensure maximum uptime and minimum risk of losing data.</p>	<p>The video management system shall support high availability of recording servers. A failover option shall provide standby support for recording servers and user shall have access to new recordings with or automatic synchronization to ensure maximum uptime and minimum risk of losing data</p> <p>This will ensure availability of recordings all the time</p>	Please follow tender conditions
674	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 41/60; 6.2.21.1 GENERAL SYSTEM DESCRIPTION	The video management system shall support encryption of video for export purposes.	<p>The video management system shall support encryption/digital signature with password protection of video for export purposes.</p> <p>Digital signature is most widely accepted</p>	Please follow tender conditions
675	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 41/60; 6.2.21.1 GENERAL SYSTEM DESCRIPTION	The video management system shall include a Software Development Kit (SDK) that offers important capabilities for integrating the video management system with third party software and applications like access control, video analytics, etc.	<p>The video management system shall include a Software Development Kit (SDK) that offers important capabilities for integrating the video management system with third party software and applications like access control, video analytics, etc.</p> <p>The video management system shall support third party integrations through alarm and event sharing and support open standards to integrate with third party software like access control, video analytics, etc.</p> <p>This will ensure more choice of integration to meet functional requirement and all reduce cost</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
676	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 41/60; 6.2.21.1 GENERAL SYSTEM DESCRIPTION	The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. While the camera(s) is (are) communicated on a pre-configured protocol, it shall be possible to manually switch to unicast/multicast features to ensure stability of video stream. The OEM shall provide the Software Development Kit for smooth integration of CCTV system with other telecommunication systems specified in this technical Specification	The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. While the camera(s) is (are) communicated on a pre-configured protocol, it shall be possible to manually switch to unicast/multicast features to ensure stability of video stream.. The OEM shall provide the necessary support like SDK,API or other industry standard or custom developmet for smooth integration of CCTV system with other telecommunication systems specified in this technical specification This will ensure more choice of integration to meet functional requirement and all reduce cost	Please follow tender conditions
677	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 41/60; 6.2.21.2 MANAGEMENT SERVER	The administrator through the relevant software shall be able to do software auditing which displays the software versions running on the CCTV equipments.	The video management system shall provide complete diagnostic feature to run system performance test and provide means collect system logs Diagnostic tool will ensure better management and ease of maintainence	Please follow tender conditions
678	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg41/60; 6.2.21 CCTV VIDEO SURVEILLANCE SOFTWARE	M. The video management system shall include a standalone viewing client application to be included with video exported from the viewing client application. The standalone viewing client application shall allow recipients of the video to browse and playback the exported video without installing separate software on their computers	We understand that the exported clip should support open media players like WMV etc.,. Please confirm	Please follow tender conditions
679	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg43/60; 6.2.21.2 MANAGEMENT SERVER	b. Manual backup. System logs shall not be backed up or restored when performing manual backup or restore.	Our understanding is that the manual back up shall not affect the system logs. Please confirm	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
680	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg43/60; 6.2.21.2 MANAGEM ENT SERVER	N. The system shall support search of recorded video for motion in user specified areas of a camera image. This intelligent post-recording motion search will work for cameras connected.	We understand this as Region Of Interest "ROI" based motion detection analytics for selected cameras. Please confirm.	Refer UPMRCL S.No 308
681	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg43/60; 6.2.21.2 MANAGEM ENT SERVER	O. It shall be possible to backup and restore system configuration in order to quickly restore the configuration of the video management system. Two types of backup of system configuration shall be possible: a. Scheduled backup,	As per our understanding of scheduled backup, the system shall provide the option to be able to schedule a backup of selected cameras for a selected duration at selected time to specified location. Please confirm.	To be dealt during design phase
682	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 44/60; 6.2.21.3 Network Video Recording Server	Once configured, recording servers shall run independently of the management server, and shall continue to operate even if the management server is offline.	Once configured, recording server shall run independently and any change or modification shall be done through management system only from local location. And management server shall continue to monitor and manage all activities of recording server in order to maintain track of all actions and system integrity This will ensure no loss of recordings, functionality like Alarm & Events, and operator action verification	To be dealt during design phase
683	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg45/60; 6.2.21.3 Network Video Recording Server	J. System should ensure that once recorded, the video cannot be altered, ensuring the audit trail is intact for evidential purposes. This has to be achieved using Authentication with SHA-1 hashing function or latest, secured with encryption to ensure authentication. Water marking alone for ensuring tamper proof recording is not sufficient. The VMS must support digital signature to prove authentication and integrity. Tamper proof recording mechanism which meets security of minimum 128 bits encryption shall be implemented.	In addition there are various password protection features. There are also mechanisms to completely hide the video files in unformatted drives so as no one can even attempt to tamper them. So, allow alternate mechanisms for tamperproof recordings.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
684	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg45/60; 6.2.21.3 Network Video Recording Server	J. System should ensure that once recorded, the video cannot be altered, ensuring the audit trail is intact for evidential purposes. This has to be achieved using Authentication with SHA-1 hashing function or latest, secured with encryption to ensure authentication. Water marking alone for ensuring tamper proof recording is not sufficient. The VMS must support digital signature to prove authentication and integrity. Tamper proof recording mechanism which meets security of minimum 128 bits encryption shall be implemented.	Please confirm if this would mean Digital certificates and same shall be acceptable	Please follow tender conditions
685	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg45/60; 6.2.21.3 Network Video Recording Server	N. The online archiving capability shall be transparent and shall allow viewing client users to playback archived recordings without the need to restore the archived video to a local hard drive for access.	Our understanding is that the archived video shall be stored on the same network as that of VMS management and recording server. Please confirm	Please follow tender conditions
686	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg45/60; 6.2.21.4 VIEWING CLIENT	The viewing client shall enable operators to connect to the management server for initial authorization. Upon authorization, the viewing client shall be able to connect to the recording server(s), for access to live and recorded videos. Once authorized, the viewing client shall run independently of the management server, and shall continue to operate even if the management server is offline. However, in the downgraded mode (when the connectivity between central server and the station is not available), the viewer client shall be able to login to the system and the video recording & the local viewing shall not be affected	Please confirm the downgrade mode as this would mean only live viewing?	Please follow tender conditions
687	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg45/60; 6.2.21.4 VIEWING CLIENT	The viewing client shall enable operators to connect to the management server for initial authorization. Upon authorization, the viewing client shall be able to connect to the recording server(s), for access to live and recorded videos. Once authorized, the viewing client shall run independently of the management server, and shall continue to operate even if the management server is offline. However, in the downgraded mode (when the connectivity between central server and the station is not available), the viewer client shall be able to login to the system and the video recording & the local viewing shall not be affected.	In the RFP Active directory functionality is also asked for to have enhanced security mechanism along with centralized management server for authentication. Allowing the local login will defeat the entire security mechanism. So, it is not recommended for such a infrastructure projects. Please confirm user shall get access only after centralized authentication.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
688	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 46/60; 6.2.21.4 VIEWING CLIENT	The viewing client shall allow the user to be able to: 5. Should switch to secondary recording by simply pressing tab in viewing page	5. Secondary recording will be accessed based on the availability of primary recording system. System will decide which storage it should connect and no user level control requiredShould have visible notification that which stored data of camera is playing back like Failover or Primary. This will ensure no operator action is needed to access all the recordings	Please follow tender conditions
689	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 46/60; 6.2.21.4 VIEWING CLIENT	17. skip gaps (periods with no recordings) during playback of recordings.	17. skip gaps (periods with no recordings) during playback of recordings . : The system shall support simultaneous playback of multiple cameras and also support simultaneous view of live and playback for same camera This will help in forensic and investigation	Please follow tender conditions
690	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 47/60; 6.2.21.5 MAPS	G. The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	We understand MAPs will be only for monitoring purpose. Other details like checking camera resolution, FPS, network usage, disk space, etc shall be available from software. Kindly confirm.	Please follow tender conditions
691	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 47/60; 6.2.21.5 MAPS	K. Map function shall allow the real-time status monitoring for VRM server/storage devices	We understand MAPs are only for monitoring purpose. Other feature like checking VRM server/storage devices shall be available from software. Kindly confirm.	Please follow tender conditions
692	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 47/60; 6.2.21.5 MAPS	G. The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	It is not a general practice to show all such camera statistics on video from map, as it blocks/covers/obstruct the important video information. Such information shall not be accessible to front end operator user from security point of view as well. Such information is always available to admin user from respective admin interface. So, request to call for functional requirement which can be met from map or any other alternate GUI.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
693	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 48/60; 6.2.21.6 ALARM MANAGEMENT FEATURE	The camera associated with alarm shall be displayed as a separate video window.	The camera associated with alarm shall be displayed as a separate video window . If it is non CCTV alarm or event the associated video clip shall be available at alarm UI as emmbded clip for investigation purpose This will ensure ease of operation and critical recordings will be available for immidiate viewing	To be dealt during design phase
694	Volume 4		KNPAGS01 PS Chapter 08 CCTV System; Pg 48/60; 6.2.21.6 ALARM MANAGEMENT FEATURE	E. An alarm preview window shall display recorded video from a selected alarm or event if these have videos associated with them. If there are more than one camera associated with an alarm or if more than one alarm is selected, the preview shall show video from all associated cameras (up to 9 cameras).	An alarm preview window shall display recorded video from a selected alarm or event if these have videos associated with them. If there are more than one cameras associated with an alarm or if more than one alarm is selected, the preview shall show video from all associated cameras (up to 9 cameras). Or operator should be able to call up all associated cameras This will ensure flexibility of operation	Please follow tender conditions
695	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg3/27; 1. INTRODUCTION	1.1.8 The ACS shall be integrated and configured over the HMI of the CCTV system at each applicable location for monitoring purpose (SCR & DCC).	We understand both ACS & CCTVapplication will be running separately on same HMI. Please confirm.	Please follow tender conditions
696	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg6/27; 1.2.3 Sensor Controller	1.2.3 Sensor Controller It shall also be able to detect sensor failure and the damage to the connecting cables.	We understand that alarm condition is to be displayed at server and not at panel. Please confirm	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
697	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg7/27; 2. Scope of the Works	(c) Central and Redundant ACS server at CERs. System functionality shall be achieved with central server in redundant mode. Contractor shall submit design & RAMS calculation for final approval.	We understand both Central and Redundant ACS server will be in same CER. All three corridors will have their separate CERs which will function standalone of each other. Please confirm.	Please follow tender conditions
698	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg10/27; 3.6 Security and Encryption	3.6.2 Suitable encryption and associated electronic safeguards shall be provided to prevent any cloned Proximity ID Cards gaining access to the system and entry to controlled locations.	In order to prevent the cloned cards it is recommended to use the card key system, wherein the reader can read and write in the sectors of the cards and for access grant verification it will read the Card Key from the Sector instead of reading the CSN no. at the outside of the card.	Please follow tender conditions
699	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg10/27; 3.6 Security and Encryption	3.6.3 Any card reading equipment removed from site, by unauthorized means, shall be automatically barred from future access to the system.	This equipment shall not be programmed in the server, but barring this equipment shall be a manual process.	Please follow tender conditions
700	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg12/27; 4. Functional Overview / Requirements	4.11 The employee master database of UPMRC shall be synchronized with the Access Control system data base for authentication.	4.11 The employee master database of UPMRC shall be synchronized with the Access Control system data base for authentication. The system shall have capability to customise the data exchange for between two databases and also shall support custom reports as needed This will ensure that more flexible and cost effective options are available for data exchange	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
701	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg13/27; 5.1 Central Access Control Server	5.1 Central Access Control Server 5.1.1 A central access control server (RAID5/with hardware redundancy and disk mirroring) shall be installed in each CER, which shall control and monitor all of the Access Control facilities installed within corridors, sites, stations, RSS, OCC, Depots and Operational administrative offices.	We understand that disk mirroring is RAID 5, please confirm?	Please follow tender conditions
702	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg13/27; 5.1.3 Station HMI for local operator control and monitoring;	5.1.3 Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	The standalone client to operate at station when communications to central server is failed would mean that we need to provide local server and database. This will increase the cost and there is will multiple servers. Please confirm if this is needed?	Access Control Application can be integrated with any other telecom system HMI.
703	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg14/27; 5.3 Access Point Hardware	5.3.1 General (b) All access point facilities shall be vandal resistant and tamper proof.	The Access control equipments are vandal resistant & tamper resistant not tamper proof. Hence the same is recommended for tamper resistant.	Please follow tender conditions
704	Volume 4		KNPAGS01 PS Chapter 10 Access Control System; Pg16/27; 5.3.6 Proximity Identification Cards	5.3.6.4 Consideration shall be given as to the distances over which a proximity ID is required to operate to cover pedestrian access at gates and door access, such as based on ISO 14443 for communications at distances up to 10 cm.	As cards shall be compatible with AFC, communication distances of 10 cm, cannot be achieved. Distance can be upto 5 cms. Request approval for same.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
705	Volume 4		KNPAGS01 PS Chapter 01	(9) An Uninterrupted Power Supply System (3 phase 415V AC Supply) shall be built for providing UPS Supply for Telecom, AFC, E&M and Signalling contractors with on-line redundant configuration with backup plan for four hours for Telecommunication, S&TC, E&M and AFC equipment at Stations, Depots and OCC. (10) 48 V DC Power Supply System for Powering the Telephone System and also for Powering all other Telecomm Systems such as Radio, Clock etc shall be designed, installed, commissioned, tested and maintained as part of the scope of KNPAGS-01	We understand requirement mentioned in KNPAGS01 PS Chapter 09 Power Supply System have to be offered as per BOQ. Please confirm.	This is a design and Built contract, the quantity mentioned in BoQ is minimum.
706	Volume 4		13.1.1.4 (Volume 4 Chapter 1 PS)	The training courses shall normally be conducted at manufacturers' place and at the site(s).	All the expenses related to travel,Lodging,boarding & Local travel of customer's representative for training at manufacturer's place shall be borne by customer. <i>Please confirm if understanding is correct.</i>	Refer UPMRCL S.No 380
707	Volume 4		8.3.1 (Volume 4 Chapter 1 PS)	The Contractor shall carry out factory acceptance tests at the place of manufacturing in the presence of the Employer's Engineer. The test shall include, but not be limited to, visual, environmental, electrical and functional tests on each individual equipment and associated Subsystems as well as simulation before delivery of the equipment to the Site.	All the expenses related to travel,Lodging,boarding & Local travel of customer's representative for Factory acceptance test at manufacturer's place shall be borne by customer. <i>Please confirm if understanding is correct.</i>	Refer UPMRCL S.No 381

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
708	Volume 4		Point No. 33 , Clause 10 (Volume 2 SCC)	<p>10.1 GCC "Defects Liability Period" shall mean the defects liability period stated in the Special Conditions of Contract and shall be calculated from the date of start of revenue services (ROD) of the respective section.</p> <p>Clause 10 SCC : Defect liability period shall be 24 months from the date of issue of Partial taking over certificate.</p> <p>Clause 10 SCC : For the equipment and software supplied for OCC & CERs, the Defect Liability Period shall start from the date of opening of the first section for revenue services and shall continue until 36 months from the date of completion of T&C works of OCC & CERs.</p> <p>DLP of the equipment: If any equipment fails during DLP, then warranty of such equipment shall be provided for two years, which shall be counted from the date of replacement of the equipment.</p>	<p>We understand as per schedule of key dates that for priority section of Kanpur and Priority section of Agra the warranty for OCC equipments shall be 36 months from the date of opening of first section. i.e. IM section of Kanpur and TF section of Agra.</p> <p>And for Balance section for Kanpur & Agra(CT,BN,AD,VB sections for Kanpur & MR, IS Sections for Agra) DLP shall be 24 months , start from Revenue Services of respective section or date of issues of partial taking over certificate.</p> <p>As completion of contract is 31.12.2025, So DLP for all the Corridor/Sections should not be beyond mentioned date and same shall be applicable for any repaired equipment which will fail during the DLP period.</p> <p>Please confirm if understanding is correct.</p>	Please follow tender conditions
709	Volume 4		6.6 (Volume 4 ,Chapter 1, PS)	6.6.1 Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, convergence Time, Latency, Synchronization, Interfaces & Integration etc.	<p>Please clarify the POC shall be done for each individual subsystem at Buyer's Location.</p> <p>We understand that Integrated test of all the subsystem is not required in the POC set up.</p> <p>Please confirm the understanding.</p>	Refer UPMRCL S.No 382
710	Volume 4		6.3.7 (Volume 4, Chapter 4 , PS)	The use of radio frequency spectrum in India is regulated by the Wireless Planning & Coordination Wing (WPC) Wing of the Ministry of Communications, Government of India. The employer may be authorised the use of the frequency band 380-400 MHz for mobile train radio communication. However, a separate clearance for the use of specific frequencies is to be obtained. Based on the frequency plan proposed by the Contractor, approval from WPC shall be obtained by the Contractor and all the expenses including License fees etc. shall be borne by the contractor till ROD of last section. The Contractor, if so, required by the WPC, shall incorporate specific changes in the frequency plan, after mutual discussions.	<p>Costs for liaisoning with authorities for the required licenses from DoT/WPC shall be borne by Tenderer.</p> <p>All the License fee is paid by the Licensee to WPC/DoT. We understand that the same shall be paid by the Buyer (UPMRC).</p> <p>Please confirm the understanding.</p>	Refer UPMRCL S.No 56

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
711	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 20 of 123	5.3.4.4 Central Equipment Rooms (Telecommunication) at Depots/Admin Buildings One RCW with restricted access shall also be located in each Central Equipment Room for Telecommunication Systems at both Depots/Admin Buildings. This unit shall be used for maintenance monitoring and shall work as spares for RCWs in the OCC.	Please confirm the RCW for maintenance monitoring is already considered in MMI distribution in Appendix H of PS as an RCW in CER. Also please confirm if RAU is also be provided as back up to these RCW. Request you to update the BoQ accordingly.	Refer UPMRCL Sr. No. 62
712	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 123	5.8.3.9.3 The maintenance radio's call shall be routed to the maintenance controller RCW.	The maintenance controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if maintenance controller for RCW needs to be considered. If not, request you to please remove the maintenance controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 62
713	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143	5.8.3.9.4 The security radio's call should be routed to the security controller RCW.	The security controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if Security controller for RCW needs to be considered. If not, request you to please remove the Security controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 63

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
714	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143	5.8.3.9.5 The Traction supply radio's call should be routed to traction supply controller RCW.	The traction supply controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if traction supply controller for RCW needs to be considered. If not, request you to please remove the traction supply controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 64
715	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 81 of 123	6.9.7 Controllers RCW in OCC, DCC & other locations shall be provided a RAU in addition to RCW to work as a back-up/ all other controllers shall be provided only RAUs. One extra RAU complete with all accessories shall be provided and installed at each of the terminal stations also.	Please confirm if the number of terminal stations to be considered is 1 for each corridor. As the RAU quantity is not included in MMI distribution in Appendix H of PS, request you to please add the same in Appendix H. Request you to revise the BoQ accordingly.	RAU shall be provisioned as per Appendix-H of Chapter-11 of PS. One extra RAU for terminal station shall be installed in Crew Control Room. Crew Control Room quantity for Kanpur=xx nos and for Agra=XX nos.
716	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 87 of 123	6.10.9.1.2 The antenna network for the Underground section shall be LCX in tunnels and a combination of LCX and low-profile antenna if required at stations. The coverage in the tunnel, under craft, platform and concourse area shall primarily be by use of LCX cables. The LCX cable shall be able to support optimally train radio services in the TETRA frequency bands 380-400 MHz and also support signals up to 1 Ghz, for future. LCX shall be supported by stand-offs installed at regular interval as per guidelines issued by EIA Standard RS 422 and new wind tunnel vibration tests. A common LCX cable for transmission and reception of RF signals shall be used. Contractor shall install minimum one LCX cable in each tunnel, tunnels leading out of the underground up till out in open and minimum two LCX cables throughout in underground station areas all along the Cable containment, for future expansion and use for the TETRA services and Fire/Police services.	Request you to clarify why there is a requirement of minimum two LCX cables throughout in the underground station. This should be left for the bidders to design the IBS in Underground station as per requirements stated in the PS.	Refer UPMRCL S.No 66

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
717	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 88 of 123	6.10.9.1.5 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	Please confirm that the clause is only asking about the failure of repeater of one tunnel and not about the failure of LCX cable. Providing redundancy in LCX cable is not a standard set up in any Metros.	Refer UPMRCL Sr. No. 67
718	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123	8.4 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	The IBS for cellular communication will be dependent on the Cellular communication design including frequency, power, location of cellular BTS, cellular coverage available, etc. Further 100% overlapping of signals is not possible in Cellular network due to technology challenges and the system performance. It is recommended to have the overlapping only at the hand over zones, please consider the revision of the requirement	Please follow tender conditions
719	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123	5.1.5 The CER in Depot/Admin Building shall be equipped with all control and monitoring equipment. The central control system shall be fault tolerant, and in a hot-standby configuration at CERs or based on a distributed architecture with full redundancy.	The location of CER/OCC/BCC is not mentioned. Please confirm the location of CER and if the CER is within the OCC and BCC/Depot.	Refer UPMRCL S.No 392

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
720	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123	5.2.2 The Radio System shall cover, but not be limited to:10) All parts of OCC and Depot, DCC's and UPMRC Headquarters	Please provide the locaton and coordinates of OCC, BCC and UPMRC headquarter	Refer UPMRCL S.No 59
721	Volume 4		ITT, Page 31 of 96		As per ITT, Table A, the total number of station mentioned for Kanpur is 30 + 2 depots. Please confirm if the Agriculture university mentioned in TENDER KNPAGS-01, Particular Specifications CHAPTER 11 Appendices, Appendix C is station only so that the count of total number of station remains at 30.	Please refer Appendix-C for detailed nos of stations and depots.
722	Volume 4		General	Future Stations	Please confirm if the future station need to be considered as a part of BoQ with respect the quantities of RCW, RAU, RCP and RF coverage design. Request you to revise the quantity in the BoQ accordingly.	Refer UPMRCL S.No 210
723	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 11 Appendices, Appendix H	RCW quantity	As per Appendix H, the quantity of RCW is coming out to be 17 (9 for Kanpur and 7 for Kanpur). As per technical specification chapter 4 radio system clause 5.8.3.9.3, 5.8.3.9.4 , 5.8.3.9.5 and 5.3.4.4, additional RCWs are required. please confirm if the controllers are required to be considered. Please update the quantity in the BoQ accordingly. If not, request you to please delet the same from the specification.	Refer UPMRCL S.No 394

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724	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123	8.8. No repeater equipment shall generally be installed in the tunnels. Nevertheless, if it is unavoidable then intermediate repeaters can be allowed to install adhering to the schedule of dimensions. Power for the same has to be extended by the Telecom Contractor from the S&T UPS. Any co-axial cable, optical fibre cable, power cable, etc has to meet the FRLSZH (Fire Retardant Low Smoke Zero Halogen) criteria for underground environment and has to be provided by the Telecom Contractor along with associated equipment for receiving signals of mobile service providers. In this regard, certificates and test reports of the manufacturer are to be submitted to employer representative for review. Further, if required to install more active components to cover the stations areas, such locations of active components can be decided during detailed design phase. The installation of passive equipment has to be done inside the false ceiling and aesthetics of areas to be maintained. Location of such installation is to be approved by employer representative.	Cellular system works in a wider spectrum with various technologies 2G,3G & 4G. The higher frequencies and latest technologies are working with user shared output power, The reference power distinguish the coverage level is much lower and require to install the amplifiers a frequent interval inside tunnel to meet the coverage requirement. This madates the requirement of installation of BDA inside the tunnel wall also. Request you to please confirm the same.	To be dealt during design phase
725	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 17 of 123	5.2.3) The Design requirements required to be submitted are given in Chapter 1 of this PS and clause 6 of this Chapter. Contractor shall however submit to the Employer's Representative for review, the coverage calculations and coverage plots (both up-link & down-link) to confirm that the required RF coverage stated above can be achieved using the Contractor's proposed antenna locations.	The design of UG station and tunnel shall be done through design tool and the simulation plots are available for the downlink.The link budget calculations shall be done based on the distance /losses for the uplink direction.	Please follow tender conditions
726	Volume 4		4.4.2	4.4.2 The service life of the CDRS equipment except server/workstation shall not be less than 15 years. The service life of all types of cables shall not be less than 25 years. The service life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	This chapter talks about Radio system. The CDRS to be updated as Radio system	Refer Addendum-1

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727	Volume 4		4.6 Interoperability requirements	<p>The Radio system supplier shall have previously demonstrated working radio interoperability tests between their radio equipment and the equipment of another radio vendor. The radio system supplier must submit documentation that has demonstrated interoperability. This test certification must be issued by only Accredited Test Houses of TETRA. The Inter-Operability Profile (IOP) certificates have to be submitted for the Switching Infrastructure Equipment. Copy of IOP Certificates issued for compliance to each of the following TETRA summary features for the Switching Infrastructure Equipment to be necessarily submitted as part of the Bid</p> <ul style="list-style-type: none"> i. Core System ii. Short Data Service (minimum SDSTL). iii. Individual Address Dynamic Group Number Assignment iv. Packet Data v. Air Interface Encryption (minimum Class 3) vi. Authentication. vii. End to End Encryption. viii. Inter System Interface (ISI) <p>In case of non-compliance or non-availability for any of the above important summary features, the Bid shall be considered as technically non-compliant.</p>	<p>Interconnection between TETRA system with another TETRA system or with other wireless communication technologies may be done through ISI or Suitable gateways hence Clause 4.6/VIII i.e Inter System Interface (ISI) should be accepted as</p> <p>"It is required to interface and communication between TETRA network with other TETRA network (existing or to be planned in future) or TETRA System with UHF / GSM / CDMA services with inter System Interface (ISI) OR through network Gateways."</p>	Please follow tender conditions
728	Volume 4		General	To be added for TETRA Radio system	Radio system should support Inter working Functionality (IWF) for integration to future broadband systems. The standards have already been defined by ETSI for Inter working Functionality (IWF) and should be incorporated considering the future upgradation requirements.	Please follow tender conditions
729	Volume 1		NIT; 1.1.2 Key details	Date & time of Submission of Tender 26.10.2020 up to 15:00 Hrs.	We would like to highlight that Bidder shall requires adequate time to review the response provided by the Client and incorporate the same after Addendum replies are issued by UPMRCL. So we request UPMRCL to extend the bid submission deadline by minimum of 6 weeks from issuance of Replies to Bidders query	Refer Addendum-1

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730	Volume 1		NIT; 1.1.3 Source of Funds; ITT; A2 Source of Funds	UPMRCL has applied Loans from multilateral funding agency (EIB) hereinafter-called "Funding Agency" towards the part cost of the Project,EIB has already agreed in principle for financing the Kanpur project requirements included in the tender.For Agra project, UPMRCL has already applied for funds for requirements included in this tender.	Kindly confirm the status of financing agreement with EIB for Kanpur Metro project and also for Agra Metro project	Please follow tender conditions
731	Volume 1		NIT; 1.1.4.1 Eligible Applicants: Sub clause ix) ITT; A3.9 In Case OF JV/ Consortium	NON-SUBSTANTIAL PARTNERS IN CASE OF JV/CONSORTIUM Lead Partner must have a minimum 26% participation in the JV/Consortium. Substantial Partner should have at least 26% participation, otherwise they will be termed as non-substantial partner and will not be considered for evaluation, which means that their financial soundness and work experience shall not be considered for evaluation of JV/Consortium.	We would request you to waive off this minimum participation requirement, in case the consortium members are from same group/sister companies. As a result of this clause, international participants who form a consortium with their Indian subsidiaries would be required to have at least 26% participation if they bring in the technical/financial credentials. This would prevent them from localising their operations. This also goes against the spirit of the "Make in India" initiative that invites foreign players to setup local operations in India. Any concerns on the performance of the Indian subsidiary would be alleviated as the members of the consortium are jointly and severally liable.	Please follow tender conditions
732	Volume 1		NIT; 1.1.4.1 Eligible Applicants: Sub clause xii)	xii) Tenderer and all of its associates (if any) and all the members of the "Group" in case of joint venture will be required to confirm and declare in the Tender submittal they have not engaged in any fraudulent and corrupt practice as defined in Sub-Clause 4.33 of the General Conditions of Contract and that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract.	We understand that the only Bidders entity which is participating in this tender is required to confirm and declare in the Tender submittal that they have not engaged in any fraudulent and corrupt practice as defined in Sub-Clause 4.33 of the General Conditions of Contract and that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract. Kindly Confirm	Please follow tender conditions
733	Volume 1		NIT; 1.1.4.2 Minimum Eligibility Criteria; (B) Financial Standing	(ii) T2- Profitability: Profit before Tax should be Positive in at least 2 (two) years, out of the last five audited financial years. In case of JV/Consortium: The Profitability of the only lead member shall be evaluated.	We believe that the Financial capability of any company shall be checked by its Net-worth and its ability to have a sufficient credit line for project execution (Liquidity). Also, Net-worth reflects the true worth of the company whereas profitability can change very quickly for various reasons and doesn't give correct insight into company's ability to get credit or invest to execute projects in future. So, we request UPMRCL to waived off the profitability requirement.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
734	Volume 1		NIT; 1.1.4.3 Bid Capacity Criteria:	Where, A = Maximum of the value of works executed in any one year during the last five financial years (updated to 30.06.2020 price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year). N = No. of years prescribed for completion of the work =36 months B = Value of existing commitments (as on 30.06.2020) for on-going works during period of 36 months w.e.f. 01.07.2020	We understand that the values of works executed required for "A" and value of existing Commitments for "B" is required to be provided only for similar works only. Kindly Confirm	The values of works executed required for "A" and value of existing Commitments for "B" is required to be provided only for all works.
735	Volume 1		ITT; C12.3; Page 24	The key staff for design and construction shall be from that member of the Joint venture or consortium or the subcontractor on the experience of which, the JV/Consortia has been prequalified.	Request UPMRCL to remove the requirement of Key staff from that member of the Joint venture or consortium or the subcontractor on the experience of which, the JV/Consortia has been prequalified.	Please follow tender conditions
736	Volume 1		ITT; C19.1; Page 24 ITT; C19.3; Page 24	The Tenderer shall submit full details of the identity of the proposed parties who would respectively provide or issue: (a) Performance Security in accordance with Sub-Clause 4.2 of the GCC; (b) Parent company Undertakings in accordance with Clause 4.2 of the GCC; (c) Parent company Guarantees in accordance with Clause 4.2 of the GCC; If the Tenderer comprises a partnership, consortium or joint venture, a parent company of each member or participant will be required to execute the Undertakings and Guarantees referred to in sub-paragraphs (b) and (c) of C19.1 above	Request UPMRCL to remove the requirement of Parent company Undertakings (in accordance with Clause 4.2 of the GCC) and Parent company Guarantees (in accordance with Clause 4.2 of the GCC) for entities directly participating in the tender without help of item Parent company credentials.	Refer Addendum-1
737	Volume 1		NIT; 1.1.4.2 Minimum Eligibility Criteria: (A) Work Experience:	(A) Work Experience: The tenderers will be qualified only if they satisfy the criteria as given below: Notes: 2. The tenderer shall submit details of work executed by them, in the Performa of Annexure-1 for the works to be considered for qualification of work experience criteria	We request UPMCL to allow bidder to use the credentials of Associate company for meeting qualification criteria, without considering the associate company in JV/consortium. Definition of Associate with respect to the applicant: is one who directly/indirectly controls, or are controlled by, or are under common control. As used in this definition, the expression "control" means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 70% (Seventy per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and policies of such person by operation of law.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
738	Volume 1		ITT; Clause C24.4: Pg. 28	The text of the questions raised by all the tenderer and the responses given, will be transmitted without delay to all purchasers of the Tender Documents. Any modification of the Tender Documents listed in paragraph B4 which may become necessary as a result of the Pre-Tender meeting shall be made by the Employer exclusively through the issue of an Addendum/ clarification pursuant to paragraph B4.	We understand that the Addendum/ clarification issued by the Employer will form part of Contract Agreement. Kindly Confirm	Agreed, please follow tender conditions
739	Volume 2		GCC Clause 2.2; Access to and Possession of the Site	For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time and no monetary claims whatsoever shall be paid or entertained on this account.	We would like to highlight that any delay in granting right of access to, or possession of the Site, to contractor might delay/impact the complete project schedule and installation assumption of contractor, thus request client to provide adequate compensation for such delay in addition to extension of time	Please follow tender conditions
740	Volume 2		SCC Add. Clause 56;	The Contractor shall furnish a Bank Guarantee from an Indian Nationalised Bank for an amount equivalent to ten percent of cost of spares (without escalation/de-escalation) required for maintenance of Telecommunication Systems under this contract during a period of ten years	We request UPMCL to delete the requirement of Bank Guarantee for an amount equivalent to ten percent of cost of spares, instead Bidder can submit undertaking confirming the same.	Please follow tender conditions
741	Volume 2		SCC Add. Clause 63;	Retention Money Retention money equal to 10 percent of the amount due to the Contractor from each on account payment will be retained, so as to maintain a reserve in the hands of the Employer equal to 5 percent of the Contract Price.	We request UPMRCL to release the Retention amount deducted against of Bank Guarantee (Retention BG) on quarterly basis. Releasing of retention amount against Bank Guarantee would help improve Bidders cash flow thus submitting competitive Bid	Please follow tender conditions
742	Volume 2		SCC Clause 11.3;	Provisional Payment Against Material at Site 80% of Cost Center C of all sections (Except MS Section) and 80% of Cost Center B for MS Section against Indemnity bond as described in GCC, Balance 20% after acceptance of Installation Test as described in Cost center D of all Sections (Except MS Section) and in Cost center C of MS Section against safe custody Bank Guarantee. Safe Custody Bank Guarantee shall be released after acceptance of Installation Test	Request UPMRCL to allow bidder to submit Indemnity Bond in option to Safe Custody Bank Guarantee also for Balance 20% after acceptance of Installation Test as described in Cost center D of all Sections (Except MS Section) and in Cost center C of MS Section.	Refer Addendum-1
743	Volume 2		SCC -39; Clause 11.3	Provisional Payment Against Material at Site 80% of Cost Center C of all sections (Except MS Section) and 80% of Cost Center B for MS Section against Indemnity bond as described in GCC, Balance 20% after acceptance of Installation Test as described in Cost center D of all Sections (Except MS Section) and in Cost center C of MS Section against safe custody Bank Guarantee. Safe Custody Bank Guarantee shall be released after acceptance of Installation Test.	We request UPMRC to remove Safe custody Bond requirement as 30% of total Bid price already blocked in Installation , testing & commissioning Milestone.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
744	Volume 2		SCC -40; Clause 11.4.1	Application for Interim Payment Certificate Contractor may apply for part completion of any milestone, if the milestone activity has been at least 50% completed, along with supporting details justifying the percentage completion being requested. The Employer's Engineer shall have the full authority to accept, modify or reject any such request. The decision of the Engineer shall be final and binding. Notwithstanding early completion of the Milestones or part of milestones, the payment to the Contractor at any time shall not exceed the cumulative monthly cash flows agreed at the time of award of the Contract.	We request UPMRC to amend the clause & allow monthly payment based progress of work. No payment till 50% of milestone value impact Cash flow very badly	Please follow tender conditions
745	Volume 2		SCC -61; Additional Clause	BOCW (Building and Other Construction Works) Cess Bidders need to judge the applicability of BOCW for the work. Any liabilities on account of BOCW at any stage shall be on part of bidder and the quoted price shall be inclusive of BOCW charges. If same is not applicable, the bidder needs to submit required undertaking/certificates. The UPMRC shall make the deduction accordingly and deposit the amount to the concerned authorities	To avoid any ambiguity during execution , we request UPMRC to clarify whether BOCW will be deducted 1% of total contract value OR 1% of Testing & commissioning milestone only	Please follow tender conditions
746	Volume 2		SCC -63; Additional Clause	Retention Money Retention money equal to 10 percent of the amount due to the Contractor from each on account payment will be retained, so as to maintain a reserve in the hands of the Employer equal to 5 percent of the Contract Price. The Retention money shall be held by the Employer without obligation to invest them or account for interest thereon or to place them in a designated account. No interest of whatsoever nature and type will be payable by the Employer in respect of Retention monies. Retention money shall become due to the Contractor on the date of issue of the Final Taking Over Certificate of works in respective sections/corridors	We request UPMRC to accept Retention BG instead of deduction from IPC.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
747	Volume 1		Instruction to Tenderers Clause No. A.3 Volume 1. Page No 2	<p>Eligible Tenderers - A Tenderer may be from any country and all areas either a single entity or any combination of entities in the form of a JV/Consortium under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a JV/Consortium:</p> <ol style="list-style-type: none"> 1. All partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; and 2. The JV/Consortium shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV/Consortium during the tendering process and, in the event the JV/Consortium is awarded the Contract, during contract execution. 	<p>We understand that,</p> <ol style="list-style-type: none"> 1. Bidding by consortium consist of foreign entity and Indian entity is allowed. 2. Consortium is not required to be registered as a taxable entity. <p>Please confirm</p>	<ol style="list-style-type: none"> 1. Please follow tender conditions 2. Please follow relevant prevailing rules
748	Volume 2		SCC - Clause 35 Volume 2. Page 18	<p>Sub Clause 11.1.1 (i) of GCC is replaced as under:</p> <p>(A):</p> <p>(a) The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions.</p>	<p>In case of bidding by consortium consist of Indian entity & Foreign entity, GST will be reimbursed as below -</p> <ol style="list-style-type: none"> 1. In case work of any consortium member is covered as works contract, the GST as applicable and charged in the invoice on works contract will be reimbursed by employer to contract. 2. In case if any work of any consortium member is not covered in works contract, the GST as applicable and charged in the Invoice for supplies and services as per will be reimbursed by employer to contract. 3. In case of offshore supplies and services by foreign consortium member, the employer will be importer on records and employer's IEC will be used for customs clearance. Similarly in case of offshore services by consortium member, the employer will borne and deposit RCM GST. <p>Please confirm the same.</p>	<p>It is composite contract and implication of GST will be as per prevailing rules</p>

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
749	Volume 2		SCC - Clause 40 Volume 2. Page 21	Application for Interim Payment Certificate Contractor may apply for part completion of any milestone, if the milestone activity has been at least 50% completed, along with supporting details justifying the percentage completion being requested. The Employer's Engineer shall have the full authority to accept, modify or reject any such request. The decision of the Engineer shall be final and binding. Notwithstanding early completion of the Milestones or part of milestones, the payment to the Contractor at any time shall not exceed the cumulative monthly cash flows agreed at the time of award of the Contract.	In case of bidding by consortium of foreign entity and Indian entity 1. Each consortium member can raise separate invoices for their respective scope and get paid separately. 2. Each consortium member's scope will have clear billing breakup identifying the details of currency wise split for their respective scope as per consortium agreement. Please confirm	Please follow tender conditions
750	Volume 2		Clause GCC 7.8 Volume 2, Page 60	Ownership of Plant, Rolling Stock and Materials - Each item of Plant, goods, and Material shall become the property of the Employer, when it is delivered to Site or payment thereof, either in part or full, has been made. The Contractor shall however continue to bear the risk in respect of such items which continue to remain in his custody.	Please clarify whether - In case of offshore supplies by foreign consortium member, ownership will be transferred to employer on CIF / CIP Indian port of entry basis. Please confirm the same	Please follow tender conditions
751	Volume 2		Clause GCC 7.4 Volume 2, Page 74	In the event of exemption of custom duties, GST or any other cess/levy being granted by the Government in respect of the Works, the benefit of the same shall be passed on to Employer. The Contractor shall therefore maintain meticulous records of all the taxes and duties paid and provide the same as and when required by the Employer, so that the Employer is able to avail the reimbursement for which UPMRC may issue a procedure order separately. Alternatively, the Employer may direct the Contractor to get the reimbursements based on exemption certificates / government's order and it shall be obligatory on part of the Contractor to get the reimbursements from the statutory authorities and pass on the benefit to UPMRC.	We understand that project is eligible for concessional customs duty under project imports (Chapter 98) for imports of goods by contractor & sub-contractor required for execution of project. In this regard, please confirm that - 1. Whether customer will issue necessary documents required to import under project import to contractor and sub-contractor. 2. The benefit of concessional customs duties under project import to be considered in bid price and no separate benefit to be passed on to employer by contractor. 3. In the event if documents are not made available to contractor and sub-contractor for project import benefit, employer to reimburse the differential customs duty (including SWS) along with applicable GST on reimbursement claim. Please confirm the same.	Refer Addendum-1
752	Volume 2		SCC - Clause 35 Volume 2. Page 18	Sub Clause 11.1.1 (i) of GCC is replaced as under: (A): (a) The contract price, subject to any adjustment thereto in accordance with the contract shall be inclusive of all taxes (except Goods and Services Tax – GST), duties, levies, cess, royalties, etc. and all other incidental charges required to fulfil the tender conditions	Please confirm whether suitable adjustment will be made in contract price for change in law on inputs and output as below - 1. Increase or decrease in tax rates 2. Any new levy 3. Change in interpretation	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
753	Volume 1		Volume 1, ITT FORM OF TENDER: Appendix-01: Contract Conditions	KD2 Submission of Final Design submission of all telecom sub-systems - 48 Weeks prior to KD6	KD 6 for Priority Section Kanpur is 30th November 2021. KD2 milestone is 29th November 2020 which is 2 months away from tender submission date and KD1 is within 16 Weeks from the date of LOA. Please amend the Key Dates	Refer Addendum-1
754	Volume 1		Volume 1, ITT FORM OF TENDER: Appendix-01: Contract Conditions	General	As we know that project schedule is very tight and challenging. Therefore, we request you to provide early access dates of priority Section in both the cities (Kanpur and Agra). This will help the contractor to have an realistic and effective plan for the Installation and commissioning activities to meet the revenue service milestone.	Refer Addendum-1
755	Volume 1		ITT FORM OF TENDER: Appendix-01: Contract Conditions	General	Kindly confirm the NTP (Notice to Proceed)/start date of the contract	NTP shall be issued either along with LOA or Susequent date
756	Volume 1		Volume 1 ITT KNPAGS-01, Clause A1	General	1.Kindly confirm the tunnel (Mono tube or Bi-Tube) details for underground section and viaduct (mono or dual) details for elevated section in Kanpur Metro. 1.Kindly confirm the tunnel (Mono tube or Bi-Tube) details for underground section and viaduct (mono or dual) details for elevated section in Agra Metro.	In general, Track area in underground section will be in Bi-Tube tunnel. Track area in viaduct section will be on twin viaduct.
757	Volume 1		Volume 1 ITT KNPAGS-01, Clause A1	General	Kindly confirm – 1.No. of OCC (Operation Control Center) in AGRA and No. of OCC in Kanpur 2.Location of each OCC Is there any BCC (Backup Control Center) also?	Please refer tender drawings in Volume-05 of tender documents.
758	Volume 1		Volume 1, ITT KNPAGS-01, Schedule J3, Sl.8	Cable Trays/Brackets provided by E&M. Telecom tenderer shall pay the cost (for Elevated & Underground stations, Depots & OCCs)	As per our understanding, Requirement of Cable Trays and cost of same shall be borne by E&M/Civil Contractor based on their Design Requirement., which is a normal practice in all Metro Project. Request you to remove the Cable Tray design and cost payment from Telecom Contract scope and add in E&M/Civil Scope.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
759	Volume 5		General	----	Please provide the CAD drawings of Stations, Depots, OCC, CER, RSS, TSS and Section Plans to estimate the BOQ of various equipment of Telecom Sub-systems.	To be dealt during design phase
760	Volume 4		PS Chapter-1/Clause 3.6	The Site Telecom Contractor shall liaise and deploy initial setup to provide 3rd Party leased line connectivity with sufficient, dedicated & high availability bandwidth of approximately 1 Gbps from the Kanpur & Agra Metro Rail Projects to centralised OCC at Lucknow. The Leased line connectivity shall comply with following SLA but not limited to Availability- 99.99 % .	1. Kindly confirm whether the existing Lucknow OCC will be upgraded OR new centralized OCC will be constructed to cater all three locations – Lucknow, Agra and Kanpur. 2. Kindly confirm what would be expected from OCC at Kanpur and OCC at Agra once Centralized OCC will be operational. 3. Since, Leased Line will be provided by 3rd Party and initial and recurring charges will be paid by UPMRC , Availability of 99.99% to be ensured by 3rd Party leased line provider. 4. Regarding Centralized OCC, kindly also confirm on the - 1. Expected NTP & completion time 2. Who will be responsible to provide these leased lines (Employer OR Contractor)? 3. Where these lease lines will be terminated in Lucknow (e.g. SER, TER)? 4. Clear activity wise scope expected (design, engineering, interface, integration etc.) from a Telecom contractor of KNPAGRS-01 to be performed. 5. Clear material scope which a Telecom contractor of KNPAGRS-01 is supposed to be delivered 6. Architecture and functions 7. Which all systems will be monitored and controlled from this centralized OCC 8. Common GUI or separate for each subsystem? 9. Scope of Furniture/Ergonomics study for this Centralized OCC under Telecom Contractor of KNPAGRS-01	1. Centralised OCC will be there at Lucknow. 2. Monitoring of all lines. 3. Refer Sr. No. 18 4. 1. Will be dealt during design stage. 2. Refer Sr. No. 18. 3. TER 4. Refer Sr. No. 18. 5. Equipment related to Optical fibre termination etc. 6. Will be dealt in design phase.
761	Volume 4		PS Chapter-1/Clause 4.4.12	The Contractor shall submit Maintainability Plan to the Employer's Representative for review in accordance with RAMS Plan as per table below and as given in the respective chapters of each subsystem Table 1.4: MTBF of the major systems 7 CCTV System	MTBF value mentioned for the Video Display Units (monitors) is >150000 Hours, which is not as per Industry Standard. Please amend the requirement of MTBF for Video Display Units (monitors) as >35000 Hours.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
762	Volume 4		PS Chapter-1/Clause 6.1.1.4	All of the Contractor's key design staff shall be located in Kanpur & Agra. The Contractor's design staff shall be competent with sufficient experience in the individual responsibility areas. While the supply of equipment may be done from the OEM of the equipment, competent and sufficiently experienced technical representative of the OEM (qualification and experience to be approved by UPMRC) shall be available at Lucknow for design reviews/discussions and for installation supervision of the sub system during the implementation of the project.	It is mentioned that Contractor's Key Design Staff shall be located in Kanpura & Agra, whereas experience technical representative of the OEM shall be available at Lucknow for design reviews/discussions and Installation Supervision. We understand that OEM representative is required at Kanpur & Agra and not at Lucknow. Please confirm and amend this clause accordingly.	Please follow tender conditions
763	Volume 4		PS Chapter-1/Clause 6.6.1	Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, Convergence Time, Latency, Synchronization, Interfaces & Integration etc.	Please amend the clause as per below understanding: Contractor shall demonstrate maximum features of individual sub-systems during FAT at respective OEM premises. Detail Interfaces & Integratin will be validated during PAT, SAT and ITC stage at site.	Please follow tender conditions
764	Volume 4		PS Chapter-1/Clause 8.4.4.10	The Contractor shall carry out tests on the OCC, CERs, Depots, stations and RSSs/TSSs etc operation of the System in accordance with the reviewed operation procedures as below: (1) When OCC is the master control (2) Switchover from main to standby control within OCC, if applicable (3) Switchover from Main CER to back up CER (4) Switchover from back up CER to Main CER (5) Switchover from Main System to Standby System of Station, CERs etc.	As we understand, Central Level Equipment will be installed at Main CER and Backup CER only for both Agra & Kanpur locations. At OCC, only MMIs will be installed in the Theatre, Security Control location and other Control Room of OCC. There will not be any switchover within the MMIs. Please confirm.	Please follow tender conditions
765	Volume 4		PS Chapter-2/Clause 1.3.4.5	Kanpur Metro project have two corridors, two CERs & one OCC, two depots, two Administrative Buildings and three RSSs. Total nos. of Stations for Kanpur Project are 30. While Agra Metro Project have one corridors, two CERs & one OCC, one depots, one Administrative Buildings and two RSSs. Total nos. of Stations for Agra Project are 13.	Please provide the OCC and CERs location, Administration Building (HQ) location, RSS/TSS locations and its associated drawings of Kanpur and Agra Metro Project in order to estimate the OFC Cable Length, CCTV Cameras, Access Control Readers, Speakers, Clocks, etc.	Refer UPMRCL S.No 27

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
766	Volume 4		PS Chapter-2/Clause 1.3.4.5	Kanpur Metro project have two corridors, two CERs & one OCC, two depots, two Administrative Buildings and three RSSs. Total nos. of Stations for Kanpur Project are 30. While Agra Metro Project have one corridors, two CERs & one OCC, one depots, one Administrative Buildings and two RSSs. Total nos. of Stations for Agra Project are 13.	With reference to Volume2 / ITT KNPAGS-01 , Appendix-J, a total of 6 nos. of RSS/TSS is mentioned for Kanpur & Agra Metro Project, whereas as per clause 1.3.4.5, total RSS/TSS is mentioned as 5nos. Please confirm the correct quantity of RSS/TSS.	Total no. of RSS/TSS is 5.
767	Volume 4		PS Chapter-2/Clause 1.4.2	Main System Elements 1.4.2.1 WAN Nodes (i) The WAN shall connect all sites in ring topologies via WAN Nodes which shall be provided at all main sites including stations, Administrative Buildings/HQ, RSSs, depots, & CERs.	With reference to PS Chapter-2 clause 1.2.1 and 1.20.9, we understand that Layer2 Switches (Carrier grade or Industrial Grade) will be provided at OCC, Admin Building/HQ and RSS locations and same will be connected to Backbone WAN Network. We request to remove the requirement of Distribution Switches at OCC, Admin Building/HQ and RSS locations from clause 1.4.2, 1.20 and 1.20.9.	Please follow tender conditions
768	Volume 4		PS Chapter-2/Clause 1.7.1	The Mean Time to Repair, not including travel time, of the FOTS, its elements and networking shall be less than 1 (One) hour (excluding travel time). The travel time should not be more than one hour.	With reference to clause 4.4.12, Table1.5- it is mentioned that MTTR for FOTS is 4 Hours (excluding travel time), whereas, as per clause 1.7.1, MTTR of 1 Hour is required (excluding travel time). We request to modify clause 1.7.1 requirement of MTTR for 4 Hours (excluding travel time).	The Mean Time to Repair, not including travel time, of the FOTS, its elements and networking shall be less than 1 (One) hour (excluding travel time). The travel time should not be more than one hour.
769	Volume 4		Appendix- J of Annexure 2 of ITT	Minimum BOQ (Ch-2 BOQ of Appendix- J of Annexure-2 of ITT) ,	With reference to clause 1.3.1.1 (b) & 1.3.4.4 of PS Ch-2, please include the BOQ of Armoured 24 Core Optical Fibre Cable.	Please follow tender conditions
770	Volume 4		PS Chapter-2/Clause 2.4.1.6	The specifications of the Router, Firewall and Unified Threat Management System (UTMS) shall be minimum as above mentioned in clause 1.20.11.	With reference to clause 1.20.11 and clause 2.4.1.6, Router, Firewall and Unified Threat Management System is required for FOTS and OA/IT Systems. We request to modify the Minimum BOQ (Ch-2 BOQ S. No. 11 -Appendix- J of Annexure-2 of ITT) quantity of these items as "4 nos." each for Kanpur and Agra Metro Project	Please follow tender conditions
771	Volume 4		PS Chapter-2/Clause 1.13	The FOTS shall conform to the applicable ITU-T and IEEE standards and shall fulfil the EMC standards EN 55022 class A and EN50082-1.	EN55032 emissions standard covers multimedia equipment and applicable for products marketed for communications and information technology (IT) end equipment. So, Requesting to please modify it as "The FOTS shall conform to the applicable ITU-T and IEEE standards and shall fulfil the EMC standards EN 55022 class A and EN50082-1 / EN55022."	Refer UPMRCL S.No 26

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
772	Volume 4		PS Chapter-2/Clause1.3.4.5	Kanpur Metro project have two corridors, two CERs & one OCC, two depots, two Administrative Buildings and three RSSs. Total nos. of Stations for Kanpur Project are 30. While Agra Metro Project have one corridors, two CERs & one OCC, one depots, one Administrative Buildings and two RSSs. Total nos. of Stations for Agra Project are 13.	As per understanding of this clause and PS document, redundant switches will be CERs. Please clarify CERs will act as OCC and BCC for network redundancy point of view. Also please help to understand role of separate OCC as mentioned in clause.	Refer UPMRCL S.No 27
773	Volume 4		PS Chapter-2/Clause1.4.3.1 (c)	The equipment shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks.	As per our understanding the Core switches, Distribution switches and Access switches will be installed in temperature controlled areas hence all switches will not be rugged (Industrial grade with high temperature 75 degree for outdoor/closed high temperature areas like tunnel, open area) switches. For open area only, industrial grade switches can be proposed. Please modify it as "The equipment for open area shall be rugged Commercial off the Shelf (COTS) for Metro Railway purposes and harsh environment , widely deployed across a wide range of metro networks".	Refer UPMRCL S.No 28
774	Volume 4		PS Chapter-2/Clause1.4.3.1 (h)	Ability to integrate with Non-IP based equipment and networks.	Switches are based on IP/Ethernet protocols with open standard. Integrate to any other system will require IP/Ethernet / Open standard. Please clarify for the clause.	Refer UPMRCL S.No 29
775	Volume 4		PS Chapter-2/Clause1.1.8.3	A summary alarm indication shall be provided at the top of each rack to indicate the summary alarm status of the equipment within the rack.	Switches have dedicated LED indication for their health and for detailed observation for network alarms, it is recommended to check switch logs and NMS. Requesting to please remove the clause as mentioned above.	Refer UPMRCL S.No 33
776	Volume 4		PS Chapter-2/Clause1.2.0.10 (1)	24- ports-10/100/1000-Base-T-PoE/PoE+ and 4x1G/10G-SFP+ slots:- PoE/PoE+ ports are required for PoE/PoE+ access switches; for Non-PoE Access switches PoE/PoE+ ports are not required. 40G Stacking ports/clustering ports will be considered additional, in addition to the above port requirement.	AS access switches will have sufficient stacking bandwidth with total 20G (aggregated 40G). Request to change the clause to "24-ports-10/100/1000-Base-T-PoE/PoE+ and 4x1G/10G-SFP+ slots:- PoE/PoE+ ports are required for PoE/PoE+ access switches; for Non-PoE Access switches PoE/PoE+ ports are not required. 40G-Stacking ports/clustering ports (aggregated) will be considered additional, in addition to the above port requirement. "	Refer UPMRCL S.No 411
777	Volume 4		PS Chapter-2/Clause1.2.0.10 (1)	1.20.10 (11) Certifications- UL, EN 60950, ROHS, EN55032, EN55024	EN55032 covers multiple standards (multi-media (ITE, Audio/Video, Broadcast receivers & Combinations) which comprise of three categories EN55013 (sound and television broadcast receivers), EN55022 (information technology equipment, EN55103-1 (electromagnetic capability - family standard for audio video, etc). Hence request to change the clause to "Certifications- UL, EN 60950, ROHS, EN55022/EN55032, EN55024" as (EN55022) is specific to switches.	Refer UPMRCL S.No 26

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
778	Volume 4		PS Chapter-3/Clause 4.1.1.2	EPABX Network Topology For EPABX network, stations shall be connected on a ring topology and the EPABX at one CER shall be main node and EPABX at another CER shall be backup node respectively. Station nodes shall act as the transit node forming a ring topology in effect. To form the "ring", the stations shall be grouped together with 4 stations in each group and each such group shall be connected to the main switches of CERs directly on one Ethernet link.	As Telephone Backbone is fully IP based, Telephone Ring architecture will follow the FOTS Ring architecture. Please amend the requirement of clause 4.1.1.1, 4.1.1.2 and 4.2.1.5 accordingly.	Please follow tender conditions
779	Volume 4		PS Chapter-3/Clause 4.1.1.7	The EPABX switches at all locations shall provide extensions locally: i) at depot throughout UPMRC premises, OCC and administrative building including other buildings (like ancillary buildings of UPMRC (TSS, RSS, Time office, etc.)) in close proximities to OCC/Depots and stations. ii) at the particular stations where exchange is located through multi pair telephone indoor/outdoor cables. Two 50 pair cables are to be laid for staff quarter from TER/CER of Depot or nearest metro station to the guard room at Entry Gate of Staff Quarters. Cables are to be terminated at MDF/IDF which shall be provided inside guard room of staff quarter. Further extensions within the Staff Quarters are not within the scope of Telecom Contractor.	Please provide the tentative distance between TER/CER of Depot or nearest Station to the Guard Room of Staff Quarter so that 50 Pair Cable quantity can be estimated accordingly.	To be dealt during design phase
780	Volume 4		PS Chapter-3 /Clause 4.1.1.13.1 (7)	A minimum of 20 memory keys with 10 keys for speed dialling and 10 keys for programmable system features which shall include but not be limited to, call pickup, call forward, call back, system speed dial, call park, direct pickup, cancel call forward, cancel call back, personal speed dial and one spare key;	we request you to modify the clause with maximum 10 keys as analog phone does not come with 20 keys.	Refer UPMRCL S.No 48
781	Volume 4		PS Chapter 3/Clause 4.1.1.13.2 (17)	The digital feature telephone shall support ISDN BRI (2B+D) and ISDN PRI (30B+D) signalling.	The digital Phone can dial or receive a call from any trunk signaling, but as phone works on (2b+d) signalling. And does not required and support in side the digital phone as (30b+d) signalling. We request you to kindly amend the clause accordingly.	Refer UPMRCL S.No 49
782	Volume 4		Chapter - 4, 3.3.4	3.3.4 The Contractor shall liaise with all concerned authorities including DoT, WPC, SACFA, civil Aviation authorities and other local authorities and obtain necessary clearances/sanctions for installation and commissioning of the Radio system. All costs therein have to be borne by the Contractor.	Our understanding is only liasioning cost to be borne by contractor. All Government Fees or Charges will be paid by Employer. Please confirm.	Refer UPMRCL S.No 56

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
783	Volume 4		Chapter - 4, 6.16.4	6.16.4 The Telecom Contractor system shall be up-gradable to support higher data rates service by only software upgrades or upgradable to broadband services by adding broadband base station based on LTE or latest technology on the proposed infrastructure. Contractor to detail how this shall be achieved.	Bidder's understanding is that upgradation from TETRA to broadband base station (LTE) have many dependencies as given below: 1. Spectrum Availability for LTE 2. Revamping of TETRA System Hardware Please remove this requirement of upgradation of TETRA to LTE. Also please clarify the meaning of "latest technology".	Please follow tender conditions
784	Volume 4		Chapter - 4, 5.1.3	5.1.3 The Radio System shall provide a common radio communication platform to all radio users.	Bidder's understanding is the Radio System shall provide a common radio communication platform to all Tetra radio users of KNPAGS01 contract. Please confirm.	Please follow tender conditions
785	Volume 4		Chapter - 4, 5.1.6	5.1.6 Antenna network / IBS comprising of leaky coaxial cable (for underground and in case the antennae coverage is not there for elevated/at grade) shall enable radio coverage throughout the network. Also, Antenna Network/ IBS for Cellular Mobile Communication shall enable mobile cellular coverage throughout the network within the underground station's areas of UPMRC for Kanpur and Agra Metro Projects.	Bidder's understanding is IBS network and LCX will be provided for Cellular coverage inside tunnel and UG station only. Cellular BTS will be in scope of UPMRC/Third party Telecom Operator. The interfacing between Telecom Contractor & Cellular Operator will be facilitated by UPMRC. Please confirm.	Please follow tender conditions
786	Volume 4		Chapter - 4, 3.2.1 (9)	3.2.1 (9) IBS infrastructure along with NMS for TETRA Radio System including Fire and Police network comprises of Low loss coaxial cable, splitters, amplifiers, and accessories to support wide band signal distribution over 380-400 MHz of frequencies with optimum performance and also able to support signals from 150 MHz upto 1 Ghz without much degradation.	Bidder's understanding is that there will be two separate IBS network and LCX cable in UG section as follows: 1. IBS antenna network and LCX cable for Tetra, Fire and Police. 2. IBS antenna network and LCX cable for Cellular coverage. Please confirm.	Please follow tender conditions
787	Volume 4		Chapter - 4, 5.12.6.9	5.12.6.9 The OCC Controller will normally input the TID in his RCW/RAU and the RCW/RAU, through the table in the RCW database shall correlate it to the relevant Radio ID and establish the relevant call automatically.	As per our understanding, RCW database will have radio ID and Rake ID only. The TID is a temporary ID which will be received from ATS to RCW. The TID will keep on change for each train RUN. The RAU does not have any facility of a RCW GUI. Please ammend the clause accordingly as below: "The OCC Controller will correlate the TID to the relevant Radio ID and establish the relevant call automatically".	Please follow tender conditions
788	Volume 4		Chapter - 4, 5.16.1.6.2	5.16.1.6.2 All the radios in the system including, base station, hand portable radio and Train radio shall be based on a flexible software design to allow programming by a notebook computer. The following radio parameters shall be configurable into the radio base station and Cab radio as a minimum: 1) RIN; 2) talkgroup;	RIN and Talkgroup configuration is not applicable for radio base station. Please ammend the clause accordingly.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
789	Volume 4		Chapter - 4, Radio 6.3.2	6.3.2 A total of 5 (Five) frequency pairs are likely to be allotted for use by the metro for Kanpur and Agra Metro Projects. In case more frequencies are required by the Contractor, then the same have to be arranged by the Contractor totally at his cost and without time implications to the Employer. The frequencies which may be allotted are in the band 380-400 MHz.	As per our understanding DoT will allot the frequency license to UPMRC for Metro Operation. WPC is independent authority in India to allot frequency pairs and to define specific frequency band for UPMRC. The contractor will do only the liasioning work on behalf of UPMRC. In case, if extra frequency pairs are required, it will be provisioned by UPMRC only. Please confirm	Refer UPMRCL S.No 56
790	Volume 4		Chapter - 4, Radio 6.12.1.8	6.12.1.8 The Hand-portable radio shall have a WRF Power Output, Full Keypad and shall comply IP 67 rating.	As per normal Metro operational requirement, IP54 rated hand portable radios are being used in other Metro projects. Please ammend the clause accordingly.	Refer UPMRCL S.No 68
791	Volume 4		Chapter - 4, Radio 6.10.9.1.4	6.10.9.1.4 The system shall also extend Radio Coverage of the Local Police & Fire Authorities Radio Systems inside whole of the Underground section either on the same cable or on a separate LCX cable & Antenna network. All the coordination with the Local Authorities, any additional equipment required at either end shall be provided by the Telecom Contractor. With the implementation of the system, it shall be possible for a Local Police & Fire Deptt. Hand-portable to seamlessly roam inside the underground station area plus the tunnels and continue communication with their on-ground Radio system(s).	Since the UP Police and Fire departments are government agencies, they will not entertain the Telecom Contractor directly. Hence all the coordination with local authorities will be lead by UPMRC. The contractor's scope will to provide technical support only. Also, cost of any additional equipment required to be borne by respective authorities. Please confirm.	Please follow tender conditions
792	Volume 4		Chapter - 4, CDRS 2.3.3	2.3.3 In addition, the contractor shall interface and coordinate with relevant sub systems for telephone System, PAS, Rolling Stock, Radio System, Master Clock System, etc.	Onboard announcement will be done using radio system and the same will be recorded in CDRS through Radio interface. Hence there is no direct interface requirement with rolling stock. Please ammend the clause accordingly.	Please follow tender conditions
793	Volume 4		Chapter - 4, CDRS 5.17 (c.)	5.17 Recording of Voice Channels c. Calls on the dedicated phones in the SCR, DCC, CER, PPIO, Security Controller Room, Police control room and OCC for contacting the emergency services.	As per our understanding these phones are part of KNPAGS01 contract telephone system. Please confirm.	Please follow tender conditions
794	Volume 4		Chapter - 4, CDRS 5.17 (d.)	5.17 Recording of Voice Channels d. Incoming calls from the PSTN to public phones in depots (to track hoax calls/to facilitate investigation)	Please provide the type and numbers of public phones at each depot to be recorded.	To be dealt during design phase
795	Volume 4		Chapter - 4, CDRS 5.17 (g.)	5.17 Recording of Voice Channels g. All live PAS audio messages originating from PAS operators, Radio to PAS operations and Telephone- to-PAS operations.	As per our understanding PAS audio messages originating from PAS operators at OCC, Radio to PAS operations and Telephone- to-PAS operations. Please confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
796	Volume 4		PS Chapter-5/Clause 1.2.2	The PAS shall have control equipment located at the equipment room(s) of each station, OCCs, CERs and depots etc.	With reference to Minimum BOQ Chapter-5 (Appendix- J of Annexure-2 of ITT), we understand that PAS control equipment is not required at OCC and same will be controlled from respective CERs. Please confirm.	Please follow tender conditions
797	Volume 4		PS Chapter-5/Clause3.2	Scope of Supply for Public Address System (4) PAS/PIDS integrated Servers along with MMIs for Station and CERs;	As per clause clause 1.2.4 , 3.3.1, 4.3.2 (4), 5.4.5.5 and clause 7.3.5 of PS Ch-5, we understand that Depot local Server is also required for Depot Operation along with Servers at Stations & CERs. We request to update the S. No. 68 of Chapter-6 (Minimum BOQ of Appendix-J of Annexure-2 of ITT) to include Depot Servers quantity.	Please follow tender conditions
798	Volume 4		PS Chapter-5/Clause3.3.1	The requirements on the scope of services are given in General Requirement (Chapter 1) of this PS. For implementation of PAS, Telecom Contractor shall be required to provide Integrated PAS/PIDS servers at stations, Depot TERs and CERs to interface with ATS (signalling) and should co-ordinate/interface with the TC&S Contractor. The Main and Backup Servers along with MMIs shall be provided at CERs	As per current Metro Signalling/Telecom Design, PAS/PIDS Server interface at Central Level only. Please amend the clause accordingly.	Please follow tender conditions
799	Volume 4		PS Chapter-5/Clause 4.5.1	The output of the PAS Amplifier should be tapped and recorded automatically locally at station server and remotely at CERs, so that record of actual announcement made can be analysed at a later date. The record to be kept for 7 days.	Output of the PAS Amplifier should be recorded automatically at Station Server and on scheduled basis at CERs. Please amend the requirement of clause 4.5.1 and 5.6.5 accordingly.	Please follow tender conditions
800	Volume 4		PS Chapter-5/Clause 5.1.2	The PAS shall have the necessary facilities to direct different live and recorded announcements, Live and recorded Music to separate zones and group of zones simultaneously within a station.	We understand that UPMRC will arrange and provide the necessary equipment and Interface for Live Music from 3rd Party. Telecom Contractor is only responsible to play the live Music on proposed PA System. Please confirm.	Please follow tender conditions
801	Volume 4		PS Chapter-5/Clause5.1.3	PAS announcement shall be capable of being originated from designated hand portable radios also to a set of pre-defined PAS zones at each station. It should be possible to make simultaneously Radio to PAS announcement at minimum 30 different stations. This needs to be coordinated and demonstrated with Radio/Telephone sub systems.	As per current Metro Operations, simultaneous Radio to PAS announcement for 5 stations is sufficient. Please amend the clause accordingly.	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
802	Volume 4		PS Chapter-5/Clause 5.3.1	Station Coverage The following PAS zones shall be provided for each station as a minimum: (5) All Common area in between Property Development and Station area used for passenger movement	Please provide the list of stations and relevant drawings in regard to All Common Area in between Property Development and Station area used for passenger movement in order to estimate the Speakers , PAS Cables and other equipments.	Relevant Drawings have been shared in volume 5,Details of PD area will be shared during design stage
803	Volume 4		PS Chapter-5/Clause 5.6.5	Live audio broadcast relating to emergency, fire and evacuation messages from OCC/CER shall be recorded in the Centralized digital recording system at CERs. Similar broadcasts made from SCR/PSB shall be recorded at the TERs in the PAS station server via MMI (at SCR). The CDRS at CERs shall copy these recordings from station servers at configurable intervals. It shall however be possible to retrieve any message so recorded and save same on an external storage device like a memory stick for future reference.	Broadcasts made from SCR/PSB shall be directly recorded at TERs in PAS Station Server only without any intervention via SCR MMI . Please amend the requirement accordingly.	Please follow tender conditions
804	Volume 4		PS Chapter-5/Clause 6.3.11.8	The loudspeakers and the loudspeaker cables shall be manufactured from fire retardant, low smoke, zero/ low halogen materials and shall be of the fire survival type to ensure circuit integrity for at least 3 hours during fire.	We understand that circuit integrity for atleast 3 Hours during fire is required for loudspeaker cables and Loudspeakers housing only. Please confirm.	Please follow tender conditions
805	Volume 4		PS Chapter-5/Clause 6.3.11.11	All PA speakers shall have a uniform bandwidth from 340 Hz to 18 kHz and shall be equipped with selectable multi power tapings.	With reference to clause 6.3.11.7, Loudspeaker shall have frequency response for 340 Hz to 14 kHz. Please amend the requirement accordingly.	Refer Addendum-1
806	Volume 4		PS Chapter-5/Clause 5.4.2.2	Multi-drop data links (TCP/IP) of adequate bandwidth through FOTS shall be provided to each station, PAS allowing the OCC & CERs to broadcast messages to the following as a minimum: (1) One station; (2) A group of stations; (3) All stations; (4) In a particular zone, group of zones and all zones at stations through Software and hard-wire PAS console; (5) One Train and a group of trains via Radio/FOTS Interface	PAS announcement at a Station or Group of Stations or All Stations from remote location i.e. OCC & CERs by using Hard Wire PAS Console is not possible. This can be achieved only through Software. PAS announcement to different zones or All zones of a Station or OCC can be done locally only from their respective Hard Wired PAS Console. We request to amend the requirement of clause 5.4.2.2 accordingly.	Please follow tender conditions
807	Volume 4		PS Chapter-5/Clause 7.8	Interface with Centralized Digital Recording System All PAS live audio broadcasts relating to emergency, fire and evacuation messages from OCC, SCR, CERs, etc shall be recorded in the Centralized digital recording system at CERs. PAS shall interface with Radio System & Telephone system to finalize type of no. of channels and type of interface, responsible to provide CDRS in CERs	With reference to PS Chapter-5, clause 5.6.5, All PAS live audio broadcasts relating to emergency, fire and evacuation messages from Station SCR shall be recorded in Station local Server and the CDRS at CERs shall copy these recordings from station servers at configurable intervals. With reference to above, we understand that real time recording in CDRS is not required. Please confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
808	Volume 4		PS Chapter-5/Clause5.9.2	The PAS shall have the necessary facilities to mute and attenuate selected PAS locations and zones manually & automatically under time mode control in areas where broadcasts may disturb the public.	Please remove this clause as muting of Zone is not recommended as per the IEC 60849 standards.	Refer UPMRCL S.No 78
809	Volume 4		PS Chapter-5/Clause6.3.1.6	The PAS control equipment shall be equipped with a monitoring speaker to test and verify audio output functions of each amplifier in the PAS equipment racks at all stations and the Depot. This facility can also be provided at SCRs and TERs.	To be removed as this option is available on analog PA system not Digital PA System.	Refer UPMRCL S.No 82
810	Volume 4		PS Chapter-5/Clause6.3.1.9	The audio matrix switch shall be fail safe and shall be capable of being manually/automatically bypassed to maintain all zone broadcast availability, if necessary on failure of the audio matrix switch.	To be removed as this is Vendor specific feature.	Refer UPMRCL S.No 83
811	Volume 4		PS Chapter-5/Clause6.3.4.4	The monitor speaker with volume adjustment control on the PAS control panel shall be used for real time monitoring of any message being broadcast to the pre-defined zones.	To be removed as this is Vendor specific feature.	Refer UPMRCL S.No 84
812	Volume 4		PS Chapter-5/Clause6.3.11.3	Loudspeaker output power shall be limited to provide a maximum SPL of 100 dB(A).	Kindly Consider the changes as per below description: Loudspeaker output power shall be limited to provide a maximum SPL of 100 dB. As no OEM has SPL measurement in dB(A).	Refer UPMRCL S.No 263
813	Volume 4		Appendix- J of Annexure-2 of ITT	Minimum BOQ (Ch-6 BOQ, S. No.-72, 73 & 74 of Appendix- J of Annexure-2 of ITT),	With reference to Ch-6 Minimum BOQ, S. No.-72, 73 & 74 of Appendix- J of Annexure-2 of ITT, Direct view true LED based Display Panel is asked, whereas, as per clause 5.7, True Colour LED Type Display is asked. Please confirm the correct type of Display Panel requirement for Platform and Concourse of Elevated and Underground Stations.	Refer addendum-1
814	Volume 4		PS Chapter-6/Clause 1.2.2	The PIDS shall have control equipment located at the equipment room (s) of each station, Operations Control Centre (OCC), Depots and CERs etc.	There is no requirement of PIDS display at Depot location, hence, PIDS Control Equipment at Depot location is not required. Please amend this clause accordingly.	To be dealt during design phase
815	Volume 4		PS Chapter-6/Clause 5.1.5	UPMRC shall be referred for typical "True Colour LED" type display panel at concourse and Platform level in elevated stations & underground stations covered by Telecom Contractor and detailed layouts shall be submitted to Employer's Representative for review. Layout for "True Colour LED" type display for videos & advertisements shall be developed by Telecom contractor and submitted to Employer's Representative for review.	On True Colour LED based display, there is a limitation on type of Video & Advertisement display as all type of Video can not be played on same. With reference to above, we request to amend the requirement of True Colour LED based display and add following- i. Backlit LED Based Display at Platform of Elevated Stations and TFT based display at Platform of UG Station and Concourse of Elevated and UG Station shall be provided. 2, It shall be possible to play video & Advertisement of TFT display.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
816	Volume 4		PS Chapter7/ clause 6.3.1.6	The master clock system shall work from 48 V +/- 20% DC and 240 AC UPS with an internal battery backup of at least 4 hours for continuous display of date and time without interruption.	We request to amend this clause as follows- The master clock system shall work from 48 V +/- 20% DC or 240 AC UPS with an internal battery backup of at least 4 hours for continuous display of date and time without interruption.	Please follow tender conditions
817	Volume 4		PS Chapter7/ clause6.3.1.9	The sub-master and slave clocks (digital) shall have internal battery backup of at least 4 hours for continuous display of date and time without interruption.	We understand that the UPS power back up shall be made available at site for continuous operation of Masterclock system during failure of the mains power supply. In addition to this internal battery backup of at least 4 hours shall be provided to keep running the internal RTC time in case power fails. <u>Please confirm our understanding.</u>	Please follow tender conditions
818	Volume 4		PS Chapter7/ clause1.2.1	The Master Clock System shall be compliant with ITU-T G.811. It will serve as Primary Reference Clock (PRC) for all clock functions of the UPMRC. The Master Clock shall provide synchronised time signals received by radio communication from orbiting GPS satellites. The Master Clock shall derive Coordinated Universal Time (UTC) from received GPS satellite signals and shall convert this to local Indian Standard Time. The Telecom Contractor shall provide the Master Clock for Date & Time signal also so that it can act as NTP server for the Master Clock System of UPMRC network.	We understand that as per ITU-T G.811 standard, PRC E1 / 2.048 MHz output is required for frequency synchronization in addition to the time & date synchronization functions. Please confirm our understanding.	Refer Addendum-1
819	Volume 4		PS Chapter7/ clause1.2.2	Master Clock system to be provided under Telecom Contract shall consist of following major components: (1) GPS Master Clock Unit working in active-active Redundant mode at CERs levels.	We understand that the redundant GPS Master Clock Unit working in active-active mode consist of two Master clocks interlinked to each other to achieve full redundancy specially for the case when primary GPS antenna fails, the primary Master Clock acquires the GPS time- of-day from secondary GPS antenna through redundant link and vice versa. Please confirm our understanding.	Refer UPMRCL Sr No 363
820	Volume 4		PS Chapter7/ clause2.1	Visual Time-of-day The MCS shall provide time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations. At stations and important locations, digital slave display clocks shall be provided for benefit of passengers and operational staff.	We understand that time-of-day display clocks at stations, OCC, DCCs, CERs, RSSs/TSSs and other depot offices and Technical rooms of Depots & stations are required. Please confirm if at stations platform and important locations like concourse area, Outdoor clock (Digital & Analogue) shall be provided for benefit of passengers and operational staff.	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
821	Volume 4		PS Chapter7/ clause5.4	The Sub-Master Clock system shall provide appropriate clock output interfaces for master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	There seems to be some ambiguity in this clause, kindly review and please amend this clause. Suitable clause could be: The Master Clock system shall provide appropriate clock output interfaces for Sub-master clock and timing and reference distribution. The type and quantities of the clock output interfaces shall be determined by the interfaces requirements of the subsystems (PAS, PIDS, Radio, CCTV, CDRS, Telephone System etc) and relevant interfacing project contractors (Traction, Fare Collection, Train Control and Signalling etc.). Suitable interfaces (such as RS 422 or RS232 or LAN connections) for clock output interfaces shall be supported.	Refer Addendum-1
822	Volume 4		PS Chapter7/ clause5.7	Digital Slave Clocks to be built to Open Protocol (like AFNOR, VNTV4 or latest one etc.) and to work on this Open Protocol only. In this reference following points must comply:	We understand that Digital Slave Clocks to be built to Open Protocol (like AFNOR, NTP V3/V4 or latest one etc.) and to work on this Open Protocol only including remote administration, configuration & maintenance of digital clocks through MMI software. <u>Please confirm our understanding.</u>	Refer UPMRCL Sr No 94
823	Volume 4		PS Chapter7/ clause5.7(4)	Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 66 standard and those used in indoor environment (Rooms) with IP54 standard.	We understand that the digital outdoor clocks at head end and tail end of each platform shall be necessary for the use of the train driver as well as passengers, however such clocks quantity is neither specified in the specification nor in the BoQ, kindly indicate the same as well. Secondly, As per industry norms, the outdoor display clocks are installed & tested to survive the IP 65 ingress protection degree whereas IP 66 compliance are not sought. Kindly review and please amend this clause. Suitable clause could be: Slave Clocks exposed to outdoor, station Platform and Concourse environments shall be designed, manufactured and installed to survive the environment with IP 65 ingress protection degree and those used in indoor environment (Rooms) with IP54 ingress protection degree as standard. Further, the quantity of outdoor slave clocks are neither specified in the specification nor in the BoQ, kindly indicate the same as well.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
824	Volume 4		PS Chapter7/ clause6.2	<p>Technical System Performance</p> <p>The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal quartz oscillator. This oscillator ensures that the Master Clock accuracy is better than 1x10⁻¹² (Seconds per 24 Hours) in free running mode without the input of GPS signal.</p>	<p>We understand that as per ITU-T G.811 standard, accuracy of a PRC clock when synchronised with GPS should meet 1*10⁻¹¹ (Seconds per 24 Hours) whereas free running accuracy asked in specification is 1x10⁻¹² (seconds per 24 hours) is contradictory because in free running mode (after the holdover period of 24 hours or as applicable loss of synchronization, without the input of GPS signal) the accuracy of internal quartz oscillator will start degrading and it must be comparatively lower than the PRC accuracy.</p> <p>Moreover, overall Master clock system accuracy has been asked +/- 0.01 second per 24 hour, which can be achieved by any Masterclock having accuracy less than 1 x 10⁻⁹ (Seconds per 24 Hours) in free running mode without the input of GPS signal. Hence Please review, omit the accuracy specified here under this clause and please amend this clause.</p> <p>Suitable clause could be: The overall Clock system accuracy shall be better than +/- 0.01 second per 24 hours. The Master Clock System shall comply with the NTP Protocol standard. Master Clock to be equipped with an internal Rubidium atomic oscillator. This oscillator ensures that the</p>	Please follow tender conditions
825	Volume 4		PS Chapter7/ clause 6.3.1.10	<p>The contractor will have to get at least 50% of BOQ (Appendix- J of Annexure-2 of ITT) of Digital clock of each of the Indoor type and Outdoor type, manufactured locally in India. The satisfactory workability and performance of the digital clocks manufactured in India shall have to be demonstrated as part of FAT. Local manufacturer of Clocks must have similar experience of the Clocks manufacturing that includes both hardware and software.</p>	<p>With reference to the clause 6.3.1.8 and Ch-7 BOQ (Appendix- J of Annexure-2 of ITT), Outdoor Digital Clock is not required in this contract. Please confirm.</p>	Please follow tender conditions
826	Volume 4		PS Chapter-8/ clause 1.2.4	<p>The CCTV system shall consist of the following principal sub-systems:</p> <p>4. CCTV surveillance system for monitoring important locations outside the stations/depots like TSSs/RSSs (tentatively there are three RSSs & TSSs planned in Kanpur Metro Project and 2 RSSs & TSSs are planned in Agra Metro Rail Project), Parking areas and specifically identified theft prone areas etc, from adjacent station and remotely from OCC, Security Control Rooms, DCCs, CERs. Night Vision (IR illuminated) cameras are to be used at these locations.</p>	<p>Please provide the total count and related drawings of Parking Areas, theft prone areas and RSS/TSS of Agra and Kanpur Metro Project in order to estimate total number of Cameras and Optical Fiber length.</p>	Refer Volume 5

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
827	Volume 4		PS Chapter-8/ clause 1.2.4	The CCTV system shall consist of the following principal sub-systems: 5. CCTV surveillance system for monitoring of the signalling point crossing at tracks. The minimum 13 number of interlocking stations are planned tentatively for Kanpur and Agra Metro Projects. Night Vision (IR illuminated) cameras are to be used for this purpose.	1. Please provide the total count of Signalling Point Crossings in Agra and Kanpur Metro Project. 2. Please provide the Track Corridor Plan and Alignment Drawing of Agra and Kanpur Metro Project.	1. Tentative quantities - 43 Kanpur, 25 at Agra C1 2. To be dealt during design phase Corridor 2-27,
828	Volume 4		PS Chapter-8/ clause 1.2.5	The station (including TSS, RSS, Parking areas, specifically identified theft prone track areas, and Signalling point crossings) surveillance CCTV system both live and recorded videos shall be accessed simultaneously from the following locations as a minimum: 1. At Station. a) Station Control Room b) Station Security Control Room 2. At OCC. a) OCC Controllers (Traffic controllers, Chief Controller, Auxiliary Chief Controllers, etc) of the OCC. b) Security Controllers in Security Control Room 3. At CER. a) CSS (Communication System Supervisor) Failure of one of them shall not affect the monitoring at the others. To improve the performance of the system, items such as Workstation (CPU) shall be located only in the TER or CER and the videos to SCR/Controllers are to be extended by using high quality KVM extender without compromising the video quality. All cameras shall use straight mounting arrangements and avoid use of "U" mounting arrangements, unless unavoidable as per site conditions. The	Refer to Appendix-H i.e. MMI Provision Schedule of Chapter-11- Appendices of PS, CCTV MMI is not required for Station Security Control Room and CSS at CERs. Please amend the requirement of clause 1.2.5 accordingly.	For CCTV MMI, clause 1.2.5 shall prevail
829	Volume 4		PS Chapter-8/ clause 1.2.7	Metro stations shall be controlled and viewed from OCC, Security Control Rooms, SCRs, and CERs etc.	Refer to Appendix-H i.e. MMI Provision Schedule of Chapter-11- Appendices of PS, CCTV MMI is not required for Station Security Control Room and CSS at CERs. Please amend the requirement of clause 1.2.6, 1.2.7 , 5.3.4 accordingly.	For CCTV MMI, clause 1.2.5 shall prevail

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
830	Volume 4		PS Chapter-8/ clause1.2.9	Video recording system shall provide primary recording locally at the stations itself and mirror recording at adjacent station for all Stations. For Depots the Primary local recording shall be provided in the depot itself and mirror recording will be at adjacent station in separate NVR.	With reference to Chapter-8 Minimum BOQ S. No. 93 (Appendix- J of Annexure-2 of ITT) and clause 1.2.9, we understand that OCC , CER and Administrative Building will be inside Depot Premises . Cameras of these locations will be recorded primarily in Depot NVR and redundnat recording at CER. Please confirm if our understanding is correct.	Please follow tender conditions
831	Volume 4		PS Chapter-8/ clause1.2.1 1	For Transmission of video from Stations, Distribution Layer 3 switches shall be provided by Telecom contractor at Stations, OCC, RSSs and Depots etc using optical fibre network as part of FOTS switches. The Access Layer2 Field Switches and any other hardware including switches at Stations/Depots/OCC, etc, as required, shall be provided by telecom contractor as part of FOTS switches	With reference to PS Chapter-2 (FOTS) clause 1.20.9, Distribution Layer 3 Switch is not required at OCC Location. Please amend the requirement of clause 1.2.11 accordingly.	To be dealt during design phase
832	Volume 4		PS Chapter-8/ clause1.2.1 2	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	Please confirm if 7 days recording of operator screens is also required under CCTV System for OCC Theatre Workstations only.	7 days recording of operator screens is not required
833	Volume 4		PS Chapter-8/ clause2.1.2	Depots At the depots, cameras shall be provided inside the depot connected to the NVR located in the TER and thereon to the Monitor in the DCC for display to the Depot Controller and Depot Security Controller. The same shall be connected to the CER through the Layer 3 Network, for both viewing live and recorded video and also for occasional recording. Camera shall also be provided for train entering in the Depot area.	With reference to Chapter-8 Minimum BOQ S. No. 93 (Appendix- J of Annexure-2 of ITT) and clause 1.2.9, NVR (primary and redundant) needs to be provided only at Stations and Depots for CCTV Video Recording . With reference to above, we request to remove the requirement of occasional recording of Depot Cameras at CER as there is no requirement of NVR at CERs. Please also remove NVR Requirement at CER from clause 1.2.2, 3.2 accordingly.	Refer UPMRCL S.No 105

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
834	Volume 4		PS Chapter-8/ clause5.2.1	The Coverage Plot shall be submitted by Telecom Contractor for the review & approval from Engineer or Engineer Representative. After approval of Coverage Plot from employer, it shall be vetted by security audit agency (CISF or any other authorised agencies) by the contractor, for identification of any loopholes and theft prone areas in the coverage plot. The contractor shall install the additional cameras recommended by security agency without any additional cost implication to Employer.	1. Cameras will be installed to comply the requirement of CCTV Coverage Requirement mentioned in PS Chapter-8 of this contract. CCTV Coverage requirement provided by CISF beyond the requirement of this contract is not in scope of Telecom Contractor. Please confirm. 2. We also understand that Security audit agency will approve the Coverage Plot prior to start of CCTV System Installation activities. Please confirm.	Please follow tender conditions
835	Volume 4		PS Chapter-8 /clause 5.2.3	The location of the CCTV monitors and control panel shall be as follows: (i) One CCTV control MMI shall be provided each for SCR (Station Control Room), DCC, Traffic Controller, Chief Controller, CSS and for the Depot Security Control Room. Please refer to Appendix-H of Chapter-11 of the PS for MMI Provision Schedule for the requirements of the MMIs. (ii) MMI for SCR (Station Control Room) at stations, and Security Control Rooms in OCC/Depots/Admin Buildings shall consist of workstation with two monitors, one Keyboard with Joystick controllers and one Mouse-Keyboard controller. MMI for Traffic Controller, Other System Controllers (if required) and Chief Traffic controller in OCC shall consist of workstation with one monitor and Keyboard with Joystick controllers, Mouse, Keyboard controller (iii) In addition, in the security control room in Admin Buildings/Depots of Kanpur and Agra Metro Projects, a Video Wall of 3x2x 70" i.e. 6 cubes of 70 inch size, arranged in two rows and 3 columns for each location, shall be provided for monitoring images/videos from stations, depots, TSSs, RSSs and other	1. There is a contradiction between clause 5.2.3 (i) & 5.2.3 (ii) regarding the number of Monitors to be provided at Station Control Room. Please amend the requirements with correct number of Monitors i.e. One Monitor or Two Monitor at Security Controller Room. 2. With reference to Appendix-H, Chapter-11 of PS, CCTV MMI is not required at CER/CSS. Please amend the requirement accordingly.	Please follow tender conditions
836			S. No. 163 of MISCELLANEOUS ITEMS of Appendix-J		Please confirm that Quantity of Notebook Computer for Telecom Sub-Systems need to be supplied as per Price Schedule and it will supercede the quantity mentioned in PS.	Quantity mentioned in PS shall prevail.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
837	Volume 4		PS Chapter 8/Clause 6.1.8	The CCTV system shall afford viewing simultaneously from the SCR (Station Control Room) at all the stations, Depot Control Centres, Depot Security Control rooms at the Depot and from the OCC, CERs at full frame rate. The viewing and recording for 2 MP cameras shall be at 2 MP at 25 FPS resolution. The normal 2 MP stream at 25 fps for each type of camera shall determine the size of the storage device. The storage capacity shall be calculated keeping in view the spare capacity of 25% of the installed capacity. The primary recording shall be at the Station TER and the recording shall also be mirrored at the adjoining station at the same frame rate and resolution. Telecom Contractor shall ensure adequate bandwidth, ports, channel, forwarding rate etc requirements in the FOTS.	There is contradiction between the clause 3.2 (24) and clause 6.1.8 regarding the Frame Rate. Please confirm for recording Cameras needs to be considered at 25 FPS or 30 FPS?	Recording will be at full frame rate or 30 fps
838	Volume 4		PS Chapter-8 /clause6.2.1 2	Layer 2 Switches for Field: The specification for switches used for CCTV System has been provided in the chapter-2 (FOTS) of the PS. Telecom contractor shall calculate the requirements of type/nos. of ports and switches as per their design and submit the same for the review and approval of Engineer or Engineer representative. Ethernet output from the IP cameras (Fixed and PTZ) shall be directly connected to the field switch through data cable and suitable protection devices. The outputs of the field switch shall be connected to the two aggregate switches by using 2 x 1Gigabit Fibre Uplinks through separate optical fibre cable to the redundant ports available in TER switches. For powering the PTZ, if the power (PoE/PoE+) available on the field switch ports is not sufficient to drive the PTZ functionalities, a separate power cable shall be laid by Telecom Contractor.	As per PS Chapter-2 (FOTS) clause 1.4.1.5, Access Switches including Outdoor/Rugged Switches should adapt flexible Ring Architecture. With reference to above, we understand that based on the design requirement, Ring or Link Aggregation Protocol can be used to connect Access (Indoor/Outdoor/Field Switches) Network with Distribution Switches. Please confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
839	Volume 4		PS Chapter-8 /clause6.3.1	All equipment of CCTV system shall work from 230 VAC single phase supply from UPS System which shall be provided by Telecom Contractor as specified in chapter-9 of the PS. Telecom Contractor shall provide power supply converters with associated surge arresters etc as required for satisfactory performance of various equipment of CCTV system. Cameras shall be distributed close to the 750 V DC traction systems at stations/Depots. Telecom Contractor shall provide suitable, proven and of adequate rating surge suppressers on the data, power and video cables both at the camera end and at the TER. To avoid interference from 750 V DC, Telecom Contractor shall accordingly plan the cameras for platform.	With reference to Table 1.5/Appendix-M of PS Chapter-11, we understand that Surge Suppressors to be provided only for Platform and other outdoor location CCTV Cameras and not for indoor Cameras. Please amend the requirement of clause 6.3.1 accordingly.	Please follow tender conditions
840	Volume 4		PS Chapter-8 /clause6.3.2 .1	To meet with the requirements of power supply for various CCTV equipment, a Separate Power Supply Distribution board is required to be provided by Telecom Contractor and the contractor shall submit the design of the distribution Board to the Employer's Representative for review and approval.	In Metro Environment, generally a Common Power Supply Distribution Board with suitably protected MCBs, Earth Leakage Detectors, SPDs etc and adequate no. of spare circuits of each type for each sub-system is being provided by Telecom Contractor. We request to remove the requirement of separate Power Supply Distribution Board for CCTV System.	To be dealt during design phase
841	Volume 4		PS Chapter-8 /clause 1.2.10	In emergencies or as required it shall, however, be possible, without any additional resources, to view images from any/all cameras and/or record any dynamically selected location on the system.	Bidder Understand that "In emergencies it shall be possible to view any /all camera and recorded video dynamically from any location". Please confirm .	Please follow tender conditions
842	Volume 4		PS Chapter-8 /clause1.2.1 2	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	We request to clarify the following in regard to this clause requirement- i. What is meant by re constructing complete incident into one timeline? ii. Is it meant for event based frame changes for recording? And iii. if there is any incident on any camera it has to be recorded and playback as and when required till the video is available on NVR as per defined retention time.?	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
843	Volume 4		PS Chapter-8 /clause2.1.2	At the depots, cameras shall be provided inside the depot connected to the NVR located in the TER and thereon to the Monitor in the DCC for display to the Depot Controller and Depot Security Controller. The same shall be connected to the CER through the Layer 3 Network, for both viewing live and recorded video and also for occasional recording. Camera shall also be provided for train entering in the Depot area.	What is Occasional recording , please explain.	Refer UPMRCL Sr No 105
844	Volume 4		PS Chapter-8 /clause4.2.3	The Contractor shall ensure that the CCTV system equipment supplied under the Contract shall comply with the reliability figures herein: CCTV System Equipment MTBF (Power on Hours/POH) per unit Station and central equipment > 250,000 IP Fixed Cameras > 200,000 PTZ cameras >200,000 Video recording equipment > 250,000 Video Display Units (monitors) >150,000 Digital CCTV Keyboard >200,000 Layer-2 Switch > 150,000	Defined MTBF values are to high . Kindly consider the chnages as below as none of the Metro till date has asked this much of MTBF for each equipment. 1-IP Fixed Cameras : > 100000 Hours 2- IP PTZ Cameras : > 100000 Hours 3- Digital CCTV Keyboards : > 50000 Hours	Refer UPMRCL Sr No 106
845	Volume 4		PS Chapter-8 /clause5.2.4	The display of full screen mode of a 1.6m tall person standing upright, within the CCTV camera coverage area, on any monitor shall not be less than one tenth of screen for the fixed cameras at the shortest focal length. CCTV Coverage Testing shall be done through <u>ROTAKIN method</u>	ROTAKIN standard is used for analog camera picture quality mesurement . So kindly remove the same.	Please follow tender conditions
846	Volume 4		PS Chapter-8 /clause5.2.5	Advanced video compression techniques, such as MPEG-4, H.264 and H.265, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images. End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 150 m secs under conditions of maximum network traffic.	Kindly consider the changes as below to align the requirement as per tender equipment specification. Advanced video compression techniques, such as MPEG-4, H.264 or better, shall be employed to minimize transmission bandwidth and recorder storage capacity without compromising the subjective quality of the displayed video images. End to end signal latency from any two points (source and destination) on the transmission network shall be suitable for establishing effective hand to eye coordination for remote operation of camera PTZ functions and shall be not exceed 240 m secs under conditions of maximum network traffic.	Refer UPMRCL S.No 108

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
847	Volume 4		PS Chapter-8 /clause6.2.2.1	Varifocal Lenses: 1- Focal length 9mm – 50mm 5 -Angle view wide (1/2.8") 30° x 19° or better 6 -Angle view tele (1/2.8") 6.6° x 3.8° or better 7- Iris Control P-Iris Focus control 8- Focus Control - Auto (i-CS) 9- Zoom Control - Auto (i-CS) 10. Operating Temperature -10 0C to +55 0 C	Kindly change the lense requirement as below which is most common lens type used in all metros. 1- Focal length 9mm – 40mm 5 -Angle view wide (1/2.8") 35° x 20° or better 6 -Angle view tele (1/2.8") 8° x 5° or better 7- Iris Control P- Iris Focus control / DC Control 8- Focus Control - Auto (i-CS)/Manual 9- Zoom Control - Auto (i-CS) / Manual 10. Operating Temperature -10 0C to +55 0 C	Please follow tender conditions
848	Volume 4		PS Chapter-8 /clause6.2.3.5	The housing should support input power of 110 VAC- 230 VAC.	Please remove this clause as clause 6.2.3.3 (8) you have already asked for POE+ power for housing.	Please follow tender conditions
849	Volume 4		PS Chapter-8 /clause 6.2.8	2MP (Full High Definition) IP Fixed Box Camera (Day/Night): 1Pick-up device : 1/2.8" or bigger CCD/CMOS progressive scan image sensor, P-iRIS Sensor.	As we understood camera should have pickup devices 1/2.8 or bigger CCD/CMOS progressive image sensor or P-iRIS Sensor. Please clarify	Please follow tender conditions
850	Volume 4		PS Chapter-8 /clause 6.2.11	IR Illuminator Power consumption 28W(850nm)	As per tender specification considered long range illuminator which require more power .so Kindly change the power consumption 39 W.	Refer UPMRCL S.No 121
851	Volume 4		PS Chapter-8 /clause 6.2.14	Digital CCTV Keyboard: 5.Joystick (Keyboard) should support USB Interface 2.0 and should be supplied with required interface units.	As all OEM do not have USB based CCTV keyboards .so kindly consider the chnages as below : Joystick (Keyboard) should support USB Interface 2.0 /RS-232 /RS-485 and should be supplied with required interface units.	To be dealt during design phase
852	Volume 4		PS Chapter-8 /clause6.2.2.1.1(T)	The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. The system shall automatically switch to unicast, if the client fails to connect to the multicast stream. The OEM shall provide the Software Development Kit for smooth integration of CCTV system with other telecommunication systems specified in this technical Specification.	As per requirement we would recommend to consider manual switching from multicast to unicast to avoid uncertain load and unwanted fludding of data on network.	Please follow tender conditions
853	Volume 4		PS Chapter-8 /clause6.2.2.1.5(G)	The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	Kindly Remove this requirement as all OEM do not have this feature.	To be dealt during design phase
854	Volume 4		PS Chapter-8 /clause 8	Incident Management System for CCTV	Kindly remove the insident management system from CCTV and include part of T-SCADA system . As till now all the metro have incident management system along with T-SCDA system .	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
855	Volume 4		PS Chapter 10/Clause 2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Based on previous Metro Project Experience, AFC System does not allow to program or write any configuration on IC Card due to security reasons. We understand that IC Card Unique Number will be used by Access System only. Please confirm.	Please follow tender conditions
856	Volume 4		PS Chapter 10/Clause 2.2	Scope of Services & Supply The scope of supply for each of the Station, RSS, Depot, OCC, BCC, Administrative building and other important locations shall include, but not be limited to the following items: (d) Sensor, controllers, modules & software. (g) Card reader, door sensor and Buzzer will have IP rating of IP54 for indoor installation and having IP rating of IP 65 for installation at outdoor /exposed to rain & sunlight. (m) Magnetic Locks (EML along with door contact sensor) based access control system which requires minimum grooving in the room door's frame /door	With reference to clause 2.2 (m), we understand that EML with door contact sensor based magnetic lock needs to be provided for access controlled doors and separate Door Contact Sensor is not required. Please confirm. We also request to amend the requirement of clause 2.2 (d), clause 5.3.3 for separate Sensor at Access Point doors	Please follow tender conditions
857	Volume 4		PS Chapter 10/Clause 2.2	Scope of Services & Supply The scope of supply for each of the Station, RSS, Depot, OCC, BCC, Administrative building and other important locations shall include, but not be limited to the following items: l) Design, Supply and Installation of Base Frame, False Floor & under False Floor Cable Trays with required risers for wall mounted units in TER of Stations/Depot and under false floor cable trays in SCR.	1. As per Section 2 E , S. No. 67 of Appendix-A- PS Chapter-11, under false floor cable trays in SCR will be installed by E&M Contractor. 2. Similarly, as per Section 3 , S. No. 1 of Appendix-A- PS Chapter-11, we understand that Base Frame, False Floor under false floor cable trays in Depot TER will be Supplied and installed by Civil Contractor. With reference to abovr, there is a conflict in the scope of supply and Installation between Telecom Contractor & E&M/Civil contractor. Please amend clause 3.3.2 (2) of PS Ch-1, clause 2.2 of PS Chapter-10 , Appendix-A, Section 2 B, S.No. 18 accordingly to include the	Please follow tender conditions
858	Volume 4		Section 2B /Appendix-A of PS Chapter-11		Requirement of Cable Trays and cost of same shall be borne by GSM Operators based on their Design Requirement. Please remove the Cable Tray design and cost payment from Telecom Contract scope and add in E&M/Civil Scope.	Please follow tender conditions
859	Volume 4		PS Chapter 10/Clause 3.2.3	The Contractor shall ensure that the Access Control System equipment supplied under the Contract shall comply with the reliability figures herein:	Push Button, Emergency Break Glass, Key Switch, Sensors are passive items and have no MTBF value. Please amend the requirement accordingly.	Please follow tender conditions
860	Volume 4		PS Chapter 10/Clause 5.3	Access Point Hardware	As per clause 5.2.2 (e), access card readers will be powered up from Access Controllers. Based on above, we understand that IP based Card Reader is not required under this contract. please confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
861	Volume 4		PS Chapter 10/Clause5.3.1	(d) The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	We understand that proposed access reader shall have internal storage capability, however to meet the requirement of clause 3.6.3, data should be stored in respective local Access Controllers and not in Access Readers. Please confirm if our above understanding is correct.	Please follow tender conditions
862	Volume 4		PS Chapter 10/Clause5.3.2	(b) The type of lock mechanism will depend upon the type of access point and shall be finalized during the Detailed Design phase.	We understand that for Fire Rate Doors (having Push bar Handle for exit), external Lock will be provided as provision of inbuilt lock is under the respective Civil Contractor. Please confirm.	Please follow tender conditions
863	Volume 4		PS Chapter 10/Clause5.3.2	(c) The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.	As per requirement of clause 4.5, In case of power failure, the doors shall be opened. We request to amend the clause 5.3.2 as follows- The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.	Please follow tender conditions
864	Volume 4		PS Chapter 10/Clause8.1.4	8.1.4 On initiation of an alarm of intrusion of Access Control, automatically (Pop up on CCTV HMI), CCTV cameras within the affected zone shall employ automatic positioning and operator shall continuously adjust pan, tilt and zoom to keep the intrusion within the cameras' field of view.	We understand that this requirement is only applicable for Depot Boundary Intrusion. Quantity of PTZ Camera to meet this requirement shall be provided as per clause 5.2.2 of PS Chapter-8. Please confirm.	Agreed.
865	Volume 4		Minimum BOQ Chapter-10 (Appendix J of ITT)		Looking in to number of stations, RSS, depot, Access Controller quantity of Kanpur Metro can not be same as of Agra Metro.Please update the minimum BOQ quantity accordingly.	Refer Addendum-1
866	Volume 4		Minimum BOQ Chapter-10 (Appendix J of ITT)		1. Provision of Door Interface Controller at each door is specific to particular OEM. We request to remove this requirement to have more OEM options. 2. Quantity of Access Control Smart Card Reader mentioned in minimum BOQ does not meet the minimum requirement mentioned under clause 5.7 of PS Chapter-10. Please update the minimum BOQ quantity as per PS clause requirement	To be dealt during design phase
867	Volume 4		PS Chapter 10/Clause1.1.13.4	Management of Integration Function with Other systems The Access Control System shall have the function to interface with other systems such as the CCTV system, fire alarm system and seismic sensor provided by SCADA (Traction/E&M).	Please share details of Fire alarm system and how many IO interface need to be considered and also details of seismic sensor needs to be provided for BOQ estimation.	To be dealt during design phase

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868	Volume 4		PS Chapter 10/Clause1.1.13.5.2	Middle Security Zone	Please provide functionality of middle security zone	Please follow tender conditions
869	Volume 4		PS Chapter 10/Clause1.2.1.1	The ACS shall use contact-less smart card with ID as the access media for smart card reader. The ACS smart card will be integrated with the AFC system to enable employees to use the Metro as well as access their work areas. The Metro employees and sub-Contractors shall be the target users.	Please share details of AFC card.. For ACS, AFC card to be used. Please confirm	To be dealt during design phase
870	Volume 4		PS Chapter 10/Clause2.2	The supply shall include all necessary hardware, software, firmware, accessories, materials and Documentation. Contract Scope of Services to be performed by the Contractor shall include, but not be limited to, the following a). Training for Employer's Training Instructors, operations staff, maintenance staff and engineering staff as specified in the PS b). Recommendation and provision of contract spares, tools and test equipment c). Quality and safety management. d). Prototypes, mock-ups, emulation and simulation as required. e). Project management of the implementation of the System. f). Presentations, reviews and audit support as specified in the Specification. g). Preparation and submission of documentation. h). Overall site supervision and management. i). Operation and maintenance support services. j). Manpower resources. k). Main earth extension from Earthling strip in TER to Rack l). Design, Supply and Installation of Base Frame, False Floor & under False Floor Cable Trays with required risers for wall mounted units in TER of Stations/Depot and under false floor cable trays in SCR. m). Design, manufacture, delivery, system assurance, installation, testing and commissioning of Access Control system. n). Decommissioning, removal and disposal of Temporary Works.	Is enclosure required for smart card reader seperately? is override keyswitch required only for equipment rooms and not all access control doors..? For indoor use, IP 54 enclosure is not necessary please clarify For door sensor and buzzer kindly clarify if IP 54 rating is necessary as they are installed on door frame. EML is excluded in this already and as per (m), Door contact is inbuilt in EML and hence, door contact and buzzer can also be removed	Refer UPMRCL S. No. 159
871	Volume 4		PS Chapter 10/Clause3.3.2.3	For up-dating of access control configuration, it will include the stand-alone Workstation, LAN, Central Server at CERs, FOTS and the site LAN up to the access point controller	What is meaning of standalone in "standalone workstations". are standalone workstations connected on network..? Please clarify	Refer UPMRCL S.No 160

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
872	Volume 4		PS Chapter 10/Clause3.6.2	Suitable encryption and associated electronic safeguards shall be provided to prevent any cloned Proximity ID Cards gaining access to the system and entry to controlled locations.	As cards are provided by AFC, this will be in AFC scope..kindly remove this clause from ACS and include the same on AFC requirement.	Access card shall be provided by Telecom Contractor
873	Volume 4		PS Chapter 10/Clause3.6.3	Any card reading equipment removed from site, by unauthorized means, shall be automatically barred from future access to the system	As card reader is only card reading equipment and doesnot store any data, barring this from future access is a manual process. Kindly consider the chnages accordingly.	Please follow tender conditions
874	Volume 4		PS Chapter 10/Clause4.4	It shall be able to perform its function standalone in case of communication failure with the ACS central server in the CERs. The system shall be able to detect sensor failure and damage of connecting cables	For Door contact, failure option is not available, kindly clarify what is meant by sensor	Please follow tender conditions
875	Volume 4		PS Chapter 10/Clause4.8	Within the CERs, interfaces shall be provided to a locally installed stand-alone Work-station, to create new cards, store, retrieve, and photograph and print out cardholder details including programming and cancelling details of people, cards and access rights.	Kindly clarify regarding programming required on cards, As AFC cards will be used, only card number will be added in ACS system and additional programming is not required. Kindly clarify	To be dealt during design phase
876	Volume 4		PS Chapter 10/Clause4.11	The employee master database of UPMRC shall be synchronized with the Access Control system data base for authentication.	Kindly share the details of master database and what details are to be synchronised. Please clarify	To be dealt during design phase
877	Volume 4		PS Chapter 10/Clause5.1.3	Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	Is station HMI required? If communication is failed, station HMI will not work as alarms and status is routed by ACS server and is contradicting with 5.2.2 where station controller will work in conjunction with central server. Kindly clarify	Refer UPMRC S.No 166
878	Volume 4		PS Chapter 10/Clause5.3.1	General (a) At each access point (door) the equipment detailed below shall be provided, as appropriate (b) All access point facilities shall be vandal resistant and tamper proof. (c) These units shall be mounted at suitable locations for operation by staff, maintenance, those with disabilities and, where appropriate, delivery personnel and those who require access to various locations throughout the premises of the Metro railway. Due care shall be exercised to ensure an ergonomic design. (d) The access card reader shall have suitable internal memory for data storage for fast access and operation of system in fall-back mode.	Which equipments does all access point facilities cover. Please clarify	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
879	Volume 4		PS Chapter 10/Clause5.3.2	<p>Electrical Locks (EML)</p> <p>(a) Provision and installation of electro-mechanical/magnetic locks on the doors to be provided with access control, is the responsibility of Contractor and not of other project Contractors.</p> <p>(b) The type of lock mechanism will depend upon the type of access point and shall be finalized during the Detailed Design phase.</p> <p>(c) The electrical locks may be configured as either 'fail open' or 'fail close', as appropriate to the access point location, on lock failure, power failure, fire alarm or emergency site evacuation.</p> <p>(d) Access points, which provide an exit in an emergency, shall be equipped with power-locked devices.</p> <p>(e) These devices shall operate in conjunction with an emergency release mechanism (break-glass unit and input from the fire alarm system), which is independent of the access control system.</p>	For fail safe locks, Door compatability is required. Please clarify	Please follow tender conditions
880	Volume 4		PS Chapter 10/Clause5.3.4	<p>Access Point Egress Button</p> <p>(a) Each access point shall be fitted with a manually activated egress button, at the exit location.</p> <p>(b) On initiation, the access point controller shall release the lock to allow users to exit.</p>	As per 1.1.13, 1.2.1.3, exit reader is required, where as here, Egress button is asked. Kindly clarify if exit reader is required or egress button is required	To be dealt during design phase
881	Volume 4		PS Chapter 10/Clause5.3.6.4	<p>Consideration shall be given as to the distances over which a proximity ID is required to operate to cover pedestrian access at gates and door access, such as based on ISO 14443 for communications at distances up to 10 cm.</p>	As AFC cards are to be used, card read distance will be less because of encryption technologies used in AFC card, kindly remove this clause	Please follow tender conditions
882	Volume 4		PS Chapter 10/Clause5.3.6.5	<p>The Card readers for Access Control System shall be compatible with EMV Cards.</p>	Kindly clarify if EMV is a chip based card or contactless cards. Please note that Chip Based Card will not work with RFID based Card Reader.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
883	Volume 4		PS Chapter 10/Clause5.9	<p>Access Point Controller facilities</p> <p>The access point controller shall, as a minimum, include the following facilities:</p> <p>(a) Automatic self-test facility, automatic detection and automatic configuration</p> <p>(b) Validate an individual card together with its time group and validity dates to grant or deny access when a card is presented at the card reader.</p> <p>(c) For granting access, multiple and selectable periods shall be available which may be allocated in various combinations.</p> <p>(d) If access is granted, the electrical locks shall automatically release.</p> <p>(e) When the lock release button is operated on the exit side of doors the electrical locks shall release automatically for a pre-set duration. The pre-set time shall be adjustable.</p> <p>(f) The open/closed sensor shall detect when a door or gate has been opened and if a pre-set allowable time threshold has been exceeded an alarm shall be raised locally at the access point and at the operator's HMI. The pre-set time shall be adjustable.</p> <p>(g) A forced entry shall be detected by the status of the door open/closed sensor and triggered alarm of the Access Control system.</p> <p>(h) A local alarm sounder shall be activated at the operator's HMI and locally at the door, gate to alert security personnel to the location of the forced entry. Reset of the forced entry shall be</p>	As there are many sensors connected to controller, first time configuration is required and its not automatic. Kindly clarify, what is meant by reset of forced entry shall be security protected and from which HMI security can acknowledge this..?	The functionality can be controlled by ACS HMI.
884	Volume 4		PS Chapter 10/Clause5.10.8	<p>CERs Specific Functions</p> <p>(a) Control and monitor the entire Access Control System.</p> <p>(b) Respond to event alarms on occurrence of a security breach at unmanned sites such as Receiving sub-stations</p> <p>(c) Control shall be transferred to the CERs by responding the event alarms at the stations when the stations are closed or when the local SCR is unmanned.</p>	Is HMI required at all stations? Kindly confirm	Access Control Application can be integrated with any other telecom system HMI.
885	Volume 1	1.1.4.2 Minimum Eligibility Criteria:	NIT Page No -6	<p>NOTES:</p> <p>4. For completed works, value of work done shall be updated to 30.06.2020 price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year. Selling rate of exchange at the close of business of the State Bank of India on the day twentyeight days before the latest date of Tender Submittal shall be considered for calculating equivalent value in INR.</p>	<p>Historical data of exchange rates is not provided by State Bank of India over their website. The bank will have to be procedurally approached for exchange rates of specific dates. It being a cumbersome task, request you to kindly suggest reference of some other sources like RBI, Oanda etc. for which the data is readily available and which is also accepted in any other government tenders.</p> <p>Kindly confirm.</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
886	Volume 2	58.Additional Clause	SCC Page No -30	2. Pricing Mechanism for the Order after the last ROD : (ii) The consumer price index to be used shall be submitted by tenderer with tender submission for Employer's review and acceptance. For Schedule J1, J5 (Only Supply Items of Schedules): In case of off shore material - Producer price Index for Industrial product of the respective country shall be used. In case of On shore material – relevant IEEMA formula for Power Electronics shall be used. (base date will be date of last ROD). The producer price index to be used shall be submitted by tenderer with tender submission for Employer's review and acceptance.	For the purpose of price variation under this clause, please confirm that the base date shall be reckoned from the date 30 days before bid submission date.	Please follow tender conditions
887	Volume 2	47 Clause 12.3 and 12.5	SCC Page No -22	Employer's Variations "Employer's Variation" means a change in the Employer's Requirements which makes necessary alteration or modification of the Design, quality or scope of Works as described by or referred to in the Employer's Requirements. Changes to any sequence, method or timing of manufacture, supply, installation, testing and commissioning including Integrated Testing and Commissioning and changes to any part of the Site or access thereto will not constitute Employer's Variation.	Please clarify that any change in the basic layout of Station / Yard / Depot / OCC / BCC shall be treated as "Employer's Variation" under this clause which enables contractor shall be entitled to such EOT and Payments due to increase in Cost adjustments to the Contract Price for each Variation due to change in Design.	Please follow tender conditions
888	Volume 2	1.3 For On Board equipment for the Trains (Where ever applicable):	SCC Page No -30	(ii) For the items quoted as lump sum in Appendix J for Trains, prorata rates on per cab basis shall be applied.	Please confirm that Lump sum rates shall also be decided on pro-rata basis depending on the variation in scope and configuration.	Please follow tender conditions
889	Volume 2	1.3 For On Board equipment for the Trains (Where ever applicable):	SCC Page No -30	(i) The unit rates and the lump sum rates (for those items where unit rates are not available) of Appendix J for station/depot shall remain firm.	Please confirm that Lump sum rates shall also be decided on pro-rata basis depending on the variation in nos of stations, construction layout and scope.	Please follow tender conditions
890	Volume 2	Testing 7.5	GCC Page No - 59	The employer/Engineer may instruct the contractor for any additional test	Please provide list of such proposed additional test to enable us to suitably provide for.	Please follow tender conditions
891	Volume 2	SCC Sheds, Stores, Yards	GCC Page No -39	4.21 It shall be the responsibility of the Contractor to provide at his own expense the required sheds, store houses, and yards for both Permanent and Temporary Works and provide free access to the Engineer and the Engineer's Representative who will have right of inspection including that of instructing the Contractor to remove a particular material from the stores and not to use the same on the Works	Please confirm that required space towards storage shall be provided tom the Bidder free of cost.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
892	Volume 2	SCC Rights of way and Facilities	GCC Page No -34	4.12 The Employer will acquire and provide land for Permanent Works and right of way (within UPMRC's land) for access thereto over routes established by the Contractor. The Contractor shall bear all cost and charges for special or temporary rights of way which he may require including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facility outside the Site which he may require for the purpose of the Works. The Employer reserves the right to make use of these service roads/rights of way for itself or for other Contractors working in the area, as and when necessary without any payment to the Contractor	Please confirm that any payments made to Govt authorities as statutory charges including restoration if levied by the concerned authorities to grant ROW permission shall be reimbursed extra at actual.	Please follow tender conditions
893	Volume 2	SCC Permits, Licenses or Approvals	GCC Page No -20	2.3 It shall be Contractor's exclusive responsibility to get approvals, permits or license required for the Contract. However, the Employer shall (where he is in a position to do so) provide reasonable assistance to Contractor at the request and cost of the Contractor in getting Permits, License or Approvals required during the Contract.	Bidder do not have any control over Radio Frequency allocation and issue of WPC license for import of Radio Equipment and hence Bidder cannot take sole responsibility. Bidder shall not be held responsible for any time and commercial implications on account of delays in organising such permission / licenses. Vol-IV, Page No. 9, clause no. 3.3.4	Refer UPMRCL S.No 56
894	Volume 1	(PART I) INSTRUCTIONS FOR COMPLETING THE PRICING DOCUMENT	ITT Page No -47	5. The Tenderer shall note that the apportionment of the fixed Lump Sum Price among the Sections shall have correlation with the workload involved in each section, inter-alia keeping in view the route length of the Section. Likewise, the apportionment of a Section Total into Cost Centres and then into milestones should have relation to the Content of work involved. Further, the sum of the amounts apportioned to Cost Centres 'A' and 'B' of a Section except Miscellaneous Section shall not exceed 15% of the apportioned amount for that Section. The sum of the amounts apportioned to Cost Centres 'D' and 'E' of a Section except Miscellaneous Section shall not be less than 30% of the apportioned amount for that Section (Note: Cost Centre 'E': shall not be less than 10% of the Section total). For MS section, the sum of amounts apportioned to Cost Center A shall not exceed 15% of the apportioned amount for that section. For MS section, the sum of amounts apportioned to Cost Center C shall not exceed 30% of the apportioned amount for that section.	Request you to confirm our understanding ie:- cost center A-10% Cost center B -5%, Cost center C and MS-55% cost center D- 20%, Cost center E-10%, The above are the % distribution of Cost ceneter for Financial Bid.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
895	Volume 1	F3 Notification of Award	ITT Page No -41	F3.4 In the event of award of the Contract, the following will be the sequence of events in the order given below. The contract will not come into force until unconditional concurrence to it has been obtained from funding agencies for the concerned contract KNPAGS-01. The Employer may seek suitable amendments to the Contract if such amendments are desired by funding agency and are acceptable to the Employer.	Kindly Confirm, In case of any amendment by funding agency will imposed to contractor only after having mutual discussion and agreement. Any kind of escalation will in employer scope	Please follow tender conditions
896	Volume 2	SCC Access to and Possession of the Site	GCC Page No -19	For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time and no monetary claims whatsoever shall be paid or entertained on this account	As there is standared clause in FIDIC yellow book which is followed by all metro agency across the world , which talks about"if any delay or damage happen in hading over the site to contractor, then contarctor is liable to get Extension of time and adequate Monatry compension as well" So request you amend the clause as follows:- If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall be entitled to Claims For Payment and EOT of such Cost Plus Profit.	Please follow tender conditions
897	Volume 2	17 Clause 4.18 Electricity, Water and Gas	SCC Page No:12	The Contractor will be allowed, free of charge, traction power, permanent power and use of test track as stipulated in the Employer's Requirement / General Specifications	We understand that Employer will faciliate the water and electricity to every site of operation during Implementation phase free of charge, Kindly confirm.	Contractor to make his own provision
898	Volume 1	A3.9 In Case OF JV/ Consortium	ITT Page No:9	Lead Partner must have a minimum 26% participation in the JV/Consortium. Substantial Partner should have at least 26% participation, otherwise they will be termed as nonsubstantial partner and will not be considered for evaluation, which means that their financial soundness and work experience shall not be considered for evaluation of JV/Consortium. In case of JV/Consortium change in constitution or percentage participation shall not be permitted at any stage after their submission of application otherwise the tenderer shall be treated as nonresponsive	We understand that there will can be Three consortium with One lead bidder can be allowed who can fullfill this conditions. kindly confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
899	Volume 2	SCC Liquidated Damages for Delay	GCC Page No -67	8.5 Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% of the contract value per one-week delay with an upper limit of generally 10% of the contract value.	Request you to amend the clause as follows:- Time is the essence of the contract and therefore if the work is delayed on account of the contractor, liquidated damage shall be recovered as provided for in the contract. Such liquidated damage shall generally by 0.5% 0.05% of the contract value Of the milestone vlaue per one-week delay with an upper limit of generally 10% 5% of the contract value. Also if the Contractor complete the work within the given timeline of ROD , then the paid penalty shall be reimbursed.	Please follow tender conditions
900	Volume 1	Instruction to Tenderers A1 General Description of the Work	ITT Page No - 2,3	The Corridor-1 of Kanpur Project shall be commissioned in two phases as below: (I) IITK –Moti Jheel (Priority Section): 9 elevated stations including the cross overs at both the ends for reversal along with Polytechnic Depot – Train trials to begin from July 2021. ROD for this section –November 2021 (II) Moti Jheel to Naubasta – ROD in December 2023 The Corridor-2 of Kanpur Project shall be commissioned in one phase as below: Agriculture University – Barra-8: ROD for this section – December 2023 The Corridor-1 of Agra Project shall be commissioned in two phases as below: (I) Taj East Gate to Jama Masjid (Priority Section): 3 elevated stations and 3 Underground stations including the cross overs at both the ends for reversal along with PAC Depot – Train trials to begin from 19 March 2022. ROD for this section – 02 September 2022 (II) Sikandara to Medical College– ROD in December 2023	Seeing the present covid pandemic it is very difficult to achieve the ROD dates as per the estimated ,so request you to Kindly amend the timeline as follows:- The Corridor-1 of Kanpur Project shall be commissioned in two phases as below: (I) IITK –Moti Jheel (Priority Section): 9 elevated stations including the cross overs at both the ends for reversal along with Polytechnic Depot – Train trials to begin from July 2021.July 2022. ROD for this section –November 2021 November 2022. (II) Moti Jheel to Naubasta – ROD in December 2023 December 2024 The Corridor-2 of Kanpur Project shall be commissioned in one phase as below: Agriculture University – Barra-8: ROD for this section – December 2023 December 2024 The Corridor-1 of Agra Project shall be commissioned in two phases as below: (I) Taj East Gate to Jama Masjid (Priority Section): 3 elevated stations and 3 Underground stations including the cross overs at both the ends for reversal along with PAC Depot – Train trials to begin from 19 March 2022 19Macrh 2023. ROD for this section – 02 September 2022 sept 2023 (II) Sikandara to Medical College– ROD in December 2023	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
901	Volume 1	APPENDIX A – PROJECT ORGANISATION	ITT Page No - 201	[Refer Paragraph A10. (a)] MINIMUM KEY STAFF REQUIREMENT	As there is huge requirement of Manpower , So request you to amend the clause as the deployment of these Manpower will be as per the tenderer Resource planning histogram.	Refer Addendum-1

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
902	Volume 1	APPENDIX A – PROJECT ORGANISATION	ITT Page No - 201	Note:- Please submit the CV of above Key Personals as per Format given below.	We understand that , the cvs submitted for the manpower need not to be the full time employee of tenderer and key personnel can be Contractual employee / OEM employee wherever required of the sole bidder or any member in case of a Consortium. Kindly Confirm.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
903	Volume 2	Assignment Clause	General		<p>We propose to include the below clause in the GCC under the relevant section:</p> <p>"The Contractor shall not, without the express prior written consent of the Employer, assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract to any Financial Institution(s) or Bank(s) or NBFC(s).</p> <p>In the event the Contractor assigns the monies due and payable to it or that may become due and payable to it, under the Contract, to any Financial Institution(s) or Bank(s) or NBFC(s), the Contractor shall acknowledge the intimation letter it may receive from such financial institution(s) or Bank(s) or NBFC (s). If the Contractor does not reply within 15 (Fifteen) days of the receipt of the intimation letter, it can be considered as "acknowledged by Employer". Furthermore the Employer will provide an indicative date by when the funds will be released to the SI as a measure of comfort for the decisions of Financial Institution(s) or Bank(s) or NBFC(s)."</p>	Not Acceptable
904		General - SLA	General		Penalties in case of non-availability or in the event of system getting down or breach of availability is not properly defined. Request to clarify. Also what is the limit of liability/ penalty in case of SLA	Refer availability clauses mentioned in the ERPS
905	Volume 5	Station, Depot, OCC, BCC Coordinates, track layout and drawings	General		Please provide the drawings, lat/long coordinates and track layout with respect to Stations, Depot, OCC, BCC in order to design the RF coverage for the entire network.	To be dealt during design phase
906	Volume 4	CHAPTER-01 Page No 41	Employers Requirements: Particular Specification CHAPTER-01 Page No 41	6.3.2 Unless otherwise specified, all telecommunication equipment installed under this Contract inside rooms with controlled environment shall be designed for operation in temperatures of +5oC to +35oC. All equipment installed outside these areas shall be rated for continuous operation up to + 600 C.	<p>The specification is asking for IP65 rated enclosure for controller installed outdoors and operating temperature is Up to 50 deg C.</p> <p>Please clarify if any electronic equipment housed in IP65 enclosure at a location where maximum ambient Temperature is Up to 45deg C.</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
907	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 6	CHAPTER-10 (ACCESS CONTROL) Page No. 6	1.2.3 It shall be able to display all the operational status and send the alarm signals to the ACS server and HMI. It shall also be able to detect sensor failure and the damage to the connecting cables.	Please clarify if connecting cable damage, alarm is required between controller and reader as we see there will 100 of reader in the system (if this is required then we have to keep the provision for this.)	Please follow tender conditions
908	Volume 4	CHAPTER 10 (ACCESS CONTROL) Clause No. 2.2 Point L page no. 7	CHAPTER 10 (ACCESS CONTROL) Clause No. 2.2 Point L Page no. 7	2.2 Design, Supply and Installation of Base Frame, False Floor & under False Floor Cable Trays with required risers for wall mounted units in TER of Stations/Depot and under false floor cable trays in SCR.	Please Clarify whether it is Access control system related cable trays and required risers only?	It is for all telecom subsystem
909	Volume 4	CHAPTER 10 (ACCESS CONTROL) Clause No. 2.2 Point n page no. 7	CHAPTER 10 (ACCESS CONTROL) Clause No. 2.2 Point n Page no. 7	2.2 Decommissioning, removal and disposal of Temporary Works.	Please clarify whether the decommissioning, removal and disposal of temporary works of Access control system's only?	It is for all telecom subsystem
910	Volume 4	CHAPTER 10 (ACCESS CONTROL) Clause No. 2.2 Point k page no. 8	CHAPTER 10 (ACCESS CONTROL) Page no. 8	2.2 The writing system for the contactless smart cards	Does the tender is asking about Contact less card number reader and writer kit or printing the user data on card	It is related to configuration of card for providing related accesses

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
911	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 9	CHAPTER-10 (ACCESS CONTROL) Page No. 9	The Access Control System shall have a system availability of better than 99.99%. MTBF of each equipment shall be substantiated by the previous experience or if calculated by a confidence factor, all supporting calculations, assumptions and specifications to arrive at the MTBF figures and system availability shall be supplied	<p>The specification is asking for high reliability features like equipment duplication, Hot Standby parallel run path diversity etc.</p> <p>Please clarify</p> <p>i) Aces at HMI will not function in case a main server or IP connectivity to OCC & BCC is Fail can we offer hard ware based console which will work even if server or IP network is down works in Redundant mode this console are widely used in metro and railways for managing alarm from access control/Intrusion sensor NOTE: without console there is no way to put off buzzer or hooter in alarm mode if HMI is not working . In Access control client cannot work if server is down as server communicates with client and access controllers. Unlike CCTV where Camera can communicate with server and client simultaneously.</p> <p>ii)For reliability of ACS System it is always recommended to have ACS software and Hardware (controller) of same OEM all leading global player are same OEM for ACS software and Controller this will certify 100% responsibility of OEM for MTBF & MTTR.</p> <p>iii) Latest feature in ACS system is Monitoring of Connection Between controller and Reader . On older Connection Like Wiegand not Connectivity monitoring is there.</p> <p>iv) Please clarify sub controller will not work if main controller fails so as per availability requirement we should go for IP based</p>	Please follow tender conditions
912	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 10	CHAPTER-10 (ACCESS CONTROL) Page No. 10	3.4.2 The service life of the ACS shall not be less than 15 years. Service life of all types of cables shall not be less than 25 years. The Service Life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	How the OEM can prove for 15 year service life. Do the OEM have to give some installation reference working for 10-15 years?	Please follow tender conditions
913	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 10	CHAPTER-10 (ACCESS CONTROL) Page No. 10	3.6.1 The system shall be immune to be hacked and shall provide end to end security and authentication of data.	Please clarify level of encryption. Market trend is 128 bit between card and reader, 256 bit in controller, controller to server, server to client communication.	Please follow tender conditions
914	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 10	CHAPTER-10 (ACCESS CONTROL) Page No. 10	3.6.2 Suitable encryption and associated electronic safeguards shall be provided to prevent any cloned Proximity ID Cards gaining access to the system and entry to controlled locations.	Please clarify level of encryption. Market trend is 128 bit between card and reader, 256 bit in controller, controller to server, server to client communication.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
915	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 12	CHAPTER-10 (ACCESS CONTROL) Page No. 12	4.9 Smart Cards used for the Access control System shall be compatible with the Automatic Fare Collection system such that the card can serve the dual purpose of Access control as well as Employee Pass for travel on the metro System	Please give technical details of AFC Card	Will be provided once AFC vendor is onboard
916	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 12	CHAPTER-10 (ACCESS CONTROL) Page No. 12	5.1.3 Station HMI for local operator control and monitoring: Support standalone operation while communication failure with central server	Accs at HMI will not function in case a main server or IP connectivity to OCC & BCC is Fail can we offer hard ware based console which will work even if server or IP network is down works in Redundant mode this console are widely used in metro and railways for managing alarm from access control/Intrusion sensor NOTE: without console there is no way to put off buzzer or hooter in alarm mode if HMI is not working . In Access control client cannot work if server is down as server communicates with client and access controllers. Unlike CCTV where Camera can communicate with server and client simultaneously.	Please follow tender conditions
917	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 14	CHAPTER-10 (ACCESS CONTROL) Page No. 14	5.2.1 Access Point Controllers shall be IP based and installed at TER/CER or entry side of access point (door) either individually for each door or for a group of doors (as per detailed design of the Contractor, in such a way so as to meet all prescribed functional & performance requirements	Access point controller is installed in safe zone that is Exit side of the door please clarify.	The location will be finalised during detailed design stage
918	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 14	CHAPTER-10 (ACCESS CONTROL) Page No. 14	5,2,2(e) Degraded mode of operation shall be defined and finalized during the design stage, whereas for clarity, Controller may be treated as Control Sever where local controller should work as independently in case of degraded mode of operation. Access point Controller should be POE, POE+ or 12 Volt enabled, supply may be accepted enabled, capable of battery charging, powering up readers etc. may be accepted. In case of non-POE and non-PoE+, contractor should provide appropriate Power Supply equipment for Controller & its Extension and for other	POE+ & 12v PSU you have given option Please clarify both option are technologically different what is UPMRC preference. Since the RFP is asking for UL certified controller so the PSU also need to be UL (NOTE: if the PSU is not UL then the system will not be UL)	This will be finalised during detailed design stage
919	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 16	CHAPTER-10 (ACCESS CONTROL) Page No. 16	5.3.6.5 The Card readers for Access Control System shall be compatible with EMV Cards.	Please give more details for this specific point	This will be finalised during detailed design stage

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
920	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 19	CHAPTER-10 (ACCESS CONTROL) Page No. 19	5.8.5 Under the following fault conditions, the access control system shall continue to function, without disruption, when operating in conjunction with the access control data, most recently available prior to occurrence of the fault: (a) Failure of station level equipment; (b) Failure of the communications links from the central servers to each site	Please clarify sub controller will not work if main controller fails so as per 5.8.5 a) we should go for IP based architecture or Main & Sub controller architecture?	This will be finalised during detailed design stage
921	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 20	CHAPTER-10 (ACCESS CONTROL) Page No. 20	5.10.1 The ACS HMI at the CERs shall be provided and at other sites ACS will be integrated with the CCTV HMI and shall, as a minimum, support the following functions, as appropriate to each specific site:	Whether the ACS HMI and CCTV monitoring Station will be in same Machine or only CCTV integration required for camera POPUP and postmortem of events, please clarify	This will be finalised during detailed design stage
922	Volume 4	CHAPTER-10 (ACCESS CONTROL) Page No. 27	CHAPTER-10 (ACCESS CONTROL) Page No. 27	8.1.5 On receiving the Fire alarm from Fire Alarm System, all doors of stations, depots, Admin buildings etc controlled by Access Control System should be automatically opened and pop up of concerned CCTV cameras should come on CCTV HMI at stations & ACS MMI at CERs	Per controller asking for fire alarm input to every controller over ride Key switch, ACS door lock, door [position sensor & buzzer in case of alarm, Generally as per industrial standard 8 input and 8 Output is taken per controller to take care of present requirement and future expansions.	To be dealt during design phase
923	Volume 4		13.1.1.4 (Volume 4 Chapter 1 PS)	The training courses shall normally be conducted at manufacturers' place and at the site(s).	All the expenses related to travel,Lodging,boarding & Local travel of customer's representative for training at manufacturer's place shall be borne by customer. <i>Please confirm if understanding is correct.</i>	Refer UPMRCL S.No 380
924	Volume 4		8.3.1 (Volume 4 Chapter 1 PS)	The Contractor shall carry out factory acceptance tests at the place of manufacturing in the presence of the Employer's Engineer. The test shall include, but not be limited to, visual, environmental, electrical and functional tests on each individual equipment and associated Subsystems as well as simulation before delivery of the equipment to the Site.	All the expenses related to travel,Lodging,boarding & Local travel of customer's representative for Factory acceptance test at manufacturer's place shall be borne by customer. <i>Please confirm if understanding is correct.</i>	Refer UPMRCL S.No 381

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
925	Volume 2		Point No. 33 , Clause 10 (Volume 2 SCC)	<p>10.1 GCC "Defects Liability Period" shall mean the defects liability period stated in the Special Conditions of Contract and shall be calculated from the date of start of revenue services (ROD) of the respective section.</p> <p>Clause 10 SCC : Defect liability period shall be 24 months from the date of issue of Partial taking over certificate.</p> <p>Clause 10 SCC : For the equipment and software supplied for OCC & CERs, the Defect Liability Period shall start from the date of opening of the first section for revenue services and shall continue until 36 months from the date of completion of T&C works of OCC & CERs.</p> <p>DLP of the equipment: If any equipment fails during DLP, then warranty of such equipment shall be provided for two years, which shall be counted from the date of replacement of the equipment.</p>	<p>We understand as per schedule of key dates that for priority section of Kanpur and Priority section of Agra the warranty for OCC equipments shall be 36 months from the date of opening of first section. i.e. IM section of Kanpur and TF section of Agra.</p> <p>And for Balance section for Kanpur & Agra(CT,BN,AD,VB sections for Kanpur & MR, IS Sections for Agra) DLP shall be 24 months , start from Revenue Services of respective section or date of issues of partial taking over certificate.</p> <p>As completion of contract is 31.12.2025, So DLP for all the Corridor/Sections should not be beyond mentioned date and same shall be applicable for any repaired equipment which will fail during the DLP period.</p> <p>Please confirm if understanding is correct.</p>	Please follow tender conditions
926	Volume 4		6.6 (Volume 4 ,Chapter 1, PS)	6.6.1 Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, convergence Time, Latency, Synchronization, Interfaces & Integration etc.	<p>Please clarify the POC shall be done for each individual subsystem at Buyer's Location.</p> <p>We understand that Integrated test of all the subsystem is not required in the POC set up.</p> <p>Please confirm the understanding.</p>	Refer UPMRCL S.No 382
927	Volume 4		6.3.7 (Volume 4, Chapter 4 , PS)	The use of radio frequency spectrum in India is regulated by the Wireless Planning & Coordination Wing (WPC) Wing of the Ministry of Communications, Government of India. The employer may be authorised the use of the frequency band 380-400 MHz for mobile train radio communication. However, a separate clearance for the use of specific frequencies is to be obtained. Based on the frequency plan proposed by the Contractor, approval from WPC shall be obtained by the Contractor and all the expenses including License fees etc. shall be borne by the contractor till ROD of last section. The Contractor, if so, required by the WPC, shall incorporate specific changes in the frequency plan, after mutual discussions.	<p>Costs for liaisoning with authorities for the required licenses from DoT/WPC shall be borne by Tenderer.</p> <p>All the License fee is paid by the Licensee to WPC/DoT. We understand that the same shall be paid by the Buyer (UPMRC).</p> <p>Please confirm the understanding.</p>	Refer UPMRCL S.No 56

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
928	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 20 of 123	5.3.4.4 Central Equipment Rooms (Telecommunication) at Depots/Admin Buildings One RCW with restricted access shall also be located in each Central Equipment Room for Telecommunication Systems at both Depots/Admin Buildings. This unit shall be used for maintenance monitoring and shall work as spares for RCWs in the OCC.	Please confirm the RCW for maintenance monitoring is already considered in MMI distribution in Appendix H of PS as an RCW in CER. Also please confirm if RAU is also be provided as back up to these RCW. Request you to update the BoQ accordingly.	RCW shall be provisioned as per Appendix-H of Chapter-11 of PS.
929	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 123	5.8.3.9.3 The maintenance radio's call shall be routed to the maintenance controller RCW.	The maintenance controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if maintenance controller for RCW needs to be considered. If not, request you to please remove the maintenance controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 62
930	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143	5.8.3.9.4 The security radio's call should be routed to the security controller RCW.	The security controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if Security controller for RCW needs to be considered. If not, request you to please remove the Security controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 63

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
931	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 47 of 143	5.8.3.9.5 The Traction supply radio's call should be routed to traction supply controller RCW.	The traction supply controller RCW is not included in MMI distribution in Appendix H of PS. Please confirm if traction supply controller for RCW needs to be considered. If not, request you to please remove the traction supply controller RCW from the clause. Request you to revise the BoQ accordingly.	Refer UPMRCL Sr. No. 64
932	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 81 of 123	6.9.7 Controllers RCW in OCC, DCC & other locations shall be provided a RAU in addition to RCW to work as a back-up/ all other controllers shall be provided only RAUs. One extra RAU complete with all accessories shall be provided and installed at each of the terminal stations also.	Please confirm if the number of terminal stations to be considered is 1 for each corridor. As the RAU quantity is not included in MMI distribution in Appendix H of PS, request you to please add the same in Appendix H. Request you to revise the BoQ accordingly.	RAU shall be provisioned as per Appendix-H of Chapter-11 of PS. One extra RAU for terminal station shall be installed in Crew Control Room. Crew Control Room quantity for Kanpur=xx nos and for Agra=XX nos.
933	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 87 of 123	6.10.9.1.2 The antenna network for the Underground section shall be LCX in tunnels and a combination of LCX and low-profile antenna if required at stations. The coverage in the tunnel, under craft, platform and concourse area shall primarily be by use of LCX cables. The LCX cable shall be able to support optimally train radio services in the TETRA frequency bands 380-400 MHz and also support signals up to 1 Ghz, for future. LCX shall be supported by stand-offs installed at regular interval as per guidelines issued by EIA Standard RS 422 and new wind tunnel vibration tests. A common LCX cable for transmission and reception of RF signals shall be used. Contractor shall install minimum one LCX cable in each tunnel, tunnels leading out of the underground up till out in open and minimum two LCX cables throughout in underground station areas all along the Cable containment, for future expansion and use for the TETRA services and Fire/Police services.	Request you to clarify why there is a requirement of minimum two LCX cables throughout in the underground station. This should be left for the bidders to design the IBS in Underground station as per requirements stated in the PS.	Refer UPMRCL S.No 66

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
934	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 88 of 123	6.10.9.1.5 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	Please confirm that the clause is only asking about the failure of repeater of one tunnel and not about the failure of LCX cable. Providing redundancy in LCX cable is not a standard set up in any Metros.	Refer UPMRCL Sr. No. 67
935	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123	8.4 Special considerations shall be given to ensure that there is 100% overlapping coverage in the Tunnel area so that even with the failure of the repeater of one tunnel or the LCX cable of one tunnel, the coverage is still available in both the tunnels automatically. Special considerations shall also be given to the interconnecting stations of underground corridor.	The IBS for cellular communication will be dependent on the Cellular communication design including frequency, power, location of cellular BTS, cellular coverage available, etc. Further 100% overlapping of signals is not possible in Cellular network due to technology challenges and the system performance. It is recommended to have the overlapping only at the hand over zones, please consider the revision of the requirement	Please follow tender conditions
936	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123	5.1.5 The CER in Depot/Admin Building shall be equipped with all control and monitoring equipment. The central control system shall be fault tolerant, and in a hot-standby configuration at CERs or based on a distributed architecture with full redundancy.	The location of CER/OCC/BCC is not mentioned. Please confirm the location of CER and if the CER is within the OCC and BCC/Depot.	Refer UPMRCL S.No 392

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
937	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 16 of 123	5.2.2 The Radio System shall cover, but not be limited to:10) All parts of OCC and Depot, DCC's and UPMRC Headquarters	Please provide the location and coordinates of OCC, BCC and UPMRC headquarter	Refer UPMRCL S.No 59
938	Volume 1		ITT, Page 31 of 96		As per ITT, Table A, the total number of station mentioned for Kanpur is 30 + 2 depots. Please confirm if the Agriculture university mentioned in TENDER KNPAGS-01, Particular Specifications CHAPTER 11 Appendices, Appendix C is station only so that the count of total number of station remains at 30.	Please refer Appendix-C for detailed nos of stations and depots.
939			General	Future Stations	Please confirm if the future station need to be considered as a part of BoQ with respect the quantities of RCW, RAU, RCP and RF coverage design. Request you to revise the quantity in the BoQ accordingly.	Refer UPMRCL S.No 210
940	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 11 Appendices, Appendix H	RCW quantity	As per Appendix H, the quantity of RCW is coming out to be 17 (9 for Kanpur and 7 for Kanpur). As per technical specification chapter 4 radio system clause 5.8.3.9.3, 5.8.3.9.4 , 5.8.3.9.5 and 5.3.4.4, additional RCWs are required. please confirm if the controllers are required to be considered. Please update the quantity in the BoQ accordingly. If not, request you to please delete the same from the specification.	Refer UPMRCL S.No 394

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
941	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 112 of 123	8.8. No repeater equipment shall generally be installed in the tunnels. Nevertheless, if it is unavoidable then intermediate repeaters can be allowed to install adhering to the schedule of dimensions. Power for the same has to be extended by the Telecom Contractor from the S&T UPS. Any co-axial cable, optical fiber cable, power cable, etc has to meet the FRLSZH (Fire Retardant Low Smoke Zero Halogen) criteria for underground environment and has to be provided by the Telecom Contractor along with associated equipment for receiving signals of mobile service providers. In this regard, certificates and test reports of the manufacturer are to be submitted to employer representative for review. Further, if required to install more active components to cover the stations areas, such locations of active components can be decided during detailed design phase. The installation of passive equipment has to be done inside the false ceiling and aesthetics of areas to be maintained. Location of such installation is to be approved by employer representative.	Cellular system works in a wider spectrum with various technologies 2G,3G & 4G. The higher frequencies and latest technologies are working with user shared output power, The reference power distinguish the coverage level is much lower and require to install the amplifiers a frequent interval inside tunnel to meet the coverage requirement. This mandates the requirement of installing BDA inside the tunnel wall also. Request you to please confirm the same.	To be dealt during design phase
942	Volume 4		TENDER KNPAGS-01 Particular Specifications CHAPTER 4 RADIO SYSTEM (With CDRS), Page 17 of 123	5.2.3) The Design requirements required to be submitted are given in Chapter 1 of this PS and clause 6 of this Chapter. Contractor shall however submit to the Employer's Representative for review, the coverage calculations and coverage plots (both up-link & down-link) to confirm that the required RF coverage stated above can be achieved using the Contractor's proposed antenna locations.	The design of UG station and tunnel shall be done through design tool and the simulation plots are available for the downlink. The link budget calculations shall be done based on the distance /losses for the uplink direction.	Please follow tender conditions
943	Volume 4		6.2.10	High Speed, Full High Definition IP PTZ Dome Camera (Day/Night)- Point 26 - Privacy Mask/Zones 32 individually configurable Privacy Masks/Zones	Number of privacy masks/zones varies across OEMs and is not a standard. Based on typical operational requirement and as a industry practice met by all the CCTV OEMs named in the tender, we request that this be modified to 16 or more privacy masks/zones, individually configurable to encourage wider OEM participation.	Refer UPMRCL Sr. No. 120

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
944	Volume 4		6.2.14	Digital CCTV Keyboard Keyboard shall be with user-friendly menu displayed on LCD with dynamic menu and easy to read display	With the advanced technologies , Joystick controllers are designed to seamlessly Integrate with VMS application and mapping entire keyboard buttons to control PTZ cameras. Operations smoothly , image & camera commands can be configured once which eliminates the need of LCD display to have attention for each and every action. Hence We request you to kindly Modify the Clause as Friendly Menu displayed on LCD / easy configurable image and camera commands on keyboard buttons	To be dealt during design phase
945	Volume 4		6.2.21.4	VIEWING CLIENT	0	
946	Volume 4		6.2.21.4	A. The viewing client shall enable operators to connect to the management server for initial authorization. Upon authorization, the viewing client shall be able to connect to the recording server(s), for access to live and recorded videos. Once authorized, the viewing client shall run independently of the management server and shall continue to operate even if the management server is offline. However, in the downgraded mode (when the connectivity between central server and the station is not available), the viewer client shall be able to login the system and the video recording & the local viewing shall not be affected.	Each OEM has its own architecture for the VMS. Based on the requirement for such critical operation and as per RFP, N+N redundancy is to be configured for the complete system & network. This mean if primary server goes down, failover server is going to automatically become active and hence such scenario will not take place. The specification for downgraded mode is aligned to certain OEM architecture. We request to update this specification to encourage wider OEM participation.	Please follow tender conditions
947	Volume 4		6.2.8 & 6.2.9	2 MP (Full High Definition) IP Fixed Box Camera (Day/Night),2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night): 17. Shutter speed- 2 MP (Full High Definition) IP Fixed Box Camera(Day/Night): 1 to 1/10,000 or better 20. Shutter speed- 2 MP (Full High Definition) IP Fixed Dome Camera (Day/Night): 1 to 1/10,000 or better	Camera Shutter Speed and Aperture both are paired together to balance the enough light into the scene for better image quality. Technically having faster speed more than 1/8000s will relatively allow less light hits the sensor, which can lead to a loss in image quality where as having shutter speed less than 1/8s will create motion blur effect in the picture during night Conditions. We request you to kindly accept optimal shutter range and modify the clause with 1/8 to 1/8000s or better	Please follow tender conditions
948			General	New Clause to be added	To ensure quality of product and benchmark we request that OEM be required to submit BIS certificate for proposed cameras and NVR at the time of bid submission for the purpose of country of origin of the proposed product.	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
949	Volume 4		6.2.21.5 MAPS	<p>E. The map function shall support real-time status monitoring indication from all system components</p> <p>F. The map function shall support graphical at-the-glance visualization of the system status through colour coding. Graphical tool illustrating health status of various equipment on a single screen, such as line diagram, normal status of all equipment at a station shown in Green colour and fault status shown in Red colour. The Contractor may propose alternate graphical scheme for review and acceptance of the Engineer.</p> <p>G. The map function shall support status details for cameras and servers, for example:camera resolution, FPS, network usage, disk space, etc.</p> <p>H. The map function shall provide a central overview of the video management system via an alarm list containing high, medium or low prioritized alarms. It must be possible to acknowledge alarms by right-clicking elements on maps.</p> <p>K.Map function shall allow the real-time status monitoring for VRM server/storage devices</p>	<p>All reputed OEMs handles MAPS and other desired VMS Functionalities e.g. System Health Status , Alarms Status Reporting & Alarm handling . Not all the OEMs use the same GUI , hence they may not be showing all the functionalities on Map whereas they shall be available under other tabs e.g. Site Health , Alarms etc. on the Viewing Client.</p> <p>We request you to modify the Clause 6.2.21.5 as MAPS/Other GUI and sub clauses E,F,G,H & K as " The Map/Other GUI function".</p>	Please follow tender conditions
950	Volume 4		6.2.21.6 ALARM MANAGEMENT FEATURE	<p>E. An alarm preview window shall display recorded video from a selected alarm or event if these have videos associated with them. If there are more than one camera associated with an alarm or if more than one alarm is selected, the preview shall show video from all associated cameras (up to 9 cameras).</p> <p>G. It shall be possible to filter the columns in the alarm list, to drag them to other positions and to right-click to show and hide certain columns</p>	<p>These are very specific button that may be from some GUI whereas it is not the standard form used universally. These functionalities may be captured with different GUI by other OEMs.</p> <p>We request you to modify Sub clause E as " There shall be dedicated alarm panel/window where alarm pop up and the operator can scroll through the events of the same alarm or multiple alarms from the different cameras. And delete Clause G as the feature is already captured in suggested modified Clause E.</p>	Please follow tender conditions
951	Volume 4		6.2.21.7 STANDALONE VIEWING CLIENT	<p>B. The standalone viewing client shall run from an .exe file, and no installation of software shall be required in order to view exported sources</p>	<p>Not all OEMS follow the same methods.</p> <p>We request you to modify this clause as " The standalone viewing client shall be exported with the video if required in order to view exported sources"</p>	Please follow tender conditions
952			General Query	<p>Warranty for Workstation and Servers in OCC/CER/TER etc.</p>	<p>We understand warranty period for workstation/Servers etc. In OCC/CER/TER etc. Shall be 3 years from the date of Final acceptance testing & Go Live.</p> <p>Please confirm the understanding</p>	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
953	Volume 2;SCC KNPAGS-01	20	Clause 11.2.1	Mobilization Advance Payment amount equal to 10% of the contract value	Request to amend this clause Mobilization Advance Payment amount equal to 15% of the contact value.	Please follow tender conditions
954	Volume 2;SCC KNPAGS-01	20	Clause 11.2.1	The mobilization advance shall be payable in two installment at 5% in the first installment and 5% in second installment	Request to amend this clause Mobilization Advance shall be payable in single installment.	Please follow tender conditions
955	Volume 2;SCC KNPAGS-01	21	Clause 11.3	Provisional Payment Against Material at Site 80% of Cost Center C of all sections (Except MS Section) and 80% of Cost Center B for MS Section against Indemnity bond as described in GCC, Balance 20% after acceptance of Installation Test as described in Cost center D of all Sections (Except MS Section) and in Cost center C of MS Section against safe custody Bank Guarantee. Safe Custody Bank Guarantee shall be released after acceptance of Installation Test	Request to amend this clause to 90% against Cost Center material and 10 % after acceptance of Installation Testing.	Refer Addendum-1
956	Volume 1;NIT KNPAGS-01	5	Similar Work	Similar works" for this tender for the work of telecommunication work shall be Design, Manufacture, Supply, Installation, Testing, Commissioning and Interfacing of telecom sub system(s) in Metro/LRT/Mono Rail /Airport/Railway/large infrastructure projects.	Request to amend this clause Design, Manufacture, Supply, Installation, Testing, Commissioning and Interfacing of telecom sub system(s) in Metro/LRT/Mono Rail /Airport/Railway/large infrastructure projects/ Smart city project/Data Centre.	Please follow tender conditions
957	Volume 4: CHAPTER-08 (CCTV)	55 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	1. 4K Laser based Large Video Screen Wall Cubes of 70" Diagonal 3 (C) X 2 (R) configuration with Complete equipment along with Base Stand and other accessories.	1. Full HD Laser based Large Video Screen Wall Cubes of 70" Diagonal 3 (C) X 2 (R) configuration with Complete equipment along with Base Stand and other accessories	Refer Addendum-1
958	Volume 4: CHAPTER-08 (CCTV)	55 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	3. The Rear Projection Modules must be based on Single Chip DLP (Digital Light Processing), Ultra HD Native, and Rear Projection technology.	3. The Rear Projection Modules must be based on Single Chip DLP (Digital Light Processing), Full HD Native, and Rear Projection technology	Refer Addendum-1

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959	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	4. The DMD (Digital mirror device) chip should have minimum 8 Mega pixels and the DMD mirrors should be square in shape.	4. The DMD (Digital mirror device) chip should have minimum 2 Mega pixels and the DMD mirrors should be square in shape	Refer Addendum-1
960	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	6. The overall resolution of the full graphics wall shall be minimum 11,520 x 4,320 pixels.	6. The overall resolution of the full graphics wall shall be minimum 5,760 x 2,160 pixels	Refer Addendum-1
961	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	7. The Minimum Diagonal Size of each Visual Display Unit / Rear Projection Module should be 70" nominal with a native resolution of 3840 x 2160 4K Ultra HD and should offer 16.7 million colours.	7. The Minimum Diagonal Size of each Visual Display Unit / Rear Projection Module should be 70" nominal with a native resolution of 1920 x 1080 Full HD and should offer 16.7 million colours.	Refer Addendum-1
962	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	14. Each cube shall have its own IP address to have the access from a standard web page from any PC over the Ethernet and shall communicate to a viewer via Ethernet.	14. Each cube shall have its own IP address to have the access complete consolidated video wall view from any PC over the Ethernet and shall communicate to a viewer via Ethernet.	Refer Addendum-1
963	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	15. The screen should be of almost Zero Gap technology (Inter-screen gap < 0.2 mm).	15. The screen should be of almost Zero Gap technology (Inter-screen gap < 0.5 mm).	Refer Addendum-1

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964	Volume 4: CHAPTER-08 (CCTV)	56 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	16. Each cube shall be IP based control. The control board input terminals to projection module will be 1x Digital DVI, 1x Dsub-15, 1x HDMI 2.0, 1x Display port 1.2, have a flicker free image on the Large Video Screen Graphics Wall.	16. Each cube shall be IP based control. The control board input terminals to projection module will be 1x Digital DVI/ 1x Dsub-15/ 1x HDMI 2.0/ 1x Display port 1.2 , have a flicker free image on the Large Video Screen Graphics Wall.	Refer Addendum-1
965	Volume 4: CHAPTER-08 (CCTV)	57 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	17. Each cube shall be equipped with Redundant Dual Power Supply which should be built in as integral part of projection system. Dual inbuilt power supply should be hot swappable. Cooling inside cube shall be by means of a heat pipe.	Request you to delete it as this functionality is of no use	Please follow tender conditions
966	Volume 4: CHAPTER-08 (CCTV)	57 of 60	Annexure A Requirements of 3x2 x 70" Large Video Screen A. Display unit:	18. Each cube should have a screen size of 1550 mm wide and 827 mm high. The cube depth should be less than 750 ±5 % mm.	18. Each cube should have a screen size of 1550 mm wide and 827 mm high. The cube depth as per OEM Architecture	Please follow tender conditions
967	Volume 4: CHAPTER-03 Telephone System	Page 17	EPABX 4.1.10.3	The EPABX switch network shall be connected to the Radio system to provide switching and connection for user to make telephone call connection through the hand portable/train mobile radios and call to hand portable/train mobile radios through telephone extension. This facility shall be programmable.	The EPABX switch network shall be connected to the Radio system over SIP Interface to provide switching and connection for user to make telephone call connection through the hand portable/train mobile radios and call to hand portable/train mobile radios through telephone extension. This facility shall be programmable.	Please follow tender conditions
968	Volume 4: CHAPTER-03 Telephone System	Page 12	EPABX 4.1.1.3	Minimum requirements of EPABX System	Minimum requirements of IP-PBX System	Please follow tender conditions
969	Volume 4: CHAPTER-03 Telephone System	Page 17	EPABX 4.1.11.3	The EPABX shall provide analogue and digital subscriber line cards to support analogue and digital telephone sets	The EPABX shall provide analogue and digital subscriber line cards/media gateway to support analogue and digital telephone sets	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
970	Volume 4: CHAPTER-03 Telephone System	Page 19	EPABX 4.1.1.13.1, Clause 3	Powered by the EPABX switch	Powered by the EPABX switch/Supported Interface	Please follow tender conditions
971	Volume 4: CHAPTER-03 Telephone System	Page 19	EPABX 4.1.1.13.2, Clause 7	Powered by the EPABX switch	Powered by the EPABX switch/Supported Interface	Please follow tender conditions
972	Volume 4: CHAPTER-03 Telephone System	Page 24	Help Points Phone, 4.2.4, Clause (ii)	Powered by the EPABX switch	Powered by the EPABX switch/Supported Interface	Please follow tender conditions
973	Volume 4: CHAPTER-03 Telephone System	Page 44	System Expansion, 6.8, Clause 6.8.3	The EPABX switches shall be expandable to the maximum line capacity by adding extra line cards only with the common control equipment, including the processor unit, memory modules, switching modules, power supply unit, remaining unchanged. However, the software license for the full line capacity as per the wired requirement given in this PS shall be provided as part of this Contract.	The EPABX switches shall be expandable to the maximum line capacity by adding extra line cards/multiple IPPBX nodes with the common / clustered control equipment, including the processor unit, memory modules, switching modules, power supply unit, remaining unchanged. However, the software license for the full line capacity as per the wired requirement given in this PS shall be provided as part of this Contract.	Please follow tender conditions
974	Volume 4: CHAPTER-08 (CCTV)	1.2.12	Chapter 8 CCTV	The system shall be able to integrate, record and store incidents and present videos from cameras and operator screens. The System shall have the capability to search the recorded incident with respect to size, colour and motion of the object should contain smart search capability. The system shall have the capability to replay and reconstruct the complete incident giving a complete 360° view of the incident synchronized on one timeline to include playback from Video recording platforms. The system shall record any predefined incident in a 30 frames per second to support better analysis.	The system shall have smart search capability, does means the search alerts on the basis of existing Video Analytics or new offline analytics module to proposed for object detection on the basis of size , colour and motion.	Refer UPMRCL S.No 104
975	Volume 4: CHAPTER-08 (CCTV)	6.2.20.1	Chapter 8 CCTV	Intelligent Video Analytics shall be implemented on the proposed cameras. Different types of Video analytics features shall include but not limited to:		

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
976	Volume 4: CHAPTER-08 (CCTV)		Chapter 8 CCTV	<p>Intrusion detection,</p> <ul style="list-style-type: none"> Unattended baggage detection, crowd estimation and crowd management alarms for platforms, line control, counter flow detection overcrowding detection, camera tampering alerts and Deep Neural Learning based analytics <p>Camera should also be capable of advanced deep neural learning Analytics separately. Details are as follows: - Advance People Counting at station entries and others defined area.</p> <ul style="list-style-type: none"> Any other video analytic feature relevant to UPMRC. 	Deep Neural Learning based analytics for people counting, can you please elaborate the use case for this AI base Video Analytics. Also please elaborate on what are other types of video analytic features. Request you to kindly provide us more information. Also VMS & Artificial intelligence should be independent with each other makes in order to have more competition. Also Video management system should be open platform & should not be from same camera OEM.	Refer UPMRCL S.No 251
977	Volume 4: CHAPTER-08 (CCTV)	6.2.21.2	Chapter 8 CCTV	GENERAL SYSTEM DESCRIPTION		
978	Volume 4: CHAPTER-08 (CCTV)	K		The video management system shall support a video wall application, which shall be flexible and hardware independent to allow for seamless integration with the management client and viewing client.	Same support required to from Video Wall OEM, OR Decoder level integration should be acceptable. Manytimes full functionality of video client can not be achieved using integration with video wall integration hence requesting you to accept video wall integration using VMS decoder.	Please follow tender conditions
979	Volume 4: CHAPTER-08 (CCTV)	6.2.21.5	Chapter 8 CCTV	MAP		
980	Volume 4: CHAPTER-08 (CCTV)	G		The map function shall support status details for cameras and servers, for example: camera resolution, FPS, network usage, disk space, etc.	Requesting you to delete this clause because FPS, Network Usage normally available on camera screen as OSD (On Screen Display) and disk space etc is available in health status of system.	Please follow tender conditions
981	Volume 4:: CHAPTER-01	Page 16	Chapter 1, 1.4	1.4 Relevant Codes, Standards and Specifications.	Are these applicable to IP Subsystem	Please follow tender conditions
982	Volume 4:: CHAPTER-01	Page 25	Chapter 1 ,1.6	1.6	Can Bidder propose 3rd Party open NMS	Agreed, Please follow Tender Conditions
983	Volume 4:: CHAPTER-01	Page 28	Chapter 1 ,3.6	3.6 All equipment shall work in active-active mode (Hot standby). In case of unavailability of first CER equipment, the redundant equipment in another CER will take over without any human intervention and without any service failure / disruption to the end user.	We understand that each equipment type have to provided in redundancy . Kindly confirm as this will double the BOQ	Refer Appendix-J of ITT for minimum BoQ.

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
984	Volume 4:: CHAPTER-01	Page 29	Chapter 1 ,4.1.2	4.1.2 The Systems shall be so designed as to have a minimum of 15 years of service life operating continuously. The life for Server and workstation shall not be less than 10 years. The life of all the cables shall not be less than 25 years.	Kindly confirm if the 15 years life cycle is applicable to Telecom IP equipment used in FOTS design / Ip Network design . The normal life cycle of any IP network equipment ranges from 3-7 years . Kindly relax the clause or suggest if the same is not applicable to IP /IT network equipment .	Please follow tender conditions
985	Volume 4:: CHAPTER-01	Page 30	Chapter 1 ,4.1.5	4.1.5 Single Point of Failure Telecom Contractor shall propose for all the sub system, a design and topology without any single point of failure. Redundancy at every level have to be maintained.	Kindly confirm if the redundancy here refers to 2 equipment of same type for any functional need is required at every location of WAN and LAN . We understand that CORE should be redundnat in the design however the LAN system can be non redundant (in terms of number of devcies)	Please follow tender conditions
986	Volume 4:: CHAPTER-01	Page 42	Chapter 1 ,6.5.3	6.5.3 The Equipment shall be designed for the Design Life specified in this PS from the date of Project completion. The Contractor shall explain how obsolescence can be managed over the Design Life of the System.	Kindly confirm suggest the Life cycle and support duration for IP networking equipment	Please follow tender conditions
987	Volume 4:: CHAPTER-01	Page 43	Chapter 1 ,6.6.1	6.6.1 Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, Convergence Time, Latency, Synchronization, Interfaces & Integration etc.	Kindly confirm if the POC have to be demonstrated after the award of contract to MSI /OEM	Agreed, Please follow Tender Conditions
988	Volume 4: CHAPTER-02 FOTS	Page 6	Chapter 2 ,1.2.1	1.2.1 The Scope of Supply shall include, but not limited to, all FOTS Network Equipment, softwares and manuals as per approved design requirements for the following:	Kindly suggest if there is any approved design document already in place and if we can get the same .	To be dealt during design phase
989	Volume 4: CHAPTER-02 FOTS	Page 6	Chapter 2 ,1.2.1	1.2.1 (n) (o)	need more details on spares and expansion capacity	Please follow tender conditions

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
990	Volume 4: CHAPTER-02 FOTS	Page 13	Chapter 2 ,1.4.6	1.4.1.6 Ethernet network should comply for following as minimum: (a) Q in Q configuration of VLANs. (b) Multicast protocols (c) PIM Protocols (d) MVR Protocols (e) MLAG (f) IPv4 MCast (g) ERv2 or other equivalent protocol (h) LACP (i) VRRP (j) SNMP (k) Delay and Loss measurements. (l) CFM Measurements, (m) CLI Configuration (n) ACL protocols (o) Protection against single point of failure. (p) Protection against catastrophic failure.	we understand that feaure mentioned are to be deployed and required on the core ethernet (switch / Router)devcies only forming ring architecture between Impmlocation of Metro project ,certain featres may not be required and advised for core network . The LAN behind the Core Nodes needs to be enterprise grade ethernet swicthes and should support enterprise grade ethernet fuctionality only . Kindly clarify .	Please follow tender conditions
991	Volume 4: CHAPTER-02 FOTS	Page 13	Chapter 2 ,1.4.7	1.4.1.7 The Proposed Core switches and Distribution switches design must be adopted using the latest Active – Active clustering technologies like VSS (Virtual Supervisor switching) or equivalent providing high reliability for seamless service switch over of various sub systems during any disaster.	Kindly confirm if OEM can provide Switch / Router with required interface density to meet the functional requirement of Project .	Please follow tender conditions
992	Volume 4: CHAPTER-02 FOTS	Page 13			Kindly confirm if the Core devcies needs to have redundnat CPU for maximum up time , which is most important for project requirement .	Please follow tender conditions
993	Volume 4: CHAPTER-02 FOTS	Page 13	Chapter 2 ,1.4.8	1.4.1.8 The Active – Active clustering technology should have the ability to handle a “Split brain” situation especially at the station level distribution switches and clear explanation must be provided on the mechanism available in the proposed system to avoid such catastrophic failures across the network back bone.	As per clause 1.4.1.7 VSS of equivalent technology can be provided , Kindly confirm if MC-LAG which is filed proven technology can be used , The failure scenario provides the redundancy in MC-LAG deployment . Or if OEM can provide the L3 Routed topology for the requirement , which will also help to get the redundancy based on routing protocols and minimize the broadcast domian .	To be dealt during design phase
994	Volume 4: CHAPTER-02 FOTS	Page 13	Chapter 2 ,1.4.9	1.4.1.9 The proposed Active – Active clustering technology at the Core switches must be supported over geographically diversifed locations with an ability for seamless service fail over.	Request to allow the OEM to Provide the clustering as per the OEM's design to meet the functional requiremnet . Core Switch / Router may not need the clustering since they can support MC-LAG with MPLS feature which provide sub 50 mili second convergance and also L3 design to minimize the L2 broadcast radius . Request to clarify and allow so that OEM can provide the field proven best and open technologies in the network .	To be dealt during design phase

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
995	Volume 4: CHAPTER-02 FOTS	Page 16	Chapter 2 ,1.4.3.1	1.4.3.1 (h) Ability to integrate with Non-IP based equipment and networks.	The equipment asked for core and access are with ethernet interface , kindly clarify Non-IP based equipment and what protocols will they run to connect the network and on what interface type	Refer UPMRCL S.No 29
996	Volume 4: CHAPTER-02 FOTS	Page 16	Chapter 2 ,1.4.3.2	1.4.3.2 Network Synchronization (d) The FOTS equipment shall support Ethernet synchronization preferably Sync to IEEE 1588V2 standard/NTP. The synchronization shall have frequency as well as phase synchronization/NTP Server and Client functionality.	We understand that Sync E and PTP is required for Core network only , kindly confirm	Please follow tender conditions
997	Volume 4: CHAPTER-02 FOTS	Page 18	Chapter 2 ,1.8.1	1.8.1 In the event of an optical fibre cable break, the optical transmitter laser output shall shut down to a safe level as defined by IEC-825, ITUT-G 958. The shutdown mechanism shall not be software dependent.	Modern day devcies use safe laser technology which do not harm if exposed , Request to allow OEM having the same for broader participation and best of breed of prodcuts .	To be dealt during design phase
998	Volume 4: CHAPTER-02 FOTS	Page 18	Chapter 2 ,1.8.3	1.8.3 (b) Any other interface type, necessary to support long distance communication between E&M System equipment provided by the Contractor.	Kindly confirm if the same can be provided over extra equipment as the ethernet router and switch may not provide interface other than ethernet in case of switch and E1/STM in case of router .	To be dealt during design phase
999	Volume 4: CHAPTER-02 FOTS	Page 21	Chapter 2 ,1.10.1.18	1.10.1.18 Shall provide flexible reporting capabilities including pre-defined and custom reports with scheduled and flexible delivery options. NMS should support Software Defined Network (SDN) Management including Open Flow devices.	Open flow is obselte protocol and is not widely used , instead many open standard protocols such as netconf , neutron are open standard protocol and are used the network today , request to allow OEM to choose the best breed of protocols to meet the functional requirement.	Refer UPMRCL S.No 290
1000	Volume 4: CHAPTER-02 FOTS	Page 23	Chapter 2 ,1.16.2	1.16.2 (iii) details on the hardware modularity of each type of data and voice interface including the incremental number of interfaces that can be added to a partially equipped equipment shelf and limitations on the addition of the interfaces to the equipment already equipped with mixed types of interfaces shall be defined;	Since sperate system voice is een asked in the RFP , Kindly remove voice interface from Core and Accces ethernet Router / switch FOTS devcie used to build highspeed resilient ethernet network . Request to amend for leading OEM to aprticipate	Please follow tender conditions
1001	Volume 4: CHAPTER-02 FOTS	Page 25	Chapter 2 ,1.17.7	1.17.7 Concerning the GE network the maximum traffic interruption time on any circuit due to link, node or any other failure shall be less than 50 ms by using suitable open standard Ring Protection switching protocols.	Request to allow MPLS as protocol to be used in the core network, this is filed proven with FRR capability and support multitanency for the network. We highly recommend to allow the MPLS protocol to design the carrier class networkr .	To be dealt during design phase
1002	Volume 4: CHAPTER-02 FOTS	Page 26	Chapter 2 ,1.19.1	1.19.1 (viii) All the Network Switching Devices/NMS should support Open flow Protocol for SDN technology.	Open flow is obselte protocol and is not widely used , instead many open standard protocols such as netconf , neutron are open standard protocol and are used the network today , request to allow OEM to choose the best breed of equivalnt protocols to meet the functional requirement.	Refer UPMRCL S.No 290

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1003	Volume 4: CHAPTER-02 FOTS	Page 26	Chapter 2 ,1.19.4	1.19.4 Concerning the network security, an overall set-up is expected to prevent external attacks and defend the network against "WAN-in-the-middle" or hacker attacks. This set of security features for connectivity and access control shall include as a minimum: ACLs, VLAN ACLs, authentication, port level security and identity-based network services. Port mirroring for traffic diagnostics feature shall be available.	Kindly confirm if the identity-based network services implies to NAC equipment for both Metro project , if yes kindly confirm the number of users for which the NAC solution is to be provided . (NAC = Network access control)	Please follow tender conditions
1004	Volume 4: CHAPTER-02 FOTS	Page 26	Chapter 2 ,1.20.3	1.20.3 Layer 2 Features (v) 802.3x - Flow Control, Layer 2 Ping, Layer 2 Traceroute and Connectivity Fault Management.	802.3x is access switch feature kindly remove from the core switch & Distribution switch / Routers . Layer 2 ping and Layer 2 trace route or Ping and Trace route functionality for IP traffic/ethernet OAM - request to relax as the network will have L3 core for such large network. request to relax both points for leading OEM to participate .	Please follow tender conditions
1005	Volume 4: CHAPTER-02 FOTS	Page 29	Chapter 2 ,1.20.4	1.20.4 Layer 3 Features Support Efficient Intranet Multimedia and multicast support	Request to allow standard based Multicast PIM protocol to avoid ambiguity . The clause may be OEM specific terminology . Request to relax for leading OEM to participate	Please follow tender conditions
1006	Volume 4: CHAPTER-02 FOTS	Page 30	Chapter 2 ,1.20.5	1.20.5 Quality of Service Features (vi) Scheduling IP precedence, 802.1p and ISL priority, three transmit queues on a per port basis, WRR, Strict Priority Queue TOS->COS mapping	Kindly clarify ISL priority or remove the same to avoid ambiguity and leading OEM to participate	Please follow tender conditions
1007	Volume 4: CHAPTER-02 FOTS	Page 31	Chapter 2 ,1.20.5	1.20.5 Quality of Service Features (vii) Micro-Flow Policing (limits BW of specific user/application)	Ambiguous terms request to remove for solution clarity or allow CIR (committed information rate)	Please follow tender conditions
1008	Volume 4: CHAPTER-02 FOTS	Page 31	Chapter 2 ,1.20.5	1.20.5 Quality of Service Features (viii) Aggregate-Flow Policing (dedicated BW per customer SLA)	Ambiguous terms request to remove for solution clarity or allow PIR Peak information rate)	Please follow tender conditions
1009	Volume 4: CHAPTER-02 FOTS	Page 31	Chapter 2 ,1.20.6	1.20.6 Security Features (v) Session control	Routing and switching device do not support session creation , Kindly confirm if this is required on firewall	Please follow tender conditions
1010	Volume 4: CHAPTER-02 FOTS	Page 31	Chapter 2 ,1.20.6	1.20.6 Security Features (vi) Centralized policy enforcement through a Secure Policy Manager	Policy enforcement can be done end-to-end wide on IP devices using NMS , Kindly confirm if the understanding is correct	Please follow tender conditions
1011	Volume 4: CHAPTER-02 FOTS	Page 31	Chapter 2 ,1.20.6	1.20.6 Security Features(x) Reflexive (stateful)	Routing and switching device do not support session creation , Kindly confirm if this is required on firewall	Please follow tender conditions
1012	Volume 4: CHAPTER-02 FOTS	Page 32	Chapter 2 ,1.20.9	1.20.9 Distribution Switch for stations, RSSs, Depots, CERs etc. v) 802.3x - Flow Control	802.3x is access switch feature kindly remove from the core switch & Distribution switch / Routers	Please follow tender conditions
1013	Volume 4: CHAPTER-02 FOTS	Page 32	Layer 3 Features Support:	Layer 3 Features Support: (r) Efficient Intranet Multimedia and multicast support	Request to allow standard based Multicast PIM protocol to avoid ambiguity . The clause may be OEM specific terminology . Request to relax for leading OEM to participate	Please follow tender conditions

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1014	Volume 4: CHAPTER-02 FOTS	Page 34	Quality of Service Features:	Quality of Service Features: (f) Scheduling IP precedence, 802.1p and ISL priority, three transmit queues on a per port basis, WRR, Strict Priority Queue TOS<>COS mapping	Kindly clarify ISL priority or remove the same to avoid ambiguity and leading OEM to participate	Please follow tender conditions
1015	Volume 4: CHAPTER-02 FOTS	Page 34	Quality of Service Features:	(g) Micro-Flow Policing (limits BW of specific user/application)	Ambiguous terms request to remove for solution clarity or allow CIR (committed information rate)	Please follow tender conditions
1016	Volume 4: CHAPTER-02 FOTS	Page 34	Quality of Service Features:	(h) Aggregate-Flow Policing (dedicated BW per customer SLA)	Ambiguous terms request to remove for solution clarity or allow PIR Peak information rate)	Please follow tender conditions
1017	Volume 4: CHAPTER-01	Page 25	Chapter 1 Clause 1.6	To achieve a completely integrated system, there is a need for the integration of various Telecom subsystems and the other subsystems like SCADA/IBMS/etc in each of the stations and at the OCC/CERs level. To achieve this, it would be important that each of the NMS of Telecom subsystems should possess a framework, to be able to integrate with a third party centralized IBMS/SCADA system and its applications for enabling the relaying of its status and alarm information.	We have used T-SCADA, SCADA, Telecom SCADA and IBMS in various places to describe the Train mgmt system /solution in OCC . We would recommend it to be called as T-SCADA in all places. Secondly, since T-SCADA has got much more to deliver than whatever we are describing in this particular clause. Let's bring OCC solution/T-SCADA under a separate chapter to diffuse all confusions	Please follow tender conditions
1018	Volume 4: CHAPTER-01	Page 25	Chapter 1 Clause 3.9	Asset Management The Contractor shall develop and maintain an Asset Database for all assets provided under the contract, including equipment with serial number and version number, software with version number, system configurations, documentation. The Contractor shall handover the initial database to the Employer on completion of the testing and commissioning works. The Contractor shall be responsible to maintain and update the Asset Database until the end of the contract, and handover the final database to the Employer. Contractor shall be responsible to interface, extend & implement major / critical alarms of telecommunication system to centralized asset management system or centralized fault management system (T-SCADA) of Kanpur and Agra Metro Rail Projects.	Clause no. 3.9 actually addresses another part of the T-SCADA system, which would keep a tab on all the equipments, from commissioning, installation, DLP, production till its retirement as an individual asset and also as a dependable asset. Entire hierarchy and zone/station wise mgmt. of each and every asset is important to keep MTBF, RAMS, SLA's under control	Please follow tender conditions
1019	Volume 4: CHAPTER-01	Page 30	Chapter 1 Clause 4.2.2 and Clause 4.2.3	MTBF Definition..... and Reliability calculations shall be based on data from past experience where such data is available for similar applications	MTBF and RAMS calculation depends on the architecture, we recommend for T-SCADA. The description is not complete.As explained in chapter 2/ clause – 3.2.6 and this clause	Please follow tender conditions
1020	Volume 4: CHAPTER-01	Page 35	Chapter 1 Clause 4.4.13	The Maintainability Plan shall describe the analytical methods to be used during design and development stages to demonstrate compliance with maintainability requirements specified herein and to identify the maintainability-critical items of the System.	Apart from this clause, there's no mention of a Business intelligence tool , which would continuously and simultaneously work on the maintainability aspect for such large projects. Its left to SI's and OEMs imagination	Please follow tender conditions

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1021	Volume 4: CHAPTER-01	Page 39	Chapter 1 Clause 4.14.1	For all MMI's specially designed or customised for the Systems, the Contractor shall provide and organise prototypes for demonstration and submission to the Employer's Representative for review prior to implementation.	Clause 6.1.4.1 suggests a generic approach. The depth of MMI levels have not been explained across any document of KNPAGS	Please follow tender conditions
1022	Volume 4: CHAPTER-01	Page 43	Chapter 1 Clause 6.6.1	Contractor shall demonstrate a POC (Proof of Concept) for FOTS, CCTV, Telephone System, PAS, PIDS, ACS, and Radio system before commencing detailed design. The vendor shall set-up a prototype test set up to demonstrate major functionalities as specified in PS including Redundancy levels, Traffic analysis, Convergence Time, Latency, Synchronization, Interfaces & Integration etc.	We should include OCC/T-SCADA POC also. Since this would be the tool, managing the overall operations	Please follow tender conditions
1023	Volume 4: CHAPTER-01	Page 69	Chapter 1 Clause 10.6.1	Descriptive labels shall be provided for all cabinets, enclosures, panels, assemblies and sub-assemblies	Would these labels be also part of the asset mgmt. tool. Need clarity. Since ultimately, every item, is important from productivity as well as security	Please follow tender conditions
1024	Volume 4: CHAPTER-01	Page 74	Chapter 1 Clause 11.1.1	The Contractor shall investigate all failures, major failures, repetitive failures, design defects and provide all necessary corrective actions throughout the Contract period.	Failures and defects can only be identified and reported, when we create SOPs, SLAs and SLTs. We request it be made part of the T-SCADA product/solution set. Should be clearly mentioned	Please follow tender conditions
1025	Volume 4: CHAPTER-01	Page 74	Chapter 1 Clause 11.1.2	The Contractor shall investigate interference problems either from or to the systems of other Project Contractors and provide all necessary corrective actions throughout the Contract period.	Same as above.	Please follow tender conditions
1026	Volume 4: CHAPTER-01	Page 75	Chapter 1 Clause 11.3.1	The Contractor shall submit a Maintenance Plan in accordance with provisions in GS to the Employer's Representative for review before the commencement of installation activities.	We would suggest the maintenance plan as creating a Standard operating environment (SOE) for KNPAGS . This would help us not only evaluate situation and productivity in each project. We can also draw comparison after 6 months of running each project	Please follow tender conditions
1027	Volume 4: CHAPTER-01	Page 75	Chapter 1 Clause 11.3.2	The Maintenance Plan shall describe the Contractor's proposed maintenance regime for preventive and corrective maintenance of the System, including, but not be limited to the following: 1. The maintenance philosophy and approach 2. All necessary tasks for first line, second line, third line and corrective maintenance 3. Frequency of each maintenance task	The SOE explained in the above clause, managed by an "operations and maintenance" management tool in sync with the Asset mgmt. tool would answer all questions	Please follow tender conditions
1028	Volume 4: CHAPTER-02 FOTS	Page 4	Chapter 2 Clause 1.1.1	For efficient metro railway management and operation, it is essential to have a well-organized communication infrastructure covering strategic locations like OCC, CERs, TERs in redundant mode	If MSI's read it wrongly, we would build up multiple layer of management system. The architecture needs to be defined clearly. To have a very effective, yet sustainable and secured platform	To be dealt during design phase

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1029	Volume 4: CHAPTER-02 FOTS	Page 4	Chapter 2 Clause 1.1.4	The FOTS shall provide a common transmission backbone for all the Telecom Subsystems: Telephone Subsystem, Radio Subsystem, Public Address Subsystem, Closed Circuit Television Subsystem, Passenger Information Display Subsystem, Master Clock Subsystem, Telecom- SCADA (Fault Reporting Subsystem), Access Control Subsystem, Power Supply Sub-system and Centralised Digital Recording Subsystem etc. The FOTS shall also provide separate Dark fibers connectivity for the Power SCADA, Building Management Sub-system, Automatic Fare Collection System, Office Automation and Information Technology (OA and IT), etc.	Since the main governing or mgmt. tool would sit in the OCC, and so would the other NMS/element mgrs. Request clear definition. Later it would be an overlap of multiple tools, without actually creating the effect.	To be dealt during design phase
1030	Volume 4: CHAPTER-02 FOTS	Page 4	Chapter 2 Clause 1.1.9	Network Management System (NMS) shall be provided at the CERS to monitor status of all the FOTS equipment and control the operation & maintenance process. It shall provide FCAPS facilities viz. alarm surveillance, performance monitoring, configuration management, failure management, security management etc as a minimum as per operational requirements.	FCAPS ultimately should be managed or responsibility of T-SCADA. Since we are talking about multiple subsystems, asset mgmt. along with an analytical layer	Please follow tender conditions
1031	Volume 4: CHAPTER-02 FOTS	Page 7	Chapter 2 Clause 1.2.2.1	The network throughput associated with the different levels of service, the worst case transmission delay times, latency, packet drop, traffic utilization, the availability including MTTR and recommendations for minimum equipped reserved capacity and additional spare capacity	We need to make SLA's to monitor various services, which may affect the productivity. With that, we need to also create rules for quick "root cause analysis". This part is completely missed.	To be dealt during design phase
1032	Volume 4: CHAPTER-02 FOTS	Page 7	Chapter 2 Clause 1.2.2.2	After 6 months of revenue operation, the Contractor shall compile and submit performance report to the Employer for approval.	This would need a Standard operating environment (SOE) for KNPAGS , as has been suggested above	To be dealt during design phase
1033	Volume 4: CHAPTER-02 FOTS	Page 8	Chapter 2 Clause 1.3.1.1	The FOTS shall provide the communication support for carrying voice, data, and video signals and guarantee the associated quality of service requested by each subsystem.	Details missing. Are we leaving it to the imagination of MSI and OEMs?	To be dealt during design phase
1034	Volume 4: CHAPTER-02 FOTS	Page 10	Chapter 2 Clause 1.3.1.15	One equipment rack shall be housed in RSS control room for housing the following telecom equipment / systems: • CCTV, • Access Control System, • Networking equipment for OA/IT and FOTS • Operational Telephones, Sub-Master Clock Unit, etc and along with all terminations and accessories for Dark Fibres required for PSS SCADA	Excellent thought. But it should include the entire IT equipments element managers and the T-SCADA separately.	To be dealt during design phase
1035	Volume 4: CHAPTER-02 FOTS	Page 13	Chapter 2 Clause 1.4.1.6	Protocols / Technologies "A" to "P"	It's a combination of protocols and technologies. Should we not articulate, what protocols for which part of AVVID	To be dealt during design phase

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
1036	Volume 4: CHAPTER-02 FOTS	Page 16	Chapter 2 Clause 1.4.3.2/d	The FOTS equipment shall support Ethernet synchronization preferably Sync to IEEE 1588V2 standard/NTP. The synchronization shall have frequency as well as phase synchronization/NTP Server and Client functionality.	IEEEV2 is PTP and not NTP. Are we expecting synchronisation on wireless also?? Then we would need both NTP and PTP. Our request would be to use NTP alone. Since wireless a lot of time might allow security issues	To be dealt during design phase
1037	Volume 4: CHAPTER-02 FOTS	Page 21	Chapter 2 Clause 1.1.11	OPAMP - Telecommunications Management Network (TMN) concept described in ITU-T Recommendations M-3010.	The RFP just says OPAMP and M-3010. It actually means – “Conformity assessment is the process used to demonstrate that a product, service or system conform to specified requirements and commonly used by many standard development organizations (SDOs)....” and “.....conformity assessment increases the probability of interoperability, interoperability can only be guaranteed through practical tests of interconnected equipment and services from different vendors....” The two lines have been taken from www.itu.int/en/ITU-T/C-I/Pages/default.aspx (M-3010) The RFP doesn't explain it at all.	To be dealt during design phase
1038	Volume 4: CHAPTER-02 FOTS	Page 21	Chapter 2 Clause 1.12.3 and 1.12.4	The FOTS Network Management System shall be able to correlate all the subsystems logs and alarms for detailed analysis and debugging in case of any problem of failure. -- (i) any card/module/ interface failure; iv) Power interface and v) input failure	Any NMS system, wouldn't manage subpoints of clauses 1.12.3 and 4. We request this to be part of the T-SCADA solution. Which manages all the subsystem, including power.	To be dealt during design phase
1039	Volume 4: CHAPTER-02 FOTS	Page 23	Chapter 2 Clause 1.13.5	The FOTS system shall be interfaced with the T-SCADA/ FRS for purpose of integrated fault management. All alarms and equipment status of the FOTS shall be forwarded to the T-SCADA/ FRS (Fault reporting System) for reporting and analysis purpose.	We request that the clause be re-written. All NMSs and Element managers of FOTS and other subsystems, need to integrate into T-SCADA/ FRS. Hierarchy should be maintained while design documentation	Please follow tender conditions
1040	Volume 4: CHAPTER-02 FOTS	Page 23	Chapter 2 Clause 1.14	Network configuration and provisioning – (i) interface port allocation; (ii) logging of circuit routing data logged into configuration Database; and (iii) Operator's configurations check function prior to main and backup database update	NCM or network configuration manager manages all the configurations of the network equipments and keeps a vigil on any configuration change. It can upload and backup any configuration of any networking equipment. Do we need that. These requirements, which be part of FOTS NMS.	Please follow tender conditions
1041	Volume 4: CHAPTER-02 FOTS	Page 23	Chapter 2 Clause 1.16.2/iv&vi	Details on the electrical and physical specifications of the local maintenance port which support remote and local operation, administration, maintenance and provisioning (OAM&P) functions of the equipment; Synchronization details	Its not clear, which subsystem NMS, would manage this clause. We request that, It might be made part of T-SCADA	Please follow tender conditions
1042	Volume 4: CHAPTER-02 FOTS	Page 48	Chapter 2 Clause 3.1.1.1/"a" – "i"	The Telecom-SCADA is the system used for remote supervision of Telecommunications equipment of Uttar Pradesh Metro Rail Corporation (UPMRC) for Kanpur and Agra Metro Projects. The system should have the ability to provide fault indication and diagnostic facilities. The following systems will be monitored through Telecom-SCADA system:	This clause is part of the FOTS subsystem and appears only on Page 48. If the SI's miss this part, then the entire design of KNPAGS maybe jeopardised. We request a separate chapter on T-SCADA	Please follow tender conditions

UPMRC Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
1043	Volume 4: CHAPTER-02 FOTS	P-48	Chapter 2 Clause 3.1.1.2	Faults & Failure warnings and Alarms of other Systems shall be monitored by CSSs. SCADA shall in addition, provide the OCC & CSSs/CERs staff with the necessary information	Another term as "CSS", has been introduced in this clause. Request clarity and define CSS/T-SCADA/FSR, etc.	CSS: Communication System Supervisor, who monitors system health CER: Central Equipment Room
1044	Volume 4: CHAPTER-02 FOTS	P-48	Chapter 2 Clause 3.1.1.3	The SCADA shall also provide relevant data / information, which would enable the maintenance staff to assess the need for unscheduled Preventive Maintenance based on the degradation of normal operating parameters.	This should be part of OPAMP – Would request some detailed description	Please follow tender conditions
1045	Volume 4: CHAPTER-02 FOTS	P-49	Chapter 2 Clause 3.2.1	The Network Management Systems (NMS) from the Telecommunication systems, as faults/warnings occur, inform T-SCADA Application Software (role of which is to collect information for maintenance staff to monitor the needs for intervention). T-SCADA Application Software centralizes all the alarms/warnings from all systems allowing the maintenance of all assets in UPMRC for Kanpur and Agra Projects.	This clause would confuse the Sis to a great deal. Would request differentiation created in NMS's and T-SCADA	NMS stands for Network Management System which controls and monitors whole system equipment.
1046	Volume 4: CHAPTER-02 FOTS	P-49	Chapter 2 Clause 3.2.3	The above details provided at T-SCADA Application Software operator screens ensure that the users running this application have all the relevant information so they can take appropriate actions to minimize disruptions to the metro services and inconvenience to passengers.	T-SCADA and MMI designs have not been articulated. Would request articulation.	Please follow tender conditions
1047	Volume 4: CHAPTER-02 FOTS	P-49	Chapter 2 Clause 3.2.6	All events reported to Telecom SCADA are recorded in primary database in primary Server and replicated to backup database in Standby Server. Same 1+1 redundant Server Configuration shall be placed at each CER. Through the usage of data contained in the database, T-SCADA Application Software shall be able to generate reports that UPMRC finds relevant.	1 + 1 and redundancy is ok. But placing the software separately in OCC and CER is a wrong design and over kill.	To be dealt during design phase
1048	Volume 4: Chapter 04 Radio System	P-13	4.4 Maintainability requirements, 4.4.2	4.4.2 The service life of the CDRS equipment except server/workstation shall not be less than 15 years. The service life of all types of cables shall not be less than 25 years. The service life of Server/Workstation shall not be less than 10 years. Service life shall be counted from the commencement date of Revenue Operation Date (ROD).	This chapter talks about Radio system. The CDRS to be updated as Radio system	Refer UPMRC Sr. No. 726

UPMRCL Sr. No.	Volume	Page / Sec. No. of Tender doc	Clause No.	Description of the clause	Tenderer's Query	UPMRC Reply
1049	Volume 4:Chapter 04 Radio System	P-13	4.6 Interoperability requirements	<p>The Radio system supplier shall have previously demonstrated working radio interoperability tests between their radio equipment and the equipment of another radio vendor. The radio system supplier must submit documentation that has demonstrated interoperability. This test certification must be issued by only Accredited Test Houses of TETRA. The Inter-Operability Profile (IOP) certificates have to be submitted for the Switching Infrastructure Equipment. Copy of IOP Certificates issued for compliance to each of the following TETRA summary features for the Switching Infrastructure Equipment to be necessarily submitted as part of the Bid</p> <ul style="list-style-type: none"> i. Core System ii. Short Data Service (minimum SDSTL). iii. Individual Address Dynamic Group Number Assignment iv. Packet Data v. Air Interface Encryption (minimum Class 3) vi. Authentication. vii. End to End Encryption. viii. Inter System Interface (ISI) <p>In case of non-compliance or non-availability for any of the above important summary features, the Bid shall be considered as technically non-compliant.</p>	<p>Interconnection between TETRA system with another TETRA system or with other wireless communication technologies may be done through ISI or Suitable gateways hence Clause 4.6/VIII i.e Inter System Interface (ISI) should be accepted as</p> <p>"It is required to interface and communication between TETRA network with other TETRA network (existing or to be planned in future) or TETRA System with UHF / GSM / CDMA services with inter System Interface (ISI) OR through network Gateways."</p>	Please follow tender conditions
1050	Volume 4:Chapter 04 Radio System	General		To be added for TETRA Radio system	Radio system should support Inter working Functionality (IWF) for integration to future broadband systems. The standards have already been defined by ETSI for Inter working Functionality (IWF) and should be incorporated considering the future upgradation requirements.	Please follow tender conditions