

RailTel response to Pre Bid Queries RFP no. RailTel/Tender/OT/CO/P/2018-19/CCTV at stations & in coaches/472 held on 06.06.19						
SN	Section No.	Page No.	Point No.	Content of RFP Requiring Clarification	Points of clarification required	RailTel Response
1	8.3.1.1 General Parameters	241	8.3.1.3	Video Analytic System software RDSO specification NO. RDSO/SPN/TC/65/2019 Revision 5.0 vide Point no 19.25 (a): The Face Recognition Algorithm vendor should have participated in the latest Face Recognition Algorithm Evaluation conducted by NIST (National Institute of Standards and Technology, U.S. Department of Commerce) for non co-operative subjects. The benchmarking parameters such as acceptable Error rate/Ranking in NIST report as applicable are to be specified by the purchaser.	<p>NIST is essentially an American Standards Organization, designed to further the development and adherence of Systems development for a different operating & ambient environment, none of their tests will simulate usage of equipment software, in Indian High humidity, High temperature, high volume based situations. Mostly foreign vendors are NIST certified.</p> <p>The organization has been accused of accommodation of backdoor entries of the NSA, thereby rendering this as a Security risk matter, where their authorized systems may have openings and ways to relay information to US agencies. You can read more about this in the following link - https://bits.blogs.nytimes.com/2013/09/10/government-announces-steps-to-restore-confidence-on-encryption-standards/</p> <p>The Organization is trying to cover thousands of technology areas, and their expertise and due diligence over the certification any one system, is highly suspect.</p> <p>Our facial recognition software on the other hand has been trained on over 3 lakh South Asian faces, which would be well near impossible for most companies from Overseas.</p> <p>Railtel can consider putting in a clause mentioning "Vendor to have at least one large recognized Government agency using their FRS solution".</p> <p>The supporting letters are also attached for your kind attention:</p> <p>1) Also please refer to letter dated 03 Jan 2019 by Sh. Nripendra Misra, Principal Secretary to Prime Minister of India wherein it has been emphasized that such stipulation of foreign make/brands and/or restrictive conditions like mandatory requirement of certifications by foreign bodies) in the tenders is not only violating Public Procurement (Preference to Make in India) order 2017. This letter is attached for your kind consideration to our request for removing NIST Certification.2) Also we have attached letter from Sh. Rajiv Gauba, Secretary, Ministry of Urban Development, Government of India mentioning for Ensuring level playing Field to Indian ICT companies ...</p> <p>It is therefore requested that a compulsory NIST evaluation report may be removed/modified in the Tender No. Railtel/Tender/OT/CO/P/2018-19/CCTV at stations & in coaches/472 dated 22.02.2019 to ensure an equal opportunity for solution providers.</p> <p>Above reference Letters and Innefu request letter also mailed at shaminder@railtelindia.com dated 21.05.2019</p>	Clause as per tender prevails.
2	8.3.1.1 General Parameters	242	8.3.1.4	Facial Recognition System software Also, the Face Recognition Algorithm quoted by the bidder must have participated in the in the NIST face Recognition Benchmarking for non-cooperative dataset type (walking at a travel concourse) in live CCTV video feed. The algorithm must have shown less than 50% FNIR at Less than 0.1% False positive rate for Rank 1 matching in a database size of 48,000 or more in the latest relevant NIST benchmarking.	<p>NIST is essentially an American Standards Organization, designed to further the development and adherence of Systems development for a different operating & ambient environment, none of their tests will simulate usage of equipment software, in Indian High humidity, High temperature, high volume based situations. Mostly foreign vendors are NIST certified.</p> <p>The organization has been accused of accommodation of backdoor entries of the NSA, thereby rendering this as a Security risk matter, where their authorized systems may have openings and ways to relay information to US agencies. You can read more about this in the following link - https://bits.blogs.nytimes.com/2013/09/10/government-announces-steps-to-restore-confidence-on-encryption-standards/</p> <p>The Organization is trying to cover thousands of technology areas, and their expertise and due diligence over the certification any one system, is highly suspect.</p> <p>Our facial recognition software on the other hand has been trained on over 3 lakh South Asian faces, which would be well near impossible for most companies from Overseas.</p> <p>Railtel can consider putting in a clause mentioning "Vendor to have at least one large recognized Government agency using their FRS solution".</p> <p>The supporting letters are also attached for your kind attention:</p> <p>1) Also please refer to letter dated 03 Jan 2019 by Sh. Nripendra Misra, Principal Secretary to Prime Minister of India wherein it has been emphasized that such stipulation of foreign make/brands and/or restrictive conditions like mandatory requirement of certifications by foreign bodies) in the tenders is not only violating Public Procurement (Preference to Make in India) order 2017. This letter is attached for your kind consideration to our request for removing NIST Certification.</p> <p>2) Also we have attached letter from Sh. Rajiv Gauba, Secretary, Ministry of Urban Development, Government of India mentioning for Ensuring level playing Field to Indian ICT companies ...</p> <p>It is therefore requested that a compulsory NIST evaluation report may be removed/modified in the Tender No. Railtel/Tender/OT/CO/P/2018-19/CCTV at stations & in coaches/472 dated 22.02.2019 to ensure an equal opportunity for solution providers.</p> <p>Above reference Letters and Innefu request letter also mailed at shaminder@railtelindia.com dated 21.05.2019</p>	Clause as per tender prevails.
3	4.A.14.1.3	40	6	The software OEM should have an CMMI level-5 & ISO 9001 : 2008 & ISO 14001 : 2004 for its development & ,amifaturing process	kindly remove CMMI Level-5 and ISO 14001 : 2004 certificate for software OEM. CNMMI Level-5 certificate is for IT services company and not required for VMS and VM software company. ISO 14001 is for environment management and may not be required for VMS and VA software	Please refer Corrigendum-V.
4	8.16.1/2		F	Size-not more than 2U rack mountable	Please provide bidder size deviation of +/- 0.5U ,As Rack mount UPS OEMs sizes may vary	Please refer Corrigendum-V.

5			23	1 Hrs. on full load (Single bank)	As per tender Battery Backup is demanded 1 Hour on full load, please confirm what kind of battery is required 1. Rack Mountable or Floor Mounted or 2. Installed in separate wall mounted cabinet. 3. how we are going to manage the security and safety of Batteries. If batteries are external please confirm rack type Open rack or closed cabinet Please specify VAH and Battery Makes	1&2. Battery to be installed in separate wall mount cabinet. 3. Equipment once installed and handed over to user will be responsibility of the user. Please refer amended clause.
6			18	Communication-SNMP V1/V2	Please confirm SNMP to be part of offering or optional .Also suggest functionality required	Tender clause is clear.it is not mentioned as optional.SNMP will be required for monitoring, management etc. from EMS
7				As per tender environmental operating conditions are not specified for the batteries	Please specify	Bidder to propose batteries suitable for Railway stations environmental conditions and compatible with UPS.
8	8.16.3		2	As per tender 10 kVA UPS system requested for 3-Phase Input and 1-Phase Output, as output remains 1 Phase As per tender efficiency is demanded 90% for 3 phase input and 1 phase output,	can bidder supply 1-phase input and 1-Phase output system if bidder provides 1-phase input and 1-phase output it is possible to achieve 95% efficiency. Can we modify tender specification.	Please refer Corrigendum-V.
9	8.16.3		36	Nominal Recharging current 12A (1± 10%)	8A Charger is sufficient to charge battery bank -can bidder offer same	Please refer Corrigendum-V.
10	4.A.14.1.3 (Eligibility criteria requirements for OEM's)	138	2	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR 375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender.	Your kind attention is drawn to PQ criteria for Video Management & Recording Software Companies. The criteria of annual turnover of INR 30 crores in each last 3 financial year (current and three previous financial years) is too restrictive and not in line with DIPP order dated 15th June 2017 for Indian Manufacturers/local suppliers. The clause 10 of the said order clearly states that no such unreasonable eligibility criteria should be put which unreasonably excludes local suppliers. Humble Submission & Suggestion – 1. It is understood and appreciated that local supplier should be of good financial repute. Therefore, it is suggested that you may ask for a minimum cumulative turnover of INR 90 Crores in last 3 completed financial years. 2. It is also requested that the current financial year (FY19-20) should be excluded since the current financial year has just started so there is no way a supplier can achieve such a turnover in such a short time. 3. It is also humbly submitted that for a local VMS supplier, the target market is India only for all practical purpose and local market size is not enough to achieve such a high turnover that too consistently over last few years. 4. It will be just, fair and in line with objectives of DIPP order to consider total minimum turnover of VMS local supplier as INR 90 Crores OR average turnover of INR 30Crores in last 3 completed financial years towards eligibility criteria.	Clause as per tender prevails.
11	4.A.14.1.3	139	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	1. Your kind attention is again drawn to clause 10 of the DIPP order dated 15 th June 2017 regarding putting restrictive clauses to unreasonably exclude local suppliers from offering their products. 2. It is humbly submitted that there are very very few Video Management & Recording Software companies having SEI-CMM Level 5 certifications. Even those companies do not have CMM Level 5 Certification for development of Video Management & Recording Software. As a matter of fact, CMM certifications are taken for a particular product development process and not for all the process of the organization. 3. It is humbly represented that the objective of buying best quality product can also be achieved by equally accepted quality parameter i.e. ISO: 9001:2015 (Latest Standard). 4. The ISO certification ensures that the company follows the international standards on yearly basis thereby ensuring continues process & quality improvement whereas CMMI certification does not require yearly audit or certification. 5. It is very much known that both the certification ensures that the company follows quality process. However, it is not correct to assume that only CMM certified companies can produce quality product. 6. Therefor in view of the above and also to ensure equal, just and fair opportunity to other quality process certified companies, the clause should be relaxed to allow ISO:9001:2008 certified companies to offer their Video Management Software product for this project. 7. It is also submitted that ISO 14001:2004is applicable for environmental management system pertaining to manufacturing processes/plant of the company which is not application for "Non-Polluting" Industry Sector like Software Development. 8. Therefore, for software development companies ISO 14001:2004 certification requirement should be relaxed. (Ref - https://www.iso.org/standard/31807.html) 9. In all fairness the clause should be modified as "The software OEM should have ISO: 9001:2015 OR ISO14001:2004 OR SEI CMM Level 5 certification wherever applicable and/or available".	Please refer Corrigendum-V.
12	8.11. Switches Type-IV	145	14- (v)	It shall also support SYNC Ethernet and SNMPv3.	Request you to kindly remove the SYNC Ethernet as this is not required in the solution and modify the clause as "It shall also support SNMPv3"	Please refer Corrigendum-V.

13	8.11. Switches Type-IV	145	14- (x)	Shall support at least 32K MPLS labels .	We understand that 1K labels can able to meet the solution requirement.Also same has been considered in earlier Tender specifications.Kindly modify the clause as " Shall support at least 4K MPLS labels " to allow leading bidder to participate..	Clause as per tender prevails.
14	8.8. Switches Type-I	144	RDSO	Switch Should Support 4K VLAN ID's, Min 256 static VLAN and Voice & Video VLAN	We understand that switch should have minimum 2K static vlans and 16K Mac address to support complete layer 2 functionalities to meet railtel project expectation. Kindly modify the clause as " Switch Should Support 4K VLAN ID's, Min 2K static VLAN ,16K Mac address and Voice & Video VLAN "	Clause as per tender prevails.
15	8.11. Switches Type-I	144	RDSO	Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS	As per industry standard , Switch should have sufficient amount of DRAM and Flash to insure bidder to propose enterprise grade switch to meet Railtel project requirement Kindly modify the clause as " Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS with 1Gbps DRAM and 512 internal Flash "	Clause as per tender prevails.
16	8.11. Switches Type-I	144	RDSO	Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP ports	Considering High bandwidth requirement, It is recommended that Switch should able to support 10G uplink without hardware change if required in future like Type-II,Type-III and Type-IV switches . Pls modify the clause as " Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP+ ports "	Clause as per tender prevails.
17	8.11. Switches Type-III	146	RDSO	IPv6 feature should be ready from day 1.	Type 3 switch will be deployed to connect Server & applications in DC & RPF/Thana. Switch should have Ipv6 routing capabilities work in DC environments. Pls modify the clause as " IPv6 feature should be ready and & 5K Ipv6 routing enteries from day 1. "	Clause as per tender prevails.
18	General Guidelines			Additional Recommendation for Railtel Network Project	As per Industry standard ,Network should be build in such a way that each and every user should connect & access the network securely based on the user identity Kindly add the clause as " The system should allow only authorized users & devices to access the Multivendor Network based on Type ,Identity, Time, Location and Railtel Security compliance policy to prevent unauthorize malicious activities. Each authorize user will be rated based on their access behaviour across multi-vendor network utilizing system/device logs, network packet logs & AI -ML analytics. "	Bidder to offer solution as per technical and functional requiremnet of the system.
19	8.8. Switches Type-I	243	RDSO	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp/ Humidity.: 0 °C to 45 °C, 15%-90% non-condensation. " to allow leading bidders to participate with best proposition	Clause as per tender prevails.
20	8.10. Switches Type-II	243	RDSO	Minimum Operating Temperature 0 to 50 degree.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp.: 0 °C to 45 degree " to allow leading bidder to participate with best proposition	Clause as per tender prevails.
21	8.10. Switches Type-III	243	RDSO	Minimum Operating Temperature 0 to 50°C.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp.: 0 °C to 45 °C. " to allow leading bidder to participate with best proposition	Clause as per tender prevails.
22	8.19.2 WiFi Outdoor Access Points	253	CT2RF3	Must have -90dB to -100dB or better Receiver Sensitivity.	Request you to amend the clause as there is no clients available with receive sensitivity more than -75 to 80 dbm.Kindly modify the clause as " Must have -85dB to -90dB or better Receiver Sensitivity " to allow bidder to propose best solution to meet Railtel requirement.	Clause as per tender prevails.
23	8.13.1 SFP-BX (10 KM) Single Fiber:	247	8.13.1	8.13.1. SFP-BX (10 KM) Single Fiber:	SFP-BX is not a common Industry standard for transceiver hence we request modify the statement to allow leading OEM to participate and propose the standard SFP transceiver as per solution requirement .Please modify as " 8.13.1. SFP-BX/SFP (10 KM) " "	Clause as per tender prevails.
24	8.13.1 SFP-BX (10 KM) Single Fiber:	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate.Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
25	8.13.2 SFP+ (10 Km)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate.Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
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27	8.13.4 SFP+ (350mtrs)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate.Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
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54	8.19.2 WiFi Outdoor Access Points	253	CT2RF3	Must have -90dB to -100dB or better Receiver Sensitivity.	Request you to amend the clause as there is no clients available with receive sensivity more than -75 to 80 dbm. Kindly modify the clause as " Must have -85dB to -90dB or better Receiver Sensitivity " to allow bidder to propose best solution to meet Railtel requirement.	Clause as per tender prevails.
55	8.13.1 SFP-BX (10 KM) Single Fiber:	247	8.13.1	8.13.1. SFP-BX (10 KM) Single Fiber:	SFP-BX is not a common Industry standard for transceiver hence we request modify the statement to allow leading OEM to participate and propose the standard SFP transceiver as per solution requirement .Please modify as " 8.13.1. SFP-BX/SFP (10 KM) " "	Clause as per tender prevails.
56	8.13.1 SFP-BX (10 KM) Single Fiber:	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
57	8.13.2 SFP+ (10 Km)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
58	8.13.3 SFP+ (40 Km):	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
59	8.13.4 SFP+ (350mtrs)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.

60	8.16 & 8.17 & 8.18	248/249 & 250 (1kva & 2kva UPS)	10	Input Voltage range shall be mentioned as this is missing in the RFP	It shall be 80 to 280Vac for 50 to 100% load	Please refer Corrigendum-V.
61	8.18	251 (10kva)	5	330-460 VAC (3-phase) @ 100% load	It shall be 305 to 475 VAC for full load	Please refer Corrigendum-V.
62	8.16 & 8.17	248 & 250 & 251 (1kva , 2kva & 10kva UPS)	1	Output Power Factor	for 1 & 2kva , it is mentioned as 0.8PF whereas for 10kva it is asked as 0.9PF	Please refer Corrigendum-V.
63	8.16 & 8.17	249 & 250 (1kva & 2kva UPS)	4	Display - LED/LCD	LCD shall only be asked as per the latest industry standards	Please refer Corrigendum-V.
64	8.16 & 8.17	249 & 250 (1kva & 2kva UPS)	12(1kva) /11 (2kva)	>=0.9	PI clarify is this Output PF of UPS	Please refer Corrigendum-V.
65	8.16 & 8.17	249 & 250 (1kva & 2kva UPS)	14(1kva) /13(2kva)	AC-ACEfficiency - 85%	It shall be 88% or more	Clause as per tender prevails.
66	8.16 & 8.17	249 & 250 (1kva & 2kva UPS)	21 (1kva) /20 (2kva)	Port	Only USB is asked	Clause as per tender prevails.
67	3.D.6.	107	Site Acceptance Testing (SAT)	Site Acceptance Testing (SAT)	During SAT, the parameters which are possible at site shall only be the part of testing as not all parameters can be tested at site. The query is more specific to Battery Back-up or THD test which can be done at FAT(at factory only) & can't be repeated at site	Clause is self explanatory.
68	8.16 & 8.17	249 & 250 (1kva & 2kva UPS)	25 (1kva) & 24 (2kva)	Mech/Safety /Performance	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
69	8.18	252 (10kva UPS)	38, 39 & 40	ESD/Safety	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
70	CHAPTER- 2 SCHEDULE OF REQUIREMENT	9,24,36 & 48	Item 2(b)	500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	Request you to kindly confirm the load to be considered for back-up time of 30 min. Since this is for Single PC so shall we consider a load of 150-200watts for 30 min back-up time	Bidder to offer solution as per technical and functional requiremnet of the system.
71	4.A.3.	Long Term Maintenance Support (AMC)	116	Long Term Maintenance Support (AMC)	PI clarify whether battery replacement (for UPS systems) shall be part of AMC Contract	Yes. Bidder to provide AMC support for complete system i.e. UPS and Battery both.
72	4.A.14.A.13	139	4	The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. The same should have been working satisfactorily for at least six (6) months.	The criteria proposed for OEMs is restrictive and in favor of global OEMs. The criteria may kindly be modified to include OEM(s) who have supplied IP cameras for any public institutions, Government departments, smart city projects tendered by Municipal corporations& its institutions, Police Departments, Public sector banks etc. The abovemodifications will result in wider and healthy competiton to the National institution namely Indian Railway/RailTel We further wish to submit that this OEM criterion, based on similar request made by bidders/OEM was favourably considered in the Previous tender for VSS system invited by M/S RailTel and modified as submitted above.	Clause as per tender prevails.
73	4	160	4.B.8	Offline submission	Request to avoid Hard copy of bid submission as it creates confusion between hard copy & soft copy	Clause as per tender prevails.

74	2	69	IV	Since, RailTel is also implementing Wi-Fi work at railway stations, therefore, the existing available infrastructure may be utilized by the purchaser for implementation of VSS system and such items used may not be considered as a part of Supply orders.	Please clarify the type of material i.e Active/passive can be utilized from the Wi-Fi infrastructure and the tentative items that can be utilized from Wi-Fi infrastructure	Bidder to quote items as per SOR.
75	3	80	3.A.1.6	The bidder shall be responsible for transportation and storage of Equipment and all other items required for Installation and Commissioning of the network to RailTel's stores/sites as advised.	Please Clarify whether Railtel/Railway will provide storeroom at each station for storage of Material during I&C period.	Bidder is required to arrange their own store for the same.
76	B	92	3.B.5	CCTV cameras in coaches	Please mention the local recording duration in NVR in each coach. Please also confirm about the local monitoring of the coach CCTV cameras in the train	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
77	B	94	3.B.5.1	Wi-Fi Access Point in coach will connect to Terminal Station AP at Platform for offloading data, whenever train coaches will enter to a stoppage station having Wi-Fi infrastructure or LTE (4G) wherever there is connectivity enroute.	Please clarify how connectivity establishment between the coach AP & station AP if it would be P2P	Please refer clause 3.B.5.1 & 3.B.5.2 for clarity.
78	B	94	3.B.5.1	Wi-Fi Access Point in coach will connect to Terminal Station AP at Platform for offloading data, whenever train coaches will enter to a stoppage station having Wi-Fi infrastructure or LTE (4G) wherever there is connectivity enroute.	Please mention the scope for the LTE (4G) sim connectivity as this is not mentioned in the BoQ	LTE(4G) SIM will be provided by purchaser.
79	B	99	3.B.7	Tentative schematic diagram shows Wifi & LTE (4G) connectivity between coaches & station	Please clarify the scope of the LTE (4) sims for coach mobile NVR as this is not mentioned in the BoQ	LTE(4G) SIM will be provided by purchaser.
80	3.A	81	3.A.1.10	To provide professional training and development services at each stage of the project viz. installation, testing, operation and maintenance	Please clarify the training location is centralized or need to provide at different locations in a region.	Centralized as well as distributed locations such as Stations, Region HQ, RPF Chowkis etc. as per requirement.
81	3.A	77	3.A.1.4.8	Bidder may also be required to extend fiber/network connectivity from the nearest station to the RPF/GRP Thana/Post	(i) Please confirm at how many stations fiber needs to be extend (ii) What would be the distance to be considered for this type of connectivity for design considerations	Bidder to quote as per SOR. Item to be payable as per actual lengths of items.
82	3.A	80	3.A.1.7.1	Railways shall provide AC power supply at workspace for carrying out the awarded work. The successful bidder will have to pay the specified charges for the power supply as per the existing Railways Norms.	Overall LT Power consumption shall be metered & paid by Railtel throughout the course of AMC since estimation of actual consumption at prevailing & possible revised tariff is a tedious task	Clause is related to carrying out of the work during implementation phase only. Payment towards AC Power supply after installation of equipments is not under bidder scope.
83	Section no. 2	252	8.18	RDSO specification rev. 1.0 for Coaches	Clause no. 4.5/page no. 14/point no. ix of Storage (HDD/SSD of minimum 8 TB Capacity): If we go with 4 TB SSD then cost would be extremely high & also there is no vibration proof HDD variant available in 4 TB 2.5" capacity in the market. Recommendation for above query is 2TB SSD as this is the recommended product for mobile surveillance application. Moreover the storage requirement as per tender RFP is approx. 3 TB thus we recommend 2 TB SSD X 2 for storage need & storage solution.	Clause as per tender prevails.
84	Section 8.3.2.1	242	8.3.2	Data Offloading	There is no clarity on functional requirement in tender RFP for data offloading. If we assume to transmit all available recording in MNVR to station then it would consume the all available bandwidth for Wi-Fi channel/4G Channel. Thus it is recommended to fetch/transmit recording on demand basis or on ticket basis from MNVR. we do not recommend to transmit all video footages regularly to station/data center.	Please refer Corrigendum-V.

85		69	Note	<p>(V) Bidder should submit the soft copy (Word/Excel/PDFs format) of offer in DVDs/USB's. Bill of Material (BOM) must be in PDF as well as Excel format (except price bid). Bidder is allowed to quote only for a single Make/Model of the quoted items along with the offer.</p> <p>The above stipulation of single OEM Make/Model applies to items viz. different types of cameras, servers, Video Recording Unit/Mobile NVR, workstation, storage, large format display monitors, VMS Software, switches (each Type separately), Wireless Access Point and EMS.</p> <p>DIFFERENT OEM(S) ACROSS PACKAGES IS NOT PERMITTED. OFFERS WITHOUT PARTICULARS OF MAKE/MODEL OR MULTIPLE OEMS OF SAME ITEM SHALL BE LIABLE TO SUMMARILY REJECTED.</p>	<p>In Page No: 69 state that all the cameras, Video Recording Unit/Mobile NVR of same OEMs in all packages.</p> <p>At the same time in Page No: 238 state that CCTV Camera OEMs for Stations and Coaches may quote different.</p> <p>Please clarify because most of the CCTV Camera OEMs world wide don't manufacture the mobile NVR only few Chinese OEMs manufacture both CCTV camera and mobile NVR. It restrict the reputed manufacturer to participate in the tender</p>	Please refer Corrigendum-V.																																			
86		238	CHAPTE R- 8: TECHNIC AL, FUNCTIO NAL REQUIRE MENTS & SPECIFI CATIONS	Note 3: All the IP cameras as quoted by the bidder against SOR Chapter-2 for stations packages must be sourced from the same OEM. However, bidder may quote different camera OEM for CCTV work in train coaches.	<p>If you required same OEM for all packages then our recommendation is to split the tender into two separate tender one for Stations and one for Coaches.</p> <p>or kindly accept the different OEM for Stations and Coaches.</p>	Clause as per tender prevails.																																			
87	Chapter 3	48	3.A.1.6	The bidder shall be responsible for transportation and storage of Equipment and all other items required for Installation and Commissioning of the network to RailTel's stores/sites as advised.	We request you to clarify whether Railtel/Railway will provide space/ store room at each station for storage of high value Material during I&C period.	Bidder is required to arrange their own store for the same.																																			
88	Chapter 3	81	3.A.1.10	To provide professional training and development services at each stage of the project viz. installation, testing, operation and maintenance	We request you to kindly clarify whether the training to purchasers personnel to be conducted at centralised thana/RPF post locations or at each stations.	Centralized as well as distributed locations such as Stations, Region HQ, RPF Chowkis etc. as per requirement.																																			
89	Chapter 7	204	Region wise Table	<p>Distribution of stations category wise in each Zone</p> <table><tr><td>Stations</td><td>NR</td><td>WR</td><td>ER</td><td>SR</td></tr><tr><td>A1</td><td>2</td><td>4</td><td>3</td><td>3</td></tr><tr><td>A</td><td>81</td><td>53</td><td>62</td><td>71</td></tr><tr><td>B</td><td>68</td><td>46</td><td>84</td><td>75</td></tr><tr><td>C</td><td>0</td><td>91</td><td>246</td><td>94</td></tr><tr><td>D</td><td>331</td><td>149</td><td>291</td><td>212</td></tr><tr><td>E</td><td>1321</td><td>771</td><td>1169</td><td>897</td></tr></table> <p>Total stations are 6124</p>	Stations	NR	WR	ER	SR	A1	2	4	3	3	A	81	53	62	71	B	68	46	84	75	C	0	91	246	94	D	331	149	291	212	E	1321	771	1169	897	<p>With reference to Page No 204 "Tentative list of stations for the work of CCTV at stations are enclosed with the tender document."</p> <p>our observation is there is difference in total number of stations given in Table and station list given in annexure.</p> <p>For Southern region as per Table in page no 204 is 1352 stations as per annexure total souther stations are 1785</p> <p>Break up</p> <p>Station A - 71 Nos as per table & 81 Nos as per annexure</p> <p>Station B - 75 Nos as per table & 90 Nos as per annexure</p> <p>Station C - 94 Nos as per table & 123 Nos as per annexure</p> <p>Station D - 212 Nos as per table & 291 Nos as per annexure</p> <p>Station E - 897 Nos as per table & 1198 Nos as per annexure</p> <p>Please confirm which data to be considered.</p>	Clause as per tender prevails. Bidder to quote as per SOR.
Stations	NR	WR	ER	SR																																					
A1	2	4	3	3																																					
A	81	53	62	71																																					
B	68	46	84	75																																					
C	0	91	246	94																																					
D	331	149	291	212																																					
E	1321	771	1169	897																																					

90	Chapter 8	241	8.3.1. 2	<p>with reference to clause 8.3.1.2</p> <p>Video Surveillance System hardware sizing</p> <p>Approximate number of cameras considered across 6124 Railway Stations are 89844 units.</p>	<p>With reference to clause 8.3.1.2 Total camera quantity given 89844 units</p> <p>As per chapter 2 SOR Head I SL No 1(a),1(b),1(c),1(d)</p> <p>Norther region total camera = 20834 units</p> <p>Souther region total camera = 18929 units</p> <p>Eastern region total camera = 26389 units</p> <p>Western region total camera= 15533 units</p> <p>Total Camera quantity for all regions is 81685 Units</p> <p>Please confirm the Quantity of cameras</p>	Bidder to quote quantity of cameras as per SOR
91	Chapter 8	240	8.3.1.1.1	<p>Implementation scheme for Video Surveillance system will be RPF/GRP Thana/Post Clustered based architecture as mentioned in RDSO specification no. RDSO/SPN/TC/65/2019 Rev 5.0 or latest will all amendments. For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording. Therefore, bidder is required to propose a cluster based solution at RPF/GRP Thana/Post locations on the basis of following design parameters.</p>	<p>With reference to clause 8.3.1.1.1 of chapter 8 we request you to share the information on 552 clusters (Division, category of station , Station name) and also indicate how many stations of each category will be connected to each of these 552 cluster locations.</p> <p>This information is required to estimate the server & storage sizing at each Cluster location accordingly.</p>	List will be provided to successful bidder. However, bidder may refer clause 8.3 of Chapter-8 for designing and sizing of their solution.
92	Chapter1	48	SOR	<p>SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid</p> <p>Total qty required for 149 RPF/THANA POSTS</p>	<p>SOR 2(b) for Souhtern Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories - Qty indicated is 86 Nos</p> <p>we request you to confirm the distribution of 86 workstations in 149 Thana/RPF posts</p>	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.
93	Chapter 2	48	SOR	<p>SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid</p> <p>Total qty required for 149 RPF/THANA POSTS</p>	<p>SOR 2(g) for Souhtern Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation. QTY - 100 Nos</p> <p>we request you to confirm the distribution of 100 Nos of UPS in 149 Thana/RPF posts</p>	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.

94	Chapter 2	48	SOR	<p>SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid</p> <p>Total qty required for 149 RPF/THANA POSTS</p>	<p>SOR 2(h) for Southeren Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post</p> <p>19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment</p> <p>QTY - 100 Nos</p> <p>We request you to confirm the distribution of 100 Nos of RACKS in 149 Thana/RPF posts</p>	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.
95	Chapter 2	53	SOR	<p>SOR 6(a) for Southern,Supply of IT infrastructure and asociated items at Railway Stations</p> <p>Type-I switches as defined in clause 8.8 of chapter 8, optics</p> <p>(SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per solution requirement & network design defined in clause 3.B of Chapter-3)and all accessories required</p> <p>for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.</p>	<p>With reference to clause 8.8 of chapter 8 TYPE-1 switch Type-I Switch specifications have to be as per RDSO Specification of IP Based Video Surveillance System Specification no.RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.</p> <p>As per RDSO/SPN/TC/65/2019 Revision 5.0 document TYPE -1 switch is not mentioned instead SL No 14(iii) page number 37</p> <p>8 port field switch is mentioned.</p> <p>Please confirm whether Type-1 Switch and 8 Port field switch both are same.</p>	May please refer Corrigendum-II for clarity.
96	Chapter 2	53	SOR	<p>SOR 6(a) for Southern,Supply of IT infrastructure and asociated items at Railway Stations</p> <p>Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation</p>	<p>With reference to clause 8.9 of chapter 8 TYPE-II switch specifications have to be as per RDSO Specification of IP Based Video Surveillance System Specification no.RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.</p> <p>As per RDSO/SPN/TC/65/2019 Revision 5.0 document TYPE -II switch is not mentioned instead SL No 14 (ii)page num 37 Layer 2 Switches (24 ports) is mentioned.</p> <p>Please confirm whether TYPE-II switch and Layer 2 Switch both are same.</p>	May please refer Corrigendum-II for clarity.
97	Chapter 2	51	SOR	<p>Type-III switches as Top of the Rack switch (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation.</p> <p>Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.</p>	<p>With reference to clause 8.10 of chapter 8 TYPE-III switch specifications have to be as per RDSO Specification of IP Based Video Surveillance System Specification no.RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.</p> <p>As per RDSO/SPN/TC/65/2019 Revision 5.0 document TYPE -III switch is not mentioned instead SL No 14 (i)page num 37 aggregation Switches (24 ports) is mentioned.</p> <p>Please confirm whether TYPE -III Switch and aggregation switch both are same.</p>	May please refer Corrigendum-II for clarity.
98	Chapter 8	241	8.3.1.2	<p>Video Surveillance System hardware sizing t each such cluster i.e. RPF/GRP Thana/Post location, bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras, FRS with local matching capability with the watchlist database on up to 8 cameras</p> <p>stream at each RPF/GRP Thana/Post locations without any impact on the performance of the system and overall solution requirement</p>	<p>With reference to SOR , Video recording Unit / storage requirement is indicated only for RPF/THANA posts.</p> <p>Please confirm on requirement of video recording units/storage at Non RPF/Thana Locations</p>	Bidder to offer solution as per SOR, technical and functional requiremnet of the system as defined in the tender document.
99	Chapter4	144		<p>The EMD will be payable by Bank Draft in favour of RailTel Corporation of India Limited, New Delhi.</p>	<p>Since the amount of EMD is above INR 50 Lacs for each region, we request to allow bidders to submit EMD in form of Bank Guarantee also.</p>	Clause as per tender prevails.

100	8.23 Enterprise Management System (EMS)	265	Service Management (Help Desk) and SLA Management	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted.	As per the Industry standards, it is a best practice in most of the Central / State Government's initiative to select the ITSM tool, which is certified on minimum 10+ ITIL 2011 processes, out of total 16 processes, to ensure product's ITIL compatibility for workflows, functionality, terminology and documentation against general platform, core and integration criteria. This is so as minimum 10 ITIL processes are essential to design an effective ITSM framework to cover all the basic aspects of IT & users. Pls consider the same as : " The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 10+ ITIL 2011 processes (undertaking on OEM's letter head to be submitted) of all the ITIL processes: Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted."	Clause as per tender prevails.
101	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "The solution must have at least 3 deployments in Indian Government/ Public Sector, monitoring & managing 10,000+ network nodes in each of such deployments. Customer names, solution details and OEM undertaking needs to be provided at the time of bidding." This is to ensure that the EMS solution is proven at the scalability required for the said project and is operational in the Indian Public Sector space and thereby avoid risk of being a test bed for solutions not known to scale up to the requisite levels.	Please refer Corrigendum-V.
102	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "All the NMS/EMS components must be from the single OEM." Since NMS/EMS consists of multiple components, having all these components from the same OEM will ensure that the components are pre-integrated and adequately tested and hence time to value realization is quick and issues of integration does not arise.	Clause as per tender prevails.
103	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "NMS should support out of the box monitoring of at least 3000+ devices from at least 150+ vendors." Since this is a network intrinsic project, with target infrastructure scaling to 20,000 devices from a unified console, it is extremely crucial to have devices profile coverage from variety of vendors out of the box from single tool which will provide simplicity in managing NOC. This would avoid the complexity of managing multiple tools and technologies and also avoid the requirement of various element managers.	Clause as per tender prevails.
104	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "The proposed solution must be an industry standard solution from an OEM that is ISO 27034 certified." ISO 27034-1 standard helps organizations integrate security controls in the software through their software development cycle, by defining security frameworks & vulnerability management processes. This certification protects customer assets from potential cyber breaches & security threats while complying with the Application security standards.	Clause as per tender prevails.
105	Chapter 4 A. Commercial terms & conditions	144	4.A.22	All the bidders have to pay minimum amount of EMD (lowest among all the packages, as also given in IREPS tendering portal) online through IREPS tendering portal. After that, IREPS site will allow the bidder to bid in the said Tender	Since ITI Limited is a CPSU under Ministry of Communications & IT, ITI may please be exempted from the submission of EMD or in lieu may be allowed to submit corporate guarantee in place of Bank Guarantee for EMD	Clause as per tender prevails.
106	General	Due date of Bid Submission		Extension of bid submission date	As the time for bid submission is short, we request you to extend the bid submission due date by three weeks	Clause as per tender prevails.
107	Clause 4.B.17	Payment of tender document fee		"The RailTel Tenders are published on www.railtelindia.com and on IREPS Portal https://www.ireps.gov.in/. In addition to submitting the e Tender documents online the tender fees has to be deposited online through IREPS portal.	We are in the process of registering into IREPS portal for submission of our documents. But we are facing difficulty in the registration process and has contacted help desk one week back and we are expecting their guidance. Hence we are not able to pay tender document fee online. Hence online submission of tender fee may be waived off and be allowed to pay the tender fee along with the bid documents	Clause as per tender prevails.
108	Part 1, CHAPTER- 2 SCHEDULE OF REQUIREMENT	20	SOR HEAD II: 1 (a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00,000/-)	We understand that this manpower need to be deployed during warranty period of 2 years, please clarify we need to quote manmonth rate or total for 2 years for 302 persons?	Clause is self explanatory.
109	Part 1, CHAPTER- 2 SCHEDULE OF REQUIREMENT	20	SOR HEAD II: 1 (b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00,000/-)	We understand that this manpower need to be deployed during warranty period of 2 years, please clarify we need to quote manmonth rate or total for 2 years?	Clause is self explanatory.

110	Part1, Note,	69	III	The bidder is supposed to quote for the manpower requirement of 2-years period of warranty period post Maintenance Supervision period, as during this period the contractor shall be responsible for proper maintenance supervision of the system free of cost for a period of twelve months from the date of provisional acceptance	Please clarify in SOR Head II, Unit rate should be quoted per annum or for 2 years or for 3 years, for example L1 support engineer per annum rate is 3,00,000/-, please clarify unit rate in price bid should be 3,00,000 or 3,00,000*2 (as manpower is deployed for two years)	Clause is self explanatory.
111	Part 2.4.A.14.1 Eligibility Criteria Requirements for Bidders:	35	5	Completion certificates from the User Organizations is required to be submitted	Request you to consider Projects under Operation & Maintenance phase for which supply, installation of hardware & software is completed.	Clause as per tender prevails.
112	Part 2.4.A.14.1 Eligibility Criteria Requirements for Bidders:	35	5	At least one similar work# worth of INR 99.89 crores in last three financial years plus current year upto the date of opening of tender.	Request you to consider projects executed in last 5 financial years from financial 2013-14 onwards.	Clause as per tender prevails.
113	Part 2, 4.A.22.	144		Earnest Money Deposit (EMD)/ Bid Security	Request to consider EMD in the form of Bank Guarantee	Clause as per tender prevails.
114	Part 2.4.A.45. Preference to Domestic Manufacturers	153	1.2	Above undertaking shall be supported by the following certificate from Statutory Auditor engaged by the bidder, on the letter head of such Statutory Auditor. "We _____ the statutory auditor of M/s.____ (name of the bidder) hereby certify that M/s. _____ (name of bidder) meet the mandatory Local Content requirements of the Project Work under this tender i.e. ____70%____ (to be filled by the work center) quoted vide offer No. _____ dated _____ against RAILTEL tender No. _____ by M/s. _____ (Name of the bidder).	Request to accept certificate from Chartered accountant.	Clause as per tender prevails.
115	Part 2, 4.B.8 Offline Submissions:	160	4.B.9	The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, Institutional Area, Plot 143, Sector 44, Gurgaon, before due date & time of submission of bids specified in this tender document, in a Sealed Envelope.	As this is a very large bid, Request you to allow Submission of hard copy next working day of bid online submission date.	Clause as per tender prevails.
116	4.B.9 Submission of Eligibility Criteria related documents	160	4.B.9	Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted in RailTel before Tender opening date & time. Bids without these off line submissions are liable to be rejected.	Do we have to submit Eligibility criteria documents & Technical bid documents in same envelope or separate envelope, Please clarify. Do we have to submit complete technical bid as uploaded in online portal? Please clarify hardcopy submission of bid.	Clause is self explanatory.
117	Form No. 3 PROFORMA FOR THE LONG TERM MAINTENANCE SUPPORT (To be signed by the O.E.M.)	169	Form No. 3	Form No. 3 PROFORMA FOR THE LONG TERM MAINTENANCE SUPPORT (To be signed by the O.E.M.)	Please clarify this proforma is required for which components.	Please refer Corrigendum-V. (Camera, Server, NVR, Mobile NVR, Storage, PC Workstation, Large Format Display Monitor, Switches, UPS, VMS, VA, FRS, Wi-Fi Access Point, VRU, Command Control Center including Video Wall Display and EMS OEM)
118	Form No.8	176	Form No.8	PROFORMA FOR NO MALICIOUS CODE UNDERTAKING LETTER BY OEM	At the bottom of this letter format it is mentioned as "Seal and signature of the bidder". Please clarify this form is required from bidder or OEM	Please refer Corrigendum-V.
119	Form No.10	179	Form No.10	Form No.10	Please clarify this proforma is required for which components	Please refer Corrigendum-V. (Camera, Server, NVR, Mobile NVR, Storage, PC Workstation, Large Format Display Monitor, Switches, UPS, VMS, VA, FRS, Wi-Fi Access Point, VRU, Command Control Center including Video Wall Display and EMS OEM)
120	Form No.23	200	Form No.23	Undertaking for the compliance to AMC conditions	Please clarify this letter is required from bidder or OEM.	Clause is self explanatory.

121	4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	Point 6	6. The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process. · Relevant Organizational Level Certificates to be provided	Since the globally renowned independent software companies like Qognify, Mirasys, Milestone, Genetec , Axxonsoft, OnSSI , SeeTec , who are having significant presence in this vertical(Railways / Metros Globally) does not have certifications like CMMI level -5 & ISO which is asked in tender. So we request you to kindly remove this clause for software OEMS.	Please refer Corrigendum-V.
122	4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	Point 3	The OEM(s) should be a profit making company and should have a positive net worth (Net Worth of the company would be computed as on 31st March 2018 as the summation of share capital, reserves and surpluses less accumulated losses held by the company). · Audited Financial Statements for the financial year 2017-18	Since the different MNCs follow the different financial year cycles, So request you to kindly consider the Net worth of the company for the latest year ie 2018 as per practice of financial year ending followed by them	Clause as per tender prevails.
123	4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	Point 3	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR 375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender.	Video Analytic portion has significant value in the tender so asking for 5 Crores for 3 years as an eligibility criteria is very less. As Video analytics is the heart of the system and should be given proper valuation and justification in this bid so We recommend to consider the Video Analytic (VA) eligibility turnover as 25 Crores.	Clause as per tender prevails.
124	PACKAGE-V (Coach) SOR HEAD I: IP BASED CLOSED CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM IN COACHES	63- 64,69	3. Supply of IT infrastructure, applications and associated items at RailTel Secunderabad and Gurugram datacentre(s).	(a) VSS Server Hardware for Video Management and Recording system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. - Lot 2 (g) Software for Video Management, Video recording and Facial Recognition system for the server hardware quoted in Item no. A.3.I(a), A.3.I(b) and A.3.I(c) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. Lot 2	Here in Coaches BOQ, at Data centre Video management and recording servers with software asked. While,As per RFP only alerts and on demand viewing is required at datacentre same as like stations Datacentre requirement. Also, same is disclosing in the Datacentre architecture for coaches(page 99). Kindly confirm do we need to record the coach cameras at VPU/mNVR in coaches and Datacentre both side? or not?	Clause as per tender prevails.
125	PACKAGE I : NORTHERN REGION	14	Point 5	5. Supply of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	Are the Divisional HQ Clients are included in this BOQ item of NR? Same query for WR,ER and SR	Please refer Corrigendum-V.
126	8.3.1.1 General Parameters	240	Point 8.3.1	8.3.1.1.2 Bidder to propose server(s) as Video Management servers with 1:1 redundancy (HA mode) in RailTel Datacentre for centralized management of such multiple clusters.	One of the roles of management server is to manage the failover functionality by receiving the signal from recorder server of failure and giving the signals to failover servers to get active. As per design all the recording servers and failover servers will be placed at RPF/GRP Thana/Posts and their management server will be at RailTel Data centre. If any recording server gets fail and at that particular time if the MPLS connectivity is also down from that RPF/GRP Thana/Post to RailTel Datacentre then How can we achieve the failover as the Management will not get the alert for this failure? Please clarify	Clause is self explanatory.
127	8.3.1. 2 Video Surveillance System hardware sizing	241		Approximate number of cameras considered across 6124 Railway Stations are 89844 units. Refer Chapter-7 Annexure-I for station category, Region wise camera breakup.	In this clause total cameras are 89844 however as per BOQ and total station and number of cameras per station calculations (page 169) it is coming different. i. As per this clause it is 89844 ii. As per BOQ it is 81685 iii. As per calculation with number of cameras per station and total stations it is 90114 Kindly clarify.	Bidder to quote quantity of cameras as per SOR
128	3.B.3.6 Surveillance VPN on RailTel Backbone	92		IP Video Surveillance is traffic hungry and delay sensitive service. To ensure proper functioning of this project, network architecture must have features like Multicast VLAN Registration, IP SLA, Auto-QoS, Auto Ports configuration to detect end device type connected to port and configuring QoS automatically on basis of device. Network should have IPv4 and IPv6 port and time based access list with time ranges.	The VMS Software Should support ThruCast and MAX smooth Feature for bandwidth management. Kindly consider: IP Video Surveillance is traffic hungry and delay sensitive service. To ensure proper functioning of this project, network architecture must have features like Multicast VLAN Registration, ThruCast, MAX smooth feature , IP SLA, AutoQoS, Auto Ports configuration to detect end device type connected to port and configuring QoS automatically on basis of device. Network should have IPv4 and IPv6 port and time based access list with time ranges.	Clause as per tender prevails.

129	8.3.1 VSS/CCTV System for Stations	239		This includes Video Management Software, Video Recording Software, Video Analytic Software, GUI Client Software, Facial Recognition System (FRS) etc. for IP based Video Surveillance at stations	Kindly consider: This includes Video Management Software, Video Recording Software, Video Analytic Software, GUI Client Software, Facial Recognition System (FRS) etc. for IP based Video Surveillance at stations. Also, the software platforms should be a certified partner of OS provider for last 3 years for tight integration and stability of the overall system.	Clause as per tender prevails.
130	3.B.3.6 Surveillance VPN on RailTel Backbone	91	Point 3.B.3.6	3.B.3.6 Surveillance VPN on RailTel Backbone	Kindly consider: As Cyber security threat is common these days. We suggest to add the data encryption from server to server and server to client. The VMS software should have data encryption of 256 bit AES and video should export in SEF(Secured Export Format) with password protection of up to 20 alphanumeric characters.	Clause as per tender prevails.
131	265	8.23 Service Management (Help Desk)	>> The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant certified on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstr	Products Certified by agencies other than Axelos should be allowed.	<p>Products Certified by agencies other than Axelos should be allowed =SERVIEW is another ITIL/ITSM certifying agency like Axelos.</p> <p>It is suggested that the products certified by Serview are also also allowed to be participated in tender</p> <p>SERVIEW website https://www.serview.de/</p> <p>Products like SAP, OTRS are SERVIEW Certified</p>	Please refer tender clause 8.23 of tender document.
132	269	Software License Management	<p>>> Software Asset Management should be capable of doing license compliance for vendors like HP, Microsoft, IBM (PVU), Oracle, VMware, Symantec, Autodesk, Adobe, TIBCO, RedHat, BMC etc</p>	<p>Software license Management capability should be limited to softwares included in the projects.</p> <p>Any such product which is not required as part of the solution be made optional.</p> <p>E.g. Autodesk is 3D Design, Engineering & Entertainment Software. With no relation to the project.</p>	<p>This list is refereing to softwares/hardwares which may or may not be used in the project. Vendors could be having most of the functionality, but Any software listed which is not part of the project would become a unnecessary compliance requirement</p>	Clause as per tender prevails.

133	Chapter 2	9	2.1 a) and e) SCHEDULE OF REQUIREMENT	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System. e) Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days	At RPF/GRP/ Thana Post we are giving 30 days recording through NVR or server but as per BoQ there is separate storage system mentioned. Kindly help us to provide better clarification for these points for understanding.	Clause is self explanatory.
134	Chapter 2	9	2.1 a) and b), (d) SCHEDULE OF REQUIREMENT	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII b) PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories. d) Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8.	As per tender there will be atleast 1 work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for North there are 151 RPF/GRP/Thana Posts and PC workstation are only 53 and 106 display Monitor as well as if we are using 24" screen at PC work station then we are unable to find out use of 55" screen. Kindly clarify point for better understanding.	Bidder to quote items as per SOR.
135	Chapter 2	61	2.1 a) SCHEDULE OF REQUIREMENT	a) Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	As per Tender there will be Work station at RPF/GRP/Thana Post but according to BOQ, quantity for PC work station is 390 whereas total RPF/GRP/Thana Post is 552. Kindly help us to understand point for better understanding.	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.
136	Chapter 2	13	3.1 a) SCHEDULE OF REQUIREMENT	a) VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes.	As per BOQ, VMS and FRS system are separate for all Regions at Data center. Kindly clarify whether we need to give single VMS and FRS system for all zones or we need to keep it separate. Kindly clarify point for better understanding.	Clause is self explanatory.
137	Chapter 8	248	8.13.4	SFP+ (350mtrs)	Should support 350m optical distance.	Clause is self explanatory.
138	Chapter 3	101	3.B.1/Architecture Overview	RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System	We have two Railtel Datacenter, one at Secunderabad and other at Gurugram, please help to clarify that how many zones (North, South, East or West) will be supported by each Datacenter. We recommend to have two zones in each datacenter which will help to balance the bandwidth load and should support Video Management Redundancy in each datacenter.	Bidder to quote items as per SOR.
139	Chapter 3	99	3.B.7/Architecture of VSS/CCTV system for stations and Coach	The tentative VSS architecture for system to be deployed in Train Coaches	The VSS architecture for system to be deployed in Train Coaches mentions the usage of the panic button inside the coaches, same has not been reflected in the BOQ of the coaches, please help us to clarify this point.	Please refer Corrigendum-V.
140	Chapter 8	239	8.2.2	Mobile Network Video Recorder for Coach	Each Coach shall be provided with a Video Recorder Unit or Mobile Network Video Recorder (Mobile NVR) along with System Software	Bidder to offer solution as per SOE, technical and functional requirement of the system as defined in the tender document.
141	Chapter 8	253	8.19.2/Wi-Fi Access Point and Wireless Controller	Specification of Cloud/Appliance based Wireless Controller	As per architecture and solution provided in tender the Wireless Controller is required at each Datacenter, but same is not reflected in the Tender BOQ. Thus, please help to clarify the exact quantity of the Wireless Controller required in the BOQ.	Please refer Corrigendum-V.

142	Chapter 8	275	8.26.2/Remote viewing on Web and Mobile App for CCTV system at Stations	Remote viewing on Web and Mobile App for CCTV system at Stations	Kindly help to Specify below Points 1) Total No of Users. 2) Total no concurrent logins.	Please refer Corrigendum-V.
143	Chapter 8	253	3.B.5, 8.3.2.1, 8.19/Wi-Fi Access Point and Managed PoE Ethernet Switch	Wifi AP :- 10/100/1000 Base T auto-sensing and Switch :- a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	As per architecture and solution, all 8 cameras, VRU or MNVR and Wi-Fi Access Point will be connected to the managed PoE Ethernet switch. Please clarify about Wi-Fi Access Point connection to the switch, as the Ethernet/RJ45 interface for Wi-Fi Access Point is required for connection, but as per RDSO specifications switch contains all M12/M23 connectors.	Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
144	4.A.14.1	33	4.A.14.1 /Financial Capability	Certificate issued by Chartered Accountant (CA) duly mentioning the cumulative contract amount received from the Security/IT/Telecom business in the last three financial years plus current year upto the date of opening of tender		Clause as per tender prevails.
145	Chapter 2	9	2.1 a) and e) Schedule of Requirement	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System. e) Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of station for 30 days.	At RPF/GRP/Thana Post we are giving 30 days recording through NVR or server but as per BoQ there is separate storage system mentioned. Kindly help us to provide better clarification for these points for understanding.	Clause is self explanatory.
146	Chapter 2	9	2.1 a) and b, d) Schedule of Requirement	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. b) PC workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories. d) Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8	As per tender there will be atleast 1 work station at RPF/GRP/Thana post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana posts i.e. for North there are 151 RPF/GRP/Thana posts and PC workstation are only 53 and 106 display Monitor as well as if we are using 24" screen at PC work station then we are unable to find out use of 55" screen. Kindly clarify point for better understanding.	Bidder to quote items as per SOR.
147	Chapter 2	61	2.1 a) Schedule of Requirement	a) Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	As per Tender there will be work station at RPF/GRP/Thana Post but according to BOQ quantity for PC work station is 390 whereas total RPF/GRP/Thana Post is 552. Kindly help us to understand point for better understanding.	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.
148	Chapter 2	13	3.1 a) Schedule of Requirement	a) VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes.	As per BOQ, VMS and FRS system are separate for all Regions at Data center. Kindly clarify whether we need to give single VMS and VMS and FRS system for all zones or we need to keep it separate. Kindly clarify point for better understanding.	Bidder to quote items as per SOR.
149	Chapter 8	248	8.13.4 /SFP+350 Mtrs	Should support 350m optical distance	Every major OEM use technology of 850nm wavelength in 10GB module for transmission and 850nm will work efficiently if we keep optical distance 300m. Hence, request you to kindly amend clause as should support min 300m or more optical distance. Keeping 350m will restrict specific OEM to participate, also it will increase the undue cost.	Clause as per tender prevails.
150	Chapter 3	101	3.B.1 /Architecture Overview	RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System	We have two RailTel Datacenter, one at Secunderabad and other at Gurugram, please help to clarify that how many zones (North, South, East or West) will be supported by each Datacenter. We recommend to have two zones in each datacenter which will help to balance the bandwidth load and should support video Management Redundancy in each datacenter.	Bidder to quote items as per SOR.

151	Chapter 3	99	3.B.7 /Architecture of VSS/CCTV system for stations and Coach	The tentative VSS architecture for system to be deployed in Train Coaches	The VSS architecture for system to be deployed in Train Coaches mention the usage of the panic button inside the coaches, same has not been reflected in the BOQ of the coaches, please hlp us to clarify this point.	Please refer Corrigendum-V.
152	Chapter 8	239	8.2.2 /Mobile Network video Recorder for Coach	Each Coach shall be provided with a Video Recorder Unit or Mobile Network video Recorder (Mobile NVR) along with System Software.	For optimized solution and to avoid hardware complexity of network architecture, we suggest to provide an option of using one Video Recorder Unit or Mobile Netowrk Recorder for two coaches without affecting the solution and storage requirements as per Tender. It will also help to desing a Economical/Cost-effective solution.	Clause as per tender prevails.
153	Chapter 8	253	8.19.2 /Wi-Fi Access Point and Wireless Controller	Specification of Cloud/Appliance based Wireless Controller	As per architecture and solution provided in tender the Wireless Controller is required at each Datacenter but same is not reflected in the Tender BOQ. Thus, please help to clarify the exact quantity of the Wireless Controller required in the BOQ.	Please refer Corrigendum-V.
154	Chapter 8	275	8.26.2 /Remote viewing on Web and Mobile App for CCTV system at stations	Remote viewing on Web and Mobile App for CCTV system at station	Kindly hlp to specify below points 1) Total No of Users, 2) total no of concurrent logins.	Please refer Corrigendum-V.
155	Chapter 8	253	3.8.5,8.3.2.1, 8.19 /Wi-Fi Access Point and managed PoE Ethernet Switch	WEiFi AP:-10/100/1000 Base T auto-sensing and Switch:- a) 8 nos or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector, b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	As per architecture and solution, all 8 cameras, URV or MNVR and Wi-Fi Access Point will be connected to the managed PoE Ethernet switch. Please clarify about Wi-Fi Access Point connection to the switch, as the Ethernet/RJ45 interface for Wi-Fi Access Point is required for connection, but as per RDSO specifications switch contains all M12/M23 connectors.	Bidder to offer solution as per SOR, technical and functional requiremnet of the system as defined in the tender document.
156	8.9 Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification No. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (i) Aggregation Switch: The Aggression Switch shall have following minimum	243	8.917 Minimum Operating Temperature 0 to 50 degree		24 port switch comes with 0 to 45 celecus temperature across leading OEM's with enterprise class product. Kindly modify the cluase as RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two OEM's to participate with grade devices.	Clause as per tender prevails.
157	8.10 Switches Type-IIIh As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (i) Aggregation Switch: The Aggression Switch shall have fllowing minimum	243	8.10 /20. Minimum Operating Temperature 0 to 50 Celcius		24 port switch comes with 0 to 45 celecus temperature across leading OEM's with enterprise class product. Kindly modify the clause as per RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two OEM's to participate with industrial devices.	Tender condition prevails

158	8.12 Managed PoE Ethernet Switch As per RDSO Specification of Ip based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDS) Specification NO. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments	247	8.12 /4.3 Managed PoE Ethernet Switch:ii. Ethernet Ports: a) 8 nos. or more 10/100 base T, IEEE 802.3af/at compliant PoE with M12/M23 connector, b) 02 No. 10/100/1000 Base T Ethernet Interface with M12/M23 connector		We understand Managed 8 port switch required with RJ45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All leading OEMs have RJ 45 interface which is industry standard.	Clause as per tender prevails.
159	RDSO/SPN/TC/65/2019- New Clause to be added	29 of 61	10.1 /Server Specification		The Server Platform OEM should be listed in the Top 3 Server Infrastructure vendors of IDC/Gartner in last 3 consecutive quarters.	Not agreed. Clause as per tender prevails.
160	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 /Power Supply not more than 200W		The system would consume less energy, without compromising on the asked specification.	Not agreed. Clause as per tender prevails.
161	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 /Cabinet Volume should be less than 8 Liters		The system would consume less desk space, without compromising on the asked specification	Not agreed. Clause as per tender prevails.
162	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 /Dust Filter for Dust protection		The system can be protected from possible wear and tear due to dust, which is generally the scenario at different station PAN India	Not agreed. Clause as per tender prevails.
163	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 /Performance Optimizer software		Helps in optimizing key ISV applications.	Not agreed. Clause as per tender prevails.
164	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 /The work stations should be certified to run popular ISV		Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Not agreed. Clause as per tender prevails.

165	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3 / Out-of-Band Systems Management (Intel vPro Technology)		Helps manage the machine for Out-of-Band Management functionalities	Not agreed. Clause as per tender prevails.
166	RDSO/SPN/TC/65/2019	33 of 61	12.2 /Storage Specification		Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, "Backend Interface-12 Gbps or higher". This clause will ensure that RailTel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Not agreed. Clause as per tender prevails.
167	RDSO/SPN/TC/106/2019		4.2 (vi)Storage: HDD/SSD of minimum 8 TB Capacity.		Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU with Wi-Fi AP & Managed PoE Switch shall be housed in concealed, power coated metal enclosure with suitable ingress protection for dust and water. So, it should be allowed to propose this capacity as internal Or External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile NVR vendors.	Clause as per tender prevails.
168	RDSO/SPN/TC/106/2019	11 of 21	4.2 (xvi)Regulatory Approval/ Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature Humidity and Vibration		Regulatory Approvals/Certification: a) EN 50155/IEC 60571 for Rolling Stock application OR MIL-STD-810G for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. MIL-STD-810G focuss on tailoring military equipments from different environments to transportation conditions such as shocks. MIL-STD-810G testing methodologies calls for the use of multiple vibration exciters for performing multi-axis shaking to excite test article resonances and simulate real-world vibration. This method combines three distinct tests on the x, y and z axis into one. It is our request to allow MIL-STD-810G certification to be considered here and there by no restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.
169	RDSO/SPN/TC/65/2019	29 of 61	9.3)Large Format Display Monitors shall be LED backlit type - Screen Size -55" (inches) or larger.		Since our Display Screen size is 54.6%. Kindly change the "Screen Size to 54" or bigger".	Clause as per tender prevails.
170	Chapter -2	18	7a, 7b, 7c	Schedule of Requirement	It appears from the description of the material that it should be in Mtrs whereas in QTY column it is given as Nos. Please clarify.	Please refer Corrigendum-V.
171	General	-	-	Specifications	It is requested that technical specifications for 12 core optical fibre cable may be provided to enable us submit our compliances accordingly.	Please refer Corrigendum-V.
172	Chapter - 4	144	4.A.22	EMD/Bid Security	The RFP states that we can submit the least amount of EMD from all the packages through online portal and EMD for remaining packages may be submitted through payee demand drafts while Corrigendum - 1/VSS dtd. 19.05.19 states that EMD shall be furnished through IEPS portal only. Please clarify the mode of submission of EMD for all the 5 packages.	Please refer Corrigendum-V.

173	General	-	-	The term RPG/GRP Thana/Post etc has been used at several places for providing the infrastrucutre etc.	The No. & location of RPG/GRP Thana/Post required to be covered under this tender are not given in the RFP. Please clarify.	Please refer clause 8.3.1.1 of tender document for number of RPF/GRP Thana/Post considered in the tender. Exact location of these shall be shared with the successful bidder.
174	SOR HEAD II	20	(b)	(b) L2 support engineer in RailTel Datacenter (@defined per annum rate of Rs. 6,00000/-)	As the support Engineers are required at RailTel Datacenter, can a bidder utilise the same support engineers for the other package also if a bidder is awarded more than one package. Please clarify.	No.
175	SORE HEAD II	21	2	Training of personnel over and above the on-site training, during the installation, maintenance and supervision period as details in the tender document. Defined in Man-Week i.e. One week training.	As the training will be common for all packages, can a bidder utilise one location and period for the other package also if a bidder is awarded more than one package. Please clarify.	Clause is self explanatory.
176	Payment Terms	122	4.A.5.1.3	15% payment of the value of items of Schedule-A shall be made by RailTel on installation & commissioning of stations/sites including at the concerned RPF/GRP Thana/Post of the cluster of 100 coaches for CCTV in Train Coaches each separately, 5% payment on issue of Provisional Acceptance Certificat (PAC) and the last 5% payment shall be made by RailTel on issue of Final Acceptance Certificate	The last 5% payment shall be made by RailTel on submission of PBG for an equivalent amount after issue of Provisional Acceptance Certificate valid till issue of Final Acceptance Certificate (FAC). Please clarify.	Clause is self explanatory.
177	Payment Terms	123	4.A.5.1.4	25% payment of the value of items of Schedule-A shall be made by RailTel on installation & commissioning of stations/sites including at the concerned RPF/GRP Thana /Post of the cluster for CCTV at stations, cluster for CCTV at stations, cluster of 100 coaches for CCTV in Train Coaches each separately, 25% payment on issue of Provisional Acceptance Certificate (PAC) and the last 10% payment shall be made by RailTe on issue Final Acceptance Certificate (FAC) which will be issued by respective Exeucitive Director of the concerned region. In case of foreing currency, payment will be made through TT/Wire Transfer (SWIFT) from Corporate Office.	The last 10% payment shall be made by RailTel on submission of PBG for an equivalent amount to be submitted after issue of Provisional Certificate (PAC) valid till issue of Final Acceptance Certificate (FAC). Please clarify.	Clause is self explanatory.
178	Payment Terms	123	4.A.5.1.4	(25% + 25%) payment of value % of items of Schedule - A which could not be (25% +25%) payment of value % of items of Schedule-A which could not be installed for want of site of readiness or as per the decision of Ececutive Director/Regional General Manager of the region, will be made on issue of PAC of the last RPF/GRP Thana/Post for CCTV at stations, cluster of 100 coaches for CCTV in Train Coaches each separately and remaining 10% of issue on FAC.	The last 10% payment shall be made by RailTel on submission of PBG for an equivalent amount to be submitted after issue of Provisional Certificate (PAC) valid till issue of Final Acceptance Certificate (FAC). Please clarify.	Clause is self explanatory.
179	Performance Bank Guarantee	124	4.A.6.1	Extension of item for submission of PBG beyond 15 (fifteen) days and up to 30 days from the date of issue of LOA/LOI may be given with the approval of contract signing authority. However, a penal interest of 15% per annum shall be charged for the delay beyond 15 (fifteen) days i.e. 16th day after the date of issue of LOA/LOI.	The penal interest charges may be waived off as in line with other Government Department/industry practise in case of genuine delay. Please clarify.	Clause is self explanatory.
180	Offer/Bid Prices	146	4.A.24.4	5% of the payment after expirty of one year from the date of delivery, if installation is not included in PO/LOA. In case installation is included, the terms will remain same as in cluase 5 of this Chapter-4.	The Clause may be amended as " 5% of the payment after expirty of 90 days from the date of delivery, if installation is not included in PO/LOA. In case installation is included, the terms eill remain same as in clause 5 of this Chapter-4". Please clarify.	Clause is self explanatory.
181	8.16.1	249	23	Battery Backup-1hrs for 1KVA. On full load	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 1500	Please refer Corrigendum-V.
182	8.16.1	249	24.F	Size-Not more than 2U rack mountable	May be changed to RACK/TOWER.	Clause as per tender prevails.
183	8.16.2	250	22	Battery Backup-1hrs for 2KVA. On full load	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 3000	Please refer Corrigendum-V.
184	8.16.2	250	23.G.	Size-Not more than 2U rack mountable	May be changed to RACK/TOWER.	Clause as per tender prevails.
185	8.16.3	251	28	Battery Backup-2hrs for 10KVA. On full load with each UPS System	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 28800	Please refer Corrigendum-V.
186				Eligibility Criteria	FOR UPS OEM Minimum 15 Office with GST Registration across India. - GST certificate copy required	Clause as per tender prevails.
187				Eligibility Criteria	Minimum Annual turnover of UPS OEM to be fixed as a minimum of 150 Cr.	Please refer Corrigendum-V.

188	Annexure - C	pg no. 11 / Pg no 100		All accessories / cables etc required for Installation at site	There will be various item required for site like Input/Output cable/MCB etc & hence need to be specified with min. rating & qty in Annex-C by all OEM with equal rating/capacity/Qty	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
189	CHAPTER-1	pg no. 6		the work within 45 days from the date of issue of Purchase Order/LOA.	This timeline is less & 45-60 days shall be allowed for delivery. I&C can be done in 5-10 days after instruction by Railtel based on site clearance	Clause as per tender prevails.
190	4.A.4	pg no. 29		Delivery/Implementation timelines - completion in 45 days	Kindly refer point no 2 - above	Clause as per tender prevails.
191	3.A.1.7.1	pg no. 14		Bidder to pay for Power	There is no power required otherthan commissioning of UPS at site	Clause is related to carrying out of the work during implementation phase only. Payment towards AC Power supply after installation of equipments is not under bidder scope.
192	3.A.1.7.2	pg no. 14		Railways shall provide for the space and power supply for the systems installed in the RPF/GRPThana/Post, Control Rooms and other locations at stations.	Clean room with DG back-up / earthing / SPD / D.G / Trey is also to be ensured by Indian railways Kindly confirm	Clause is self explanatory.
193	3.A.1.8	pg no. 15		List of sites/nodes will be shared with the successful bidder.	Kindly provide as required to consider costing accordingly	Clause is self explanatory. However, bidder is required to quote as per SOR.
194	3.A.1.8	pg no. 15		b) Integration with existing camera/system	Kindly clarify the scope under this head	Clause as per tender prevails.
195	3.A.1.11 / 3.D.1. / 3.D.6. INSPECTION	pg no. 16 / 20 / 24		Pg no 16 & 20 - FINAL COMMISSIONING Pg no 24 SAT Site Acceptance Testing (SAT)	Whether load bank testing(for battery back-up test) is included in this SAT? Kindly advice as there will be an considerable cost for the same at each site. Pl exclude this parameter as this can be performed at OEM factory during FAT on random samples . Kindly advice	Clause is self explanatory.
196	3.A.1.11	pg no. 17		The bidder may bring out any additional requirement and quote the price for the same as per the relevant SOR item, otherwise, it shall be required to be supplied by the bidder free of cost.	Request you to kindly include all external items w.r.t rating/capacity /qty in Annex-C by all OEM with equal rating/capacity/Qty	Clause is self explanatory.
197	4	pg no. 18		Long Term Maintenance Support: Buyer reserves the right to enter into AMC @ 3.5% of ordered value of equipment	Hope battery scope is not in AMC for 5 years as this rate of 3.5% of ordered value is not sustainable	Complete UPS system including batteries are covered under AMC scope.
198	3.D.1. INSPECTION	pg no. 20		iii) Bidder shall arrange all necessary test instruments, manpower, test-gear, accessories etc.	POINT no 9 - same query (3.A.1.11/pg 16 & 24)	Clause is self explanatory.
199	3.E.3.	pg no. 27		v) All the wiring work whether power cable, network cable or OFC cable should be wired and clamped properly on the channels and coding may be provided for the identification of the cables.	Whether tray/conduit pipes will be provided by Indian Railways? Kindly confirm	No, Same has to be provided by bidder only.
200	4.A.4.5	pg no. 30		Approach and methodology for the optimum use of cameras and other equipments as per the scope of work.	Kindly clarify the scope under this head	Clause is self explanatory.
201	4.A.5.1.1	pg no. 31		75% payment after I&C	Kindly make this as 75% on I&C or within 30 days of delivery, whichever is earlier	Clause as per tender prevails.
202		pg no. 31		25% payment on issue of Final Acceptance Certificate (FAC) which	Kindly make this as 75% on I&C or within 60 days of delivery, whichever is earlier	Clause as per tender prevails.
203	4.A.10.1.1	pg no. 35		The goods will be issued by purchaser to supplier and risk of goods shall remain with supplier until the issue of FAC by RailTel/REL. Insurance policy has to be kept valid by the contractor till issue of FAC by RailTel/REL.	Our insurance ends by the first delivery to customer. Necessary security & insurance thereafter shall be in Indian railways scope. Kindly advice	Clause is self explanatory.
204	4.A.10.2	pg no. 35		The Contractor should also insure the stores brought to site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act in force from time to time.	- - - same as above - - -	Clause is self explanatory.
205	4.A.27 Inspection	pg no. 44		4.A.27.1 RDSO specifications are to be followed for the items for which the specifications have been defined by RDSO in the latest version available on the RDSO Website. Any change in the specifications may be noted from website and will be followed. For the items which are not in the RDSO specifications shall be inspected by RailTel as under:	Whether tender specs shall supercede over RDSO specs if at all available. Kindly confirm as there can be major difference in both the specifications.	Clause is self explanatory.

206	8.11. Switches Type-IV	145	14- (v)	It shall also support SYNC Ethernet and SNMPv3.	Request you to kindly remove the SYNC Ethernet as this is not required in the solution and modify the clause as " It shall also support SNMPv3 "	Please refer Corrigendum-V.
207	8.11. Switches Type-IV	145	14- (x)	Shall support at least 32K MPLS labels .	We understand that 1K labels can able to meet the solution requirement. Also same has been considered in earlier Tender specifications. Kindly modify the clause as " Shall support at least 4K MPLS labels " to allow leading bidder to participate..	Clause as per tender prevails.
208	8.8. Switches Type-I	144	RDSO	Switch Should Support 4K VLAN ID's, Min 256 static VLAN and Voice & Video VLAN	We understand that switch should have minimum 2K static vlans and 16K Mac address to support complete layer 2 functionalities to meet railtel project expectation. Kindly modify the clause as " Switch Should Support 4K VLAN ID's, Min 2K static VLAN ,16K Mac address and Voice & Video VLAN "	Clause as per tender prevails.
209	8.11. Switches Type-I	144	RDSO	Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS	As per industry standard , Switch should have sufficient amount of DRAM and Flash to insure bidder to propose enterprise grade switch to meet Railtel project requirement Kindly modify the clause as " Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS with 1Gbps DRAM and 512 internal Flash "	Clause as per tender prevails.
210	8.11. Switches Type-I	144	RDSO	Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP ports	Considering High bandwidth requirement, It is recommended that Switch should able to support 10G uplink without hardware change if required in future like Type-II, Type-III and Type-IV switches . Pls modify the clause as " Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP+ ports "	Clause as per tender prevails.
211	8.11. Switches Type-III	146	RDSO	IPv6 feature should be ready from day 1.	Type 3 switch will be deployed to connect Server & applications in DC & RPF/Thana. Switch should have ipv6 routing capabilities work in DC environments. Pls modify the clause as " IPv6 feature should be ready and & 5K ipv6 routing enteries from day 1. "	Clause as per tender prevails.
212	General Guidelines			Additional Recommendation for Railtel Network Project	As per Industry standard ,Network should be build in such a way that each and every user should connect & access the network securely based on the user identity Kindly add the clause as " The system should allow only authorized users & devices to access the Multivendor Network based on Type ,Identity, Time, Location and Railtel Security compliance policy to prevent unauthorize malicious activities. Each authorize user will be rated based on their access behaviour across multi-vendor network utilizing system/device logs, network packet logs & AI -ML analytics. "	Not agreed. Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
213	8.8. Switches Type-I	243	RDSO	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp/ Humidity.: 0 °C to 45 °C, 15%-90% non-condensation. " to allow leading bidders to participate with best proposition	Clause as per tender prevails.
214	8.10. Switches Type-II	243	RDSO	Minimum Operating Temperature 0 to 50 degree.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp.: 0 °C to 45 degree " to allow leading bidder to participate with best proposition	Clause as per tender prevails.
215	8.10. Switches Type-III	243	RDSO	Minimum Operating Temperature 0 to 50°C.	The operating temperature 0 -45 C is the Industry standard temperature range for Enterprise grade product in all the leading OEM. Also as per solution , these switches will be deployed in control indoor environment and hence the suggested temperature range is sufficient to meet the solution requirement. Kindly modify the clause as " Operating Temp.: 0 °C to 45 °C. " to allow leading bidder to participate with best proposition	Clause as per tender prevails.
216	8.19.2 WiFi Outdoor Access Points	253	CT2RF3	Must have -90dB to -100dB or better Receiver Sensitivity.	Request you to amend the clause as there is no clients available with receive sensitivity more than -75 to 80 dbm. Kindly modify the clause as " Must have -85dB to -90dB or better Receiver Sensitivity " to allow bidder to propose best solution to meet Railtel requirement.	Clause as per tender prevails.
217	8.13.1 SFP-BX (10 KM) Single Fiber:	247	8.13.1	8.13.1. SFP-BX (10 KM) Single Fiber:	SFP-BX is not a common Industry standard for transceiver hence we request modify the statement to allow leading OEM to participate and propose the standard SFP transceiver as per solution requirement .Please modify as " 8.13.1. SFP-BX/SFP (10 KM) " "	Clause as per tender prevails.
218	8.13.1 SFP-BX (10 KM) Single Fiber:	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
219	8.13.2 SFP+ (10 Km)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
220	8.13.3 SFP+ (40 Km):	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
221	8.13.4 SFP+ (350mtrs)	247	1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment.	As per Industry standard , it is not recommended to use third party transceiver in any Enterprise grade Switches .This will impact the product performance and may affect on the warranty policy which is same for every leading OEMs. Kindly modify the clause to allow leading OEM to participate. Please modify the clause as " SFP modules should communicate with other vendors SFP module "	Clause as per tender prevails.
222	8.11. Switches Type-IV	145	14- (v)	It shall also support SYNC Ethernet and SNMPv3.	Every OEM has different technology to achieve the required functionality so request you please modify the clause as "It shall also support SYNC Ethernet or equivalent and SNMPv3"	Please refer Corrigendum-V.

223	Chapter 2	61	2.1 a) SCHEDULE OF REQUIREMENT	a) Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	The Clusters of Station i.e RPF/GRP Thana Post is 552 in number, which has PC workstation whose quantity, mentioned in the BOQ is 390, which is not matching with the RPF/GRP Thana Post quantity, please clarify the quantity of PC Workstation in RPF/GRP Thana Post .	Bidder to quote items as per SOR. Distribution list will be provided to successful bidder.
224	Chapter 8	253	3.B.5, 8.3.2.1, 8.19 Wi-Fi Access Point and Managed PoE Ethernet Switch	Wifi AP :- 10/100/1000 Base T auto-sensing and Switch :- a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	As per network layout, VRS OR MNVR, 8 Cameras & Wi-Fi Access Point are connected to managed PoE Ethernet Switch. The Ethernet/RJ45 Port is required for Wi-Fi Access Point Connection. But According to RDSO Specification switch supported all M12/M23 Connector. Please clarify.	Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
225	Chapter 2	9	2.1 a) and b), (d) SCHEDULE OF REQUIREMENT	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII b) PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories. d) Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8	The Clusters of Station i.e RPF/GRP Thana Post is 552 in number, which has PC workstation and Display 55" whose quantity, mentioned in the BOQ for each zone is not matching with the RPF/GRP Thana Post quantity.	Bidder to quote as per SOR.
226	Chapter 3	101	3.B.1 Architecture Overview	RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System	Secunderabad and Gurugram are the two RAILTEL datacenters, help to know the zones occupied in each datacenter, considering the bandwidth management and complexity we suggest to provide two zones in each datacenter with redundancy of Video Management Software in each datacenter.	Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
227	Chapter 8	239	8.2.2 Mobile Network Video Recorder for Coach	Each Coach shall be provided with a Video Recorder Unit or Mobile Network Video Recorder (Mobile NVR) along with System Software	We suggest to provide us an option of using cost effective solution by providing one VRU OR Mobile Network Recorder for two coaches, which provide network Simplicity.	Clause as per tender prevails.
228	Chapter 8	275	8.26.2 Remote viewing on Web and Mobile App for CCTV system at Stations	Remote viewing on Web and Mobile App for CCTV system at Stations	The tender has not mentioned any specific no. of users required for the VMS. Also, if Mobile App will be used, the no. of concurrent users will be more. Hence, please specify the approximate no. of expected users and concurrent user logins for the VMS, which will help to design and consider the VMS Solution accordingly.	Please refer Corrigendum-V.
229	Chapter 3	99	3.B.7 Architecture of VSS/CCTV system for stations and Coach	The tentative VSS architecture for system to be deployed in Train Coaches	Based on the tentative VSS network architecture provided in the Tender document, the use of Panic switches has been depicted in the coaches, whereas the BOQ for coaches does not include any quantity of panic switches. Please clarify the illustration of the panic switch in the network architecture..	Please refer Corrigendum-V.

230	Chapter 2	13	3.1 a) SCHEDULE OF REQUIREMENT	a) VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes.	In the architecture and Solution BoQ of Datacenter, VMS and FRS System are different for each Region. Kindly help us to find out if we need to provide one VMS and FRS System or different for all Region.	Clause as per tender prevails.
231	Chapter 8	253	8.19.2 Wi-Fi Access Point and Wireless Controller	Specification of Cloud/Appliance based Wireless Controller	Wireless Controller is mentioned in architecture and solution of tender at Datacenter but in BoQ, Quantity for Wireless Controller is not mentioned. Kindly help to find out quantity of Wireless Controller.	Please refer Corrigendum-V.
232	Chapter 8	248	8.13.4 SF P+ (350mtrs)	Should support 350m optical distance.	In 10GB module, most of the OEM uses 850nm wavelength technology for efficient transmission & which is achieved by 300m optical distance. Kindly help to change clause as Should support min. 300m or more optical distance as this clause is brand specific.	Clause as per tender prevails.
233	Chapter 2	9	2.1 a) and e) SCHEDULE OF REQUIREMENT	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System. e) Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days	As per tender requirement, Recording for all camera will be stored in NVR or Server, but additional storage system is mentioned in BOQ, please help to understand the solution points mentioned in tender	Clause is self explanatory. Bidder to quote as per SOR.
234	4.A.14.1 Eligibility Criteria Requirements for Bidders:	135	5	Technical capability: The bidder should have completed I. Package-I :a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender. II. Package-II :a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender. Clause as per tender prevails V. Package-IV :a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender. V. Package V :a.) At least one similar work# worth of INR 85.24 crores in last three financial years plus current year upto the date of opening of tender. 5/24/2019 Note:- In case of Consortium/JV, only Lead bidder experience shall be considered against the above mentioned criteria of similar work experience.	While going through the above quoted RFP, it is observed that the work in question is completely new in its nature and there would be very few MSI who can fulfil the Eligibility and Pre-Qualification Criteria given in RFP as a lead bidder. In order to have healthy competition in respective packages, we request you to consider Collective Experience in Technical Capability clause and amend the Eligibility and Pre-Qualification Criteria as follows : The bidder should have completed I. Package-I :a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender. II. Package-II :a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender. III. Package-III :a.) At least one similar work# worth of INR 70.37 crores in last three financial years plus current year upto the date of opening of tender. V. Package-IV :a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender. Note:- In case of Consortium /JV, either individually or collectively (in case of consortium any of the consortium member) shall be considered against the above mentioned criteria of similar work experience.	Clause as per tender prevails.
235	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	138	1	OEM(s) should have either direct presence in India or through their authorized registered partner in India for last 3 years or OEM(s) should have been working for last 3 years in their country of origin. Further, they should have Indian Technical Support Centre, Repair and RMA centre in India either directly or through their authorized registered partner for last 3 years or should give an undertaking for setting up a Technical Support Center and an office in India within 3 months after award of contract.	Considering the magnitude of the project we strongly request that OEM's should be directly present in India with its registered office in India for more than 3 years (Not as Joint venture, Partnership firms or any other association). OEM should have self owned repair centre and its own RMA setup in India (Not as Joint venture, Partnership firms or any other association) for the last 3 years. This ensures support capability for the large projects at such extent.	Clause as per tender prevails.

236	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	138	2	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR 375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender	We request that OEM(s) supplying the CCTV Cameras and Video Management & Recording software should have the minimum average turnover of INR 1000 Crores in last 3 financial Years. Cumulative turnover shall also be changed to Average turnover. Considering the magnitude and stringent timelines of this project this criteria will help and encourage the large reputed OEM(s) to participate.	Clause as per tender prevails.
237	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	4	The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. The same should have been working satisfactorily for at least six (6) months	The Project reference shall be of an Indian Company only and no foreign references shall be acknowledged and the operation, Maintenance and even the procurement process is quite unique and different in Indian Market scenarios. Hence request to kindly accept the Indian References only	Clause as per tender prevails.
238	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	Kindly Change CMMI level-5 to CMMI Level-3. CMMI level-5 is attained by the companies whose primary nature of business is Software development only. We are a reputed OEM for CCTV Cameras, NVR, VMS and VA and are classified as the Physical Security company and this clause refrain us to participate in this tender. We however, are a CMMI level-3 which confirms well defined and continuously improved results. Hence, Kindly change this to CMMI Level-5 or CMMI Level-3	Please refer Corrigendum-V.
239	CHAPTER- 8 TECHNICAL, FUNCTIONAL REQUIREMENTS & SPECIFICATIONS	238	Note 3	All the IP cameras as quoted by the bidder against SOR Chapter-2 for stations packages must be sourced from the same OEM. However, bidder may quote different camera OEM for CCTV work in train coaches.	Request you to kindly change the sourcing instruction for Coaches i.e. Like the stations, the cameras for Coaches also must be sourced from the same OEM only.	Clause as per tender prevails.
240	Chapter 8 Design Parameters Video Surveillance System hardware sizing	241	8.3.1.2	Approximate number of cameras considered across 6124 Railway Stations are 89844 units	As per the SOR mentioned Chapter 2 for all the packages for stations, the total number of cameras are 81685. However, here they approx camera quantity is mentioned as 89844 which is as per Annexure 1 of chapter 7. As per our understanding the total quantity shall be supplied as per SOR. However, Request you to kindly confirm the actual quantity to be supplied	Bidder to quote as per SOR.
241	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software OEM should not be same as any of the VMS OEM in the project. It should be agnostic to all VMS (existing or new). C&C application should be able to bring Live & Recorded CCTV feeds, VMS level alerts from existing VMS as well as new VMS to be installed. The existing and new VMS vendors will have to share the compatible SDK/API for this integration purpose.	Clause as per tender prevails.
242	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software should not be connecting to end points i.e. Cameras direct for Live or recorded video feeds. It should communicate to respective VMS and perform deep integrate for live and recorded video retrieval purpose. This integration will also allow capturing the VMS level alerts.	Please refer Corrigendum-V.
243	Chapter 8 8.26 Command Control Center	270	8.26	Additional OEM Qualification for Command Control Centre Application (suggested)	Command & Control application software OEM should have done 10+ third party reputed VMS integrations in past and can demonstrate the same if required.	Clause as per tender prevails.
244	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software licenses should not be based on count of edge devices such as cameras, alert zones etc. It should be able to support unlimited number of edge devices as long as they are integrated. This is to prove that the C&C is scalable for future expansion without being dependent on additional cost / license per edge device.	Clause as per tender prevails.
245	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	C&C Operator Terminal software should be a 'desktop client application' based on Client - Server architecture. The C&C client application should have inbuilt third party VMS adaptors to play live and recorded video feeds from multiple video management systems.	Clause as per tender prevails.
246	ender Clause No: 8.12 RDSO:RDSO/SPN/TC/106/2019 Rev1 Section 4 (Technical Requirement)	12	iii	Power Supply: The switch should be able to work on power provided as per clause 3.16	This clause regarding power supply referring clause 3.16. But we have not find relevant information at clause 3.16 of the tender as well as RDSO specification, hence here our request please clarify switch power requirement	Clause as per tender prevails.
247	Section:3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Design architecture including Core switch, but these switches are not asked in the SoR. Hence request please clarify these switch would be part of the supply or not, if yes what would be the quantity.	Bidder to quote as per SOR.
248	RDSO Specification-RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	4	Port Standards & Functions: IEEE 802.3u 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, 802.3ae 10 GbE, 802.3an 10GBASE-T, IEEE 802.3x Flow Control for Full- Duplex Mode, Auto-negotiation	As tender is referring RDSO specification for switches "RDSO/SPN/TC/65/2019 Revision 5.0" Clause no-1 & 4 of the Core Switch RDSO specification are contradict to each other, in clause asked port should be SFP+ based & clause no-4 ask to comply, Fast Ethernet & 1000BaseT port. We understand low rate electrical interface would not be part of the core switch, please clarify.	Bidder to quote as per SOR.

249	RDSO Specification- RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	38	Operating Temp.: 0 °C to 50 °C.	We understand core switch would be installed in controlled environment hence upto 40 °C is sufficient. Please consider the same.	Clause as per tender prevails.
250	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	The EMS Solution (Hardware & Software) shall provide future scalability with the capacity to handle 20,000 devices from Day 1 without major architectural changes. Whenever required, the additional device licenses can be procured & added respectively.	As tender is asking around 28000 Switches in total. And clause is asking EMS capacity for 20000 from day one. 1) So request you please clarify ask EMS scalability is for the whole network or package wise. 2) If it's for entire network then need to increase EMS scalability like 25% higher than the asked quantity. 3) If it's package wise then our humble suggestion to optimize the scalability, because in a particular package total switch count is not more than 8000 and today's technology advancement scalability remains pay & grow hence at day one to consider 20000 is wastage of resources. So requesting please share optimized scalability of EMS architecture.	Please refer Corrigendum-V.
251	Tender Clause No: 8.23 Enterprise Management System (EMS)		General	SoR is asking EMS as two set of hardware & two set of software in each package.	We understand two sets means one at Gurgaon & one at Secunderabad. Means server configuration 1+0 at Gurgaon & 1+0 at Secunderabad). Please confirm	Clause is self explanatory. Bidder to quote as per SOR.
252	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	Solution shall be open, distributed, scalable, and multi-platform and open to third party integration	We understand EMS remains technology wise, multi-platform & open to third party integration remains part of the NMS or OSS. Please clarify.	Clause is self explanatory.
253	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolidated Dashboard	Instruction Text (knowledge base) integrated into events /alarms for which incident tickets were created with ability to define trouble shooting steps.	Switch EMS will provide Fault Management and will send the events and alarms from the network to an NMS in real time. Ticket generation & management is not in the context of EMS. Please clarify.	Please refer detailed specification of EMS defined at clause 8.23 for clarity.
254	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolidated Dashboard	Tool should be able to highlight Priority of an event. Priority is based on both the event severity and the business impact. CI Business Impact is calculated based on Business Criticality of all affected business services, applications and business process CIs and eg. SLAs.	Tool will provide the severity (Major/Minor/Critical) for an event. Business Impact is not in the scope of EMS. That is taken care by OSS. Please clarify	Clause is self explanatory.
255	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Consolidated Dashboard	The system must allow modification and enhancement events during event processing.	Requirement is not clear need to elaborate please.	Clause is self explanatory.
256	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reporting templates for performance, availability, inventory, operation, virtualization and configuration	Requesting to please elaborate "what is meant by Virtualization" here.	Clause is self explanatory.
257	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reports that can prove IT service quality levels, such as application response times and server resource consumption	Requesting to please elaborate "What is application response time" for switches	Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
258	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should be able to deliver comprehensive, long-term, and customizable cross-domain reporting.	Requesting to please elaborate. "What is meant by cross-domain reporting" here.	Clause is self explanatory.
259	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should provide reports from both Network devices and Servers from the same console.	We understand, reports are generated from EMS UI. The reports will have information about the devices. Please confirm that this is what's required	Clause is self explanatory.
260	'Note'	69	V	Different OEM(s) across packages is not permitted. Offers without particulars of Make/model or multiple OEMs of same item shall be liable to summarily rejected	As per our understanding different OEMs within same package is not allowed for different types of cameras, servers, Video Recording Unit/Mobile NVR, workstation, storage, large format display monitors, VMS Software, switches (each Type separately), Wireless Access Point and EMS. If not please clarify how same OEMs across all packages be assured as there may be different L-1 bidders among different packages. In any case existing installation at large number of stations besides OEM procured cameras, the same OEM stipulation is hard to achieve even within same package (Region).	Clause is self explanatory.
261	4.A.45	153	1 st Paragraph	The local manufacturers are exempted from experience and past performance criteria, and average annual turnover requirement under financial standing.	Please define the term ' local manufacturers ' and criteria to qualify as local manufacturer so as to identify manufactures under this category.	Clause as per tender prevails. Clause is self explanatory.
262	4.A.14.1.3	139	2	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR 375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender.	The clause requires that OEMs whose products have been offered should have a minimum cumulative turnover however as per clause 4.A.45 on page 153 the local manufactures is exempted from such financial standings. As the products specially cameras, switches, server, VMS, FRS etc. are as per RDSO specifications and RDSO inspected, this clause shall be relaxed/ removed. Ultimate responsibility lies with bidder, not the OEMs for this RFP. Applicability of 'local manufacturing' clause on the overall bid is reasonable but the same on eligibility of each item (like camera, server, switches, software etc.) seems unreasonable & discriminatory. This is more so in view of lack of verification & validation of such 'local manufacturing' claim by OEMs at the disposal of RCIL/REL as the past experience indicates (spate of complaints by rival OEMs)	Clause as per tender prevails.

263	4.A.45	153	1 st Paragraph	The local manufacturers are exempted from experience and past performance criteria, and average annual turnover requirement under financial standing.		Clause as per tender prevails.
264	4.A.45	154	3	Only those LC bidders, whose bids are within 20% of the NLC L1 bid, would be allowed an opportunity to match L1 bid.	RCIL/ REL clarify methodology of deciding L-1 etc. in view of clause 4.A.45 and 4.A.17	Clause is self explanatory.
265	4.A.17	143	4.A.17.6	The purchaser reserves the right to award any package or combination of packages not exceeding two packages to a technically eligible L1 bidder. The remaining package(s) which could not be awarded to the L-1 bidder will be counter offered to the respective L-2 bidder at L-1 price. If L-2 bidder declines such counter offer, the counter offer shall be made to L-3 bidder at L-1 price. If other technically qualified bidder do not accept the counter offer at L-1 price then the package shall be awarded to the L-1 bidder in such cases the above condition of awarding contract to maximum of 2 packages to any bidder shall not be applicable.		Clause as per tender prevails.
266	8.3.1.5	242	8.3.1.6	In case of any failure or interruption of MPLS/IP network, the camera shall automatically start recording on Edge Storage Memory Card at resolution and frames per second as required and when the network recovers, the video data shall automatically be transferred to the Server/NVR installed at respective RPF/GRP Thana/Post without any impact on the system operations.	Please specify the duration for which recording need to be stored in camera, in case of such failure. Or Time to restore such MPLS link failure by RCIL/REL shall be specified.	Clause is self explanatory. Bidder to quote as per SOR.
267	4.A.14.1.3	139	4	The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. same should have been working satisfactorily for at least six (6) months	The criteria proposed for OEMs seem restrictive. The criteria may kindly be modified to include OEM(s) who have supplied IP cameras for any public institutions, Government departments, Smart City projects, Municipal corporations & its institutions, Police Departments, Public sector banks etc. The above modifications will result in wider and healthy competition. This criterion was relaxed in previous VSS tender.	Clause as per tender prevails.
268	4.A.22	144	4.A.22.2	The bidders have to pay minimum amount of EMD (lowest among all the packages, as also given in IREPS tendering portal) online through IREPS tendering portal. After that, IREPS site will allow the bidder to bid in the said Tender. Balance amount of EMD, if any, shall be submitted through DD along with bid submission.	As per rule 170 of GFR 2017, the bid security may be accepted in form of Demand Draft, Fixed Deposit Receipt, Bankers Cheque or Bank Guarantee from any commercial bank. It is requested to allow submission of balance EMD in form of Bank Guarantee as all modes as mentioned above have same standing to safeguard buyer's stakes.	Clause as per tender prevails.
269	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	8.3.2.1 System description and General Requirement As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments)	Clarification related to the RDSO clauses raised below Multiple clarification as below	Clause as per tender prevails.

270	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraqgted AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.
271	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well Please include : WLC should able to detect, if someone connect a Rogue Acess Point in network and able to take appropriate action to contain rogue Acess point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication. Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.	Clause as per tender prevails.
272	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achive the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box.Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.
273	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR.Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation.Deep-Packet Inspection based, Recognized application usage statistics shall reflect actual usage amount Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation	Clause as per tender prevails.

274	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xi) RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	<p>"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraqgtd AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application.</p> <p>Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection.Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p> <p>Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p>	Clause as per tender prevails.
275	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED.Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
276	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network.</p> <p>Strong endpoint security Support for the following:</p> <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
277	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p> <p>Calculation as below :</p> <p>- 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W. Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p>	Clause as per tender prevails.

278	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (Note) RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
279	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
280	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
281	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : <ul style="list-style-type: none"> - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.

282	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (i) RDSO/SP N/TC/106/2019	Ethernet Port: 10/100/1000 Base T auto-sensing	To achieve AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic, AP to support Two numnbers of GigE ports.Request to change it to "Must support 2X10/100/1000BASE-T autosensing (M12 8P female connector with X-coding per IEC 61076-2), PoE/PoE+ In) for shock proof deployment with PoE Out at one port." Request to change it to "Must support 2X10/100/1000BASE-T autosensing (M12 8P female connector with X-coding per IEC 61076-2), PoE/PoE+ In) for shock proof deployment with PoE Out at one port."	Clause as per tender prevails.
283	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	The Bandwidth Requirement is not specified in the AP specificationsKindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic	Clause as per tender prevails.
284	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	Kindly Suggest Antenna Type and Atenna Mounting. As the Train Body are made of metalic, we would recommend to mount the Antenna outside the train. Kindly confirm.Kindly Suggest Antenna Type and Atenna Mounting	Clause as per tender prevails.
285	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (Note) RDSO/SP N/TC/106/2019	Note: In case the NVR has embedded system architecture with system on Chipv(SOC) and microprocessor together, deviation can be accepted if full functionalityvis achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advatange for Embeded NVR system architecture Vendor. Kindly remove this note.Kindly delete this disclaimer, would be an advatange for Embeded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

286	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic .Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.
287	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point. Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication. Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.	Clause as per tender prevails.
288	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class AP's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box. Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.

289	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR.Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount.Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation	Clause as per tender prevails.
290		RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019			Clause as per tender prevails.
291	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xv) of RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	<p>"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraggted AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application.</p> <p>Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection.Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p>	Clause as per tender prevails.

292	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
293	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
294	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W	Clause as per tender prevails.

295	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): Note: RDSO/SPN/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note. Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
296	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs: RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Clause as per tender prevails.
297	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs: RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 11	Switch Should Support Security Features like Broadcast/Multicast/Unicast Storm Control, Traffic segmentation, TLS, DoS attack prevention, 802.1X Portbased Access Control, Port Security, ARP Spoofing Prevention, DHCP Server Screening, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control.	<u>We understand Traffic Segmentation</u> is in terms of different VLAN for types of traffic and Auto QoS. Kindly Clarify. Kindly clarify <u>DOS attack prevention</u> or equivalent like Rate limiting, ACL and Storm control is acceptable. TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement <u>DHCP Server Screening</u> : Generally DHCP Security features are provided by <u>DHCP snooping</u> , which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping" Please change the clause to "Switch Should Support Security Features like "Broadcast/Multicast/Unicast Storm Control, Traffic segmentation/Auto QoS, DoS attack prevention/Rate Limiting, Storm Control, 802.1X Portbased Access Control, Port Security, ARP Spoofing Prevention, DHCP Server Screening/ DHCP snooping, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control"	Clause as per tender prevails.

298	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):., clause no. 12	Switch Should Support features IPv4 & IPv6 Inspection, SSH v2 feature, Flow Control governed by IEEE 802.3x.	IPv4 and IPv6 inspection is not clear. Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection	Clause as per tender prevails.
299	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):., clause no. 12	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	Kindly Include Industrial Grade Switches for getting better performance and long run of this project, as per the environmental situation in Train Station Kindly Include Industrial Grade Switches for getting better performance and long run of this project,	Clause as per tender prevails.
300	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Clause as per tender prevails.

301	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.1	Should have minimum 24 x GE SFP based ports	As per the network architecture, 12x1GE SFP would be sufficient instead of 24x1GE SFP Ports. Kindly change the port requirement from 24 to 12x 1GE SFP.	Clause as per tender prevails.
302	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.2	Should have minimum 4 nos. SFP+ based 10 GE ports.	As per the network architecture, 2x10GE SFP would be sufficient instead of 4x10GE SFP+ Ports. Kindly change the port requirement from 4 to 2x 10GE SFP+.	Clause as per tender prevails.
303	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.3	Should have at least 64 Gbps full duplex line rate traffic.	Kindly change the capacity of the Switch as per the port requirement to 52Gbps, instead of 64 Gbps	Clause as per tender prevails.

304	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.11	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.	THERE IS A LESS FEASIBILITY OF GETTING TWO POWER SUPPLY FEED AT STATION PLATFORM. Kindly change the clause as per below "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz".	Clause as per tender prevails.
305	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.	ERPS is a must support Technology required for this kind of switches to achieve ring protection in less than 50 ms. ERPS is not be compared with RSTP which have protection switching time in seconds. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must Kindly change to: Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies. and IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must	Clause as per tender prevails.
306	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.	Kindly include EN61000-3-2 and EN61000-3-3 spec. These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection". These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection"Kindly change the clause as below: "Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard or EN61000-3-2 and EN61000-3-3 standard and as per requirement at Indian Railway Station.	Clause as per tender prevails.

307	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019	Clause as per tender prevails.
308	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity.	Clause as per tender prevails.
309	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	Kindly suggest Switch configuration as RDSO specs is described 1G SFP+, whether 10G SFP+ or 1G SFP port to be considered? Kindly confirm 4x 10G SFP+ to be considered	Please refer Corrigendum-V.

310	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	If we consider Switch configuration of 4x10GE+24x1GE = 64 *2 = 128 Switching Bandwidth. Kinly suggest whether switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps	Clause as per tender prevails.
311	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	As this switch to be located at RPF Location for Server and PC connectivity, Please suggest whether POE/POE+ is required or not? Please remove Power budget for POE/POE+ requirement	Please refer Corrigendum-V.
312	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 20	Minimum Operating Temperature 0 to 50°C.	AsThis switch would be located at RPF DC Location, where server /NVR operating temperature asked below 30 DegreeC. We would request to revise requirement from 50 DegreeC to 45 DegreeC. Kindly change the requirement as per Environmental condition Minimum Operating Temperature 0 to 45°C.	Clause as per tender prevails.
313	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 8	Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate.	Kindly inclue " Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate." On 70 Gbps Box, the 64 Byte Packet length mpps caapcity should be 70x1.488 mpss = 100 mpps. Kindly change to : Switch shall have minimum 100 million packets (64 Byte packets) per second forwarding rate.	Please refer Corrigendum-V.

314	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 10	Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 45 degree (minimum).	Kindly include The temperature should be increased to 50 Degree C, as per other switches environmental condition is considered. Kindly change to : Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 50 degree (minimum).	Clause as per tender prevails.
315	Chapter -8	RFP Page no. 245 and 246	8.11 Switches Type-IV clause no. 15 (iv), 16 (i)	iv. Support for IEEE 802.1 D spanning tree protocol.	Kindly suggest 802.1D/ 802.1 s MSTP is acceptable. Support for IEEE 802.1 D spanning tree protocol / 802.1 s MSTP	Please refer Corrigendum-V.
316	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xiv. Support 4 group of embedded RMON (history, static's and alarms).	RMON is a very old standard, We would request to add better and advanced level monitoring like Performance monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data. Kindly include as below: Support 4 group of embedded RMON (history, static's and alarms) or advanced level monitoring like Performance monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data	Please refer Corrigendum-V.
317	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2 (Confirmed roadmap within a year time is also acceptable for ITU-T G.8032 v2 with no additional cost to RailTel).	As it was changed during last year CCTV RFP, OEM should already developed the feature , kindly remove the roadmap acceptability. This feature should be from Day-1. Kindly change the clause to: xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2	Clause as per tender prevails.
318	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 17	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Deleted. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. Deleted.	Kindly include follow certifications as well Switches should be NEBS certified. IPv6 feature should be ready from day 1. Kindly change the clause to: Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Switches should be NEBS certified. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. IPv6 feature should be ready from day 1.	Clause as per tender prevails.
319	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2WS5	CT2WS5 : wireless Standard: Antenna Gain of Access Points must be +2dBm or better. Must support following minimum transmit power for both 2.4Ghz and 5Ghz radios. (i) 2.4-Ghz band : +21dBm (ii) 5.0-Ghz band : +24dBm	24 dBm and 21 dBm are for indoor coverage, not suitable for outdoor coverage, where the connectivity with Train AP is required. Kindly include Antenna Gain of Access Points must be 5dBm or better. Must support following minimum EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB. This will give advantage on Higher coverage with Higher power to connect the Train AP. Kindly change the clause to: CT2WS5 : wireless Standard: EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB.	Clause as per tender prevails.
320	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2M3	CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet	Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet with RF-45 console port for local troubleshooting. This will help in local troubleshooting, when the AP is not reachable at WLC. Kindly change the clause to: CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet. Additionally Access point shall have Management console port (RJ-45)	Clause as per tender prevails.
321	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS1	WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	WEP is obsolete standard, request to remove the clause. Kindly change the clause to: WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	Please refer Corrigendum-V. (WEP to be deleted as WPA2 is latest standard for security)

322	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS5	Security: Controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points	Different OEM have different method for RF security. We secure RF perimeter through from ROGUE AP's , ROGUE client, etc. Kindly change the clause "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points".Kindly change the clause to: "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points".Kindly change the clause to: WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	Clause as per tender prevails.
323	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO1	Operational: Must support AP over-the-air packet capture for export to a tool such as Wire shark.	As the Wireshark Packet Capture implementation differs from OEM to OEM. We would recomnd following changes in the clause: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark."Kindly change the clause to: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark."	Please refer Corrigendum-V. (Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark.)
324	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO15	Operational: shall support API's for NB and SNMP Integration with CNMS	As the NBI generally send by EMS not WLC. We would recomnd following changes in the clause: "shall support API's for NB / SNMP Integration with CNMS" Kindly change the clause to: "shall support API's for NB / SNMP Integration with CNMS"	Clause as per tender prevails.
325	NIT	1	1	NIT Earnest Money (INR): 6200000.00	NIT is common for all packages but against EMD column, only this amount (INR 62,00,000/-) is visible. Same issue is there in e-tender portal. Request to review and clarify.	Clause as per tender prevails.
326	NIT	1	1	NIT Allow Multiple Currencies (Offer as a whole): INR + 3 Foreign Currencies Allow multiple currencies (for an individual item) INR + Any 3	Tender document doesn't say any thing about '3 Foreign Currencies' except USD. Please elaborate.	Clause as per tender prevails.
327	Chapter 1	7	1	I/We _____ have read the various conditions detailed in tender document attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this offer open for acceptance for a period of 180 days from the date of submission and in default thereof. I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to supply various equipment at the rates quoted in the attached schedules and hereby bind myself/ ourselves to complete the work within 12 months from the date of issue of Purchase Order/LOA. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the supplies according to the Specifications for materials and works laid down by the RailTel.	As per tender conditions - Delivery Timeline for CCTV Work at Station = 18 months Delivery Timeline for CCTV Work in Train Coaches = 12 months Therefore, both the timelines should be covered in 'Offer Letter'. Request to make the provision of doing the same.	Clause as per tender prevails.
328	Chapter 3	81	3.A.1.9 b)	The bidder shall be fully responsible for Quality Assurance of equipment & other network elements and supervision of following:- a) ... b) Integration with existing network/system	For Design, BoQ finalization and compatibility purpose - Please provide the detail of existing network containing information of type of equipment's & interface details.	The existing network of RailTel is standard MPLS network. Bidder to quote as per SOR.

329	Chapter 4	119	4.A.4.1 4.A.4.2	<p>The first phase of deliverable also includes a Pilot and only after approval from the Indian Railways/RailTel, bidder shall be allowed to implement the solution further.</p> <p>In case the Pilot is declared unsuccessful, either on the basis of delay in implementation and/or on the basis on inability to adhere to the functional and operational requirements of the System as stated in this RFP, RailTel will be within its right to take measures as detailed in Terms and Conditions of the Contract.</p>	<p>a) Pilot here should be described in detail. b) If a bidder is declared L1 in two or more regions, we understand Pilot in only one division of a region is required in such case.</p> <p>Please confirm.</p>	Pilot means first set of stations where the work is completed."Pilot"shall be different for different regions of RailTel.
330	Chapter 4	160	4.B.9	<p>Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted in RailTel before Tender opening date & time. Bids without these off line submissions are liable to be rejected.</p>	<p>As Technical doc are also part of the 'CREDENTIAL BID', please clarify whether complete 'CREDENTIAL BID / TECHNICAL BID' need to be submitted offline or only few selected Eligibility criteria related documents (please specify) need to be submitted.</p> <p>Generally, in all E-tenders, purchase asked bidders to submit only few documents offline such as EMD, Integrity Pact, cost of tender document, pass phrase etc.</p> <p>Request you to allow the bidder to submit CREDENTIAL BID / TECHNICAL BID on-line only. However, documents such as EMD, Integrity Pact, cost of tender document, pass phrase etc. could be submitted offline.</p>	Clause is self explanatory.
331	Chapter-2	18	7			Please refer Corrigendum-V. (Unit- Mtr.)
332	Chapter-2	69	Note VI	<p>Bidder must validate all the quantities quoted in their technical solution proposed supported by calculations, datasheets and design documents duly vetted by respective OEM(s) as same would be required for the technical evaluation of the offer</p>	<p>Please note that this is a turnkey project and Bidder is expected to propose a single solution incorporating specifications / solution for all major items. Finalization of OEMs is strategic decision which has dependancy on various parameters and generally done at the nth hour just before bid submission.</p>	Clause as per tender prevails.
333	Chapter-2	70	Note VIII	<p>The offered solution for video management system, server and storage hardware sizing should be duly vetted and supported with certifications issued by OEM.</p>	<p>In such scenario, it is quite difficult to get the BOQ & Solution vetted / signed by respective OEMs.</p>	Clause as per tender prevails.
334	Chapter-2	71	Note XIX	<p>Central Command control center has been provisioned in Package-I. Therefore, all successful bidder of other packages are required to share API of their quoted VMS to ensure integration with central command and control center to achieve desired functionality as mentioned in the tender document.</p>	<p>We understand that API information is not required at this stage. It is only required post bid evaluation and from successful Bidders only. Please confirm.</p>	Clause as per tender prevails.
335	Chapter-3	79	3.A.1.4.2. 12	<p>IP based Closed Circuit Television (CCTV) surveillance system in Coaches of Indian Railways: Maintenance supervision period of 12 months from the date of award of PAC of cluster of train coaches.</p>	<p>Maintenance supervision of IP based Closed Circuit Television (CCTV) surveillance system in running coaches by external agency other than Railway itself is quite difficult. Request to remove the condition of 'Maintenance supervision period of 12 months from the date of award of PAC'.</p>	Clause as per tender prevails.
336	Chapter-3	81	3.A.1.7.9	<p>Any land required by the bidder may be made available by Railways, if available, at the lease cost as per the latest norms of Railways.</p>		Cost is different for different places and is as per Railway commercial rates. The cost is required to be paid for the requirement of the bidder only and not as required to be paid for ROW.
337	Chapter-3	82	3.A.1.11	<p>Any item of bidder's goods/services not specifically mentioned, but considered essential for completion/commissioning of the work in all respects shall be deemed to be included in the scope of work. The bidder may bring out any additional requirement and quote the price for the same as per the relevant SOR item, otherwise, it shall be required to be supplied by the bidder free of cost.</p>	<p>What if there is a requirement of items which is not listed in existing SOR? Is bidder allowed to include additional items in existing SOR? If yes, how the price bid evaluation will be done? Please elaborate.</p>	Clause is self explanatory.

338	Chapter-3	111	3.E.1	Training The training course shall be conducted at the manufacturing facilities from where the respective equipment/subsystems are manufactured/ offered or in India if the firm can arrange full-fledged training facilities in case their manufacturing facilities are located outside India.	As this is a turnkey project involving multiple OEMs, we propose to conduct the training at customer's place.	Centralized as well as distributed locations such as Stations, Region HQ, RPF Chowkis etc. as per requirement. Training place shall be communicated to successful bidder.
339	Chapter-4	113	4.A.1.2	The offer should remain valid for a minimum period from the date of opening of tender including the date of opening as indicated in Bid Data Sheet (BDS) Chapter 5.	We understand the offer /Bid will remain valid for 180 days from the date of opening of Technical Bid. Please confirm.	Clause is self explanatory.
340	Chapter-4	117	4.A.3.3	Separate agreement for AMC after warranty period shall be entered with OEM or Bidder specifically authorized by OEM by RailTel. A fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 months (4 months beyond the AMC period of 5 years) from the date of issue of LOA shall be required to be submitted by Bidder/OEM for due fulfillment of long term maintenance support obligation.	As most of the Banks provides BG with maximum 3 years validity, please allow contractor to submit PBG initially with 3 years validity which can be extended further as per requirement of tender.	Clause as per tender prevails.
341	Chapter-4	126	4.A.8.6	For CCTV in train coaches, train system runs 24x7, accordingly train comes for maintenance in coaching depots or car sheds 24x7. After arrival at depots or in workshop, usually train stays 6 to 10 hrs. for routine maintenance etc. In case the down time exceeds more than 6 hours then Rs.500 per day or part thereof would be deducted for each day for each camera until the failure is restored	Down time of 6 hours on a running train is very less. Request to increase it from 6 hours to 24 hours.	Clause as per tender prevails.
342	Chapter-4	137	4.A.14.1.1	Bidding for more than one packages In case the tenderer wants to quote for multiple packages i.e. Northern, Western, Southern, Eastern and Coaches, then with the submitted financial capability (4.A.14.1(5)) and technical capability (4.A.14.1(5)) credentials, bidder is allowed to quote in all the packages separately meeting the eligibility criteria.	As per our understanding, if a bidder is bidding for more than one package, financial & technical criterion need to be complied separately for each package and cumulatively for all the quoted packages combined together. Considering the case given in table below, we understand - if bidder is quoting for 4 packages and submit an Experience certificate / single PO of value above INR 140 Crores in its bid, that bidder will qualify for all the packages. And this copy of Certificate/PO is not required to be submitted four times (separately for each package) Please confirm.	Clause as per tender prevails.
343	Chapter-4	145	4.A.24.	RailTel would also enter into Rate Contract with the firm to whom the contract is awarded for catering to additional requirement of Cameras, Switches, Servers, Storages, Rack, UPS, FMS, VMS software & Other associated equipments of Schedule of requirements (SOR) as and when arise in future. Rate Contract on the successful tenderer would be placed separately and would be operative from the date of PAC of the first Station/RPF/GRP Chowki/Thana/Post, cluster of train coaches and would be valid for a period of 12 months. The validity of rate contract may be extended for further 12 months with mutual agreement.	1) Will this Rate Contract be in addition to this particular project? 2) What would be minimum quantity ordered against this rate contract? 3) Is it mandatory for successful bidder to enter into this rate contract?	Clause is self explanatory.
344	Chapter-4	149	4.A.36.2	Bidder has to mandatory quote for all the items of SOR Head-I of quoted package(s). The incomplete SOR will not be accepted and if found the offer is liable to be rejected.	We understand same is applicable for SOR Head-II. Please confirm.	Please refer Corrigendum-V. (SOR)
345	Chapter-5	165	Clause 4.B.10	Submission of pass phrases for Part I – Credential / Techno commercial Bid and Part II - Price Bid created by the bidder on IREPS Portal in a separate sealed envelope for each phrase	1) Clause 4.B.10' is not there in the tender document. The next Clause after 4.B.9 is clause 4.B.17. In upcoming corrigendum, please release missing clauses. 2) To the best of our understanding, there is no provision of pass phrases in e-tender portal www.ireps.gov.in . Please confirm.	Please refer Corrigendum-V.

346	Chapter-7	236	Annexure-VII/4	OEM for any product required for the work, covered under PPP-MII, has to submit a certificate against meeting the requirement of local content, as per PPP-MII guidelines, either as self declaration (if value of procurement is less than 10 crore) or as a certificate issued by their statutory auditors or cost auditors (if value of procurement is more than 10 crore).	As per our understanding to this clause certificate from statutory auditors for Local content is required only if the value of procurement of that particular item is more than INR 10 Crores. Please confirm if our understanding is correct.	Clause is self explanatory.
347	Chapter-8	238	Note 3	All the IP cameras as quoted by the bidder against SOR Chapter-2 for stations packages must be sourced from the same OEM. However, bidder may quote different camera OEM for CCTV work in train coaches.	We understand that the bidder should quote single OEM for all types of IP Cameras in a package but in case of bidding for multiple packages, bidder is allowed quote one OEM of IP cameras in one package and another OEM of IP cameras in another package.. Please confirm if our understanding is correct.	Clause as per tender prevails.
348	Chapter 2- Part-1	69	V	The above stipulation of single OEM Make/Model applies to items viz. different types of cameras, servers, Video Recording Unit/Mobile NVR, workstation, storage, large format display monitors, VMS Software, switches (each Type separately), Wireless Access Point and EMS.	By this clause we understand that for one item, bidder can propose only one make & model. However: a) For different types of cameras can we quote different make / models (but one make & model for one line item)? b) Can we quote maximum upto 3 make & models for other products such as SFPs, Racks, HDPE pipe etc.?	Clause is self-explanatory. Only switches are exemption (Corrigendum-IV)
349	Chapter 3- Part-1	78	3.A.1.4.14	AMC (including repair / replacement of all consumables) for 5 years after the completion of 24 months of warranty period.	Please remove the consumable items like UPS batteries from the bidder's scope as consumable is based on the usage and need to be clearly mentioned for cost calculation.	Clause as per tender prevails.
350	Chapter 3- Part-1	82	3.A.1.10.4	Continuous training and retraining - As and when required by RailTel	Kindly elaborate the term 'Continuous training' As imparting training is a cost to bidder, please elaborate the requirement of "as and when required".	On field training to executives as and when required.
351	Chapter 3- Part-1	82	3.A.1.11	Final Commissioning - The VSS shall be considered to be commissioned only after successful completion of the SAT, trial Run, successful completion of 12 months of Maintenance Supervision after issue of PAC and after issue of Final Acceptance Certificate (FAC).	Any delay due to dependancey on customer, SI should not be penalised and payment should be released on SAT certificate after consultation with customer. Incase FAT is not possible because of any reason attributable to RailTel or Railway Authority, SAT should be considered for VSS Commissioning.	Clause as per tender prevails.
352	Chapter 2- Part-1	70	Note XII	Proof of Concept (PoC): Successful bidder has to successfully demonstrate the proposed solution within the 30 days from the date of LoI (letter of Intent). The Purchaser will not be liable to pay/reimburse any type of cost incurred by the successful bidder pertaining to the PoC.	Most of the POC items have to be sourced from abroad and such items will have high lead time. Further, it will involve clearances from regulatory bodies and 30 days is not an adequate time. Hence we request you to have provision of atleast 90 days for demonstrating POC.	Clause as per tender prevails.
353	Chapter 4	159	4.B.7(2)	Submission of digitally signed copy of Tender Documents/ Addendum/ Corrigendum.	Instead of submitting the entire tender document and its corrigendums, allow bidder to submit an undertaking declaring that they have read and understood all the terms & conditions of tender document.	Clause as per tender prevails.
354	Chapter 4	160	4.B.8 Note	The Bidder has to upload the Scanned copy of all above original documents as Bid-Annexures during Online Bid- Submission.	Please confirm - a) Size limit of a file/folder bidder is allowed to upload on e-tender portal b) Total number of files/folders bidder is allowed to upload on e-tender portal. c) Total size of Bid (in terms of MB) bidder is allowed to upload on e-tender portal.	Please contact IRPES Helpdesk and visit IREPS Portal https://www.ireps.gov.in/ for detailed instruction.
355	Chapter 4	161	4.B.23.1	The bid should be submitted online along with Credential/Techno commercial & Price bid document (all documents).	In case a bidder wants to bid for all five packages - Please clarify whether five separate Bids need to be uploaded or the documents which are common e.g. Eligibility Doc, Tender forms, Agreements, Technical compliances etc. can be submitted once for all. (It is understood that few critical documents such as BOQ (Priced as well as Un-priced), Price Schedule etc. are necessarily to be submitted seperately. under one single tender ID on e-tender portal? Please confirm.	Clause is self explanatory.
356	General			Advance Payment – Not applicable for this tender	We request Railtel to provide interest free mobilization advance of 10% of the contract value for seamless project execution.	Clause as per tender prevails.

357	Chapter 2	84	3.A.1.16	SUPPLY OF SOFTWARE: All OEMs of Servers, Storage, Cameras, Network equipments, Wi-Fi Access Points, Workstations, video recorder unit/mobile NVR etc. should give an undertaking that all licenses supplied by them would be registered in favor of M/s RCIL or its nominated organization.	As per our understanding, nominated organization should be declared at this stage.	Clause as per tender prevails.
358	Chapter 2	69	Note III	Manpower Support during warranty period: * Quantities mentioned are the bare minimum requirement of the purchaser, however if bidder feels that larger manpower strength is required to maintain the installed network, then bidder is free to revisit the quantities mentioned.	It is requested to confirm that the manpower mentioned in the "Schedule of Requirement" is sum total of all the required manpowers for 24 hours support on three shift basis.	Clause is self explanatory.
359	Chapter 2	69	Note IV	Since, RailTel is also implementing Wi-Fi work at railway stations, therefore, the existing available infrastructure may be utilized by the purchaser for implementation of VSS system and such items used may not be considered as a part of Supply orders	Please provide the details of the existing Wi Fi infrastructure that may be utilized for implementation of VSS system.	Bidder to quote as per SOR.
360	Chapter 2	70	Note XII	Proof of Concept (PoC): Successful bidder has to successfully demonstrate the proposed solution within the 30 days from the date of LoI (letter of Intent).	1) Please confirm that the implementation timeline of 12/ 15 months shall begin only after POC is successfully completed. 2) Please confirm that items used for POC are part of Schedule of Requirement and payment for the same shall be made after POC completion.	Clause is self explanatory.
361	Chapter 3	75	3.A.1.1	RailTel has recently partnered with Google to set-up a high speed Wi-Fi network at train stations across the country	Please provide the details of the existing Wi Fi infrastructure that may be utilized for implementation of VSS system.	Bidder to quote as per SOR.
362	Chapter 3	77	3.A.1.4.2	The bidder should prepare a site plan showing exact location of different type of cameras, switches etc. at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey.	Site survey of stations shall be carried out by successful bidder. We understand that the Site Plan is to be submitted by successful bidder after issue of LOI/ LOA only. Please confirm.	Clause is self explanatory.
363	Chapter 3	78	3.A.1.4.2.2	The bidder should prepare a drawing as per the standard layout provided in the tender showing exact location of cameras, switch, video recorder unit(VRU)/Mobile Network Video Recorder (Mobile NVR), Wi-Fi Access Point, Switch etc. inside a AC, Non AC, EMU coaches in consultation with RailTel.	Please confirm that such drawing is to be submitted by successful bidder after issue of LOI/ LOA and not it is not required to be submitted at the time of bid submission.	Clause is self explanatory.
364	Chapter 3	80	3.A.1.5	The bidder with quality assurance should prepare Implementation Methodology covering: a) Schedule of Type Test/Acceptance Test/Inspection, supply, installation, SAT (Site Acceptance Test), trial runs, commissioning etc. b) Allocation of manpower for different activities. c) Submission of PERT chart indicating completion of various activities within targeted time frame.	Please confirm that implementation methodology is to be submitted by successful bidder after issue of LOI/ LOA and it is not required to be submitted at the time of bid submission.	As mentioned in the clause, bidder is required to prepare and submit implementation methodology along with the technical bid.
365	Chapter 3	108	3.D.8	MAINTENANCE SPARES	Please confirm whether "MAINTENANCE SPARES" is factored in the 8% mandatory spares as per Schedule of Requirements "SOR".	Clause is self explanatory.
366	Chapter 4	119	4.A.4.1	The first phase of deliverable also includes a Pilot and only after approval from the Indian Railways/RailTel, bidder shall be allowed to implement the solution further.	1) Please provide the numbers and types of stations/ coaches for Pilot run. 2) Please also confirm that the Implementation Period of 12/ 15 months shall begin after Pilot run.	Please refer SOR Note-XII and clause 4.A.4 for clarity.
367	Chapter 4	119	4.A.4.3	Spares as mentioned in SOR shall be supplied after completion of the scope of the work.	Scope of Work as defined in clause 3.A.1.4 includes supply, implementation, warranty and AMC. Please confirm at what stage Spares are to be supplied.	Clause is self explanatory.
368	Chapter 4	128	4.A.9	Manpower Support For CCTV at stations, bidder shall keep L1 Support engineers in Field (one engineer/per RPF/GRP Thana/Post) and two L2 Support engineer (one each for Network and VMS, FRS, VA System, server & storage system) 24x7 in RailTel Data Center (Gurugram/Secunderabad).	Central Command control center has been provisioned in Package-I. Are bidders for other packages required to provision L2 support engineers at Gurugram/Secunderabad. If yes, then whether these engineers have been counted in the Manpower Requirement for other packages given in the Schedule of Requirement (SOR)	Clause as per tender prevails.

369	Chapter 4	143	4.A.17.6	Case-III In case a short-listed L-1 bidder emerges as lowest in more than two Contract Packages, then the purchaser reserves the right to award any package or combination of packages not exceeding two packages to a bidder.	The "OFFER LETTER" format given on Page 7 of Chapter I should have an additional column in the Earnest money table for the bidder to give order of preference for Packages. This shall enable Railtel to award Package as per preference provided, in case the bidder is L1 in more than 2 Packages.	Clause as per tender prevails.
370	Chapter 4	157	4.A.48	Make in India:	The bid provides "Preference to Domestic Manufacturers" under clause 4.A.45 Under the "Make in India" clause foreign OEMs are required to set up the manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in planned manner from the third year. This may not be feasible in case of COTS IT equipments and other imported items. It is requested to delete this clause.	Please refer Corrigendum-V.
371	Chapter 6	176	Form No 8	PROFORMA FOR NO MALICIOUS CODE UNDERTAKING LETTER BY OEM	The format mentions Seal and signature of the bidder (This letter should be on the letterhead of the bidder duly signed by an authorized signatory) "Bidder" should be replaced "OEM".	Please refer Corrigendum-V.
372	Chapter 6	176	Form No 2	Undertaking for the compliance to AMC conditions	The format mentions Seal and signature of the bidder (This letter should be on the letterhead of the OEM duly signed by an authorized signatory) Please confirm whether this undertaking is to be signed by OEM.	Clause is self explanatory.
373	8.19.1	253	RDSO/SPN/TC/106/2019 Revision 1.0	IEEE 802.11 b/g/n or 802.11 ac	As per clause CT2WS3, the Access point is required to operate in both 2.4 and 5GHz band, but RDSO specification is limiting it to single band operation by providing flexibility to choose from either 802.11ac or 802.11n. It is to mention here that 802.11ac supports operation only on 5GHz . Therefore, both 802.11ac and 802.11n should be asked. Hence request you to change the clause to: "IEEE 802.11 b/g/n/ac"	Clause as per tender prevails.
374	8.19.2	253	CT2WS3	Must support data rates upto 800 Mbps on 5Ghz radio and 140mbps on 2.4Ghz radio.	Since the station Access Points are required to collect data from the in-coach Access Points in a very short span of time, the Access Point should support higher data rates for faster transfer of information. Hence request to change the clause to: "Must support data rates upto 870 Mbps on 5Ghz radio and 300 Mbps on 2.4Ghz radio". These are the standard offerings of all the prominent OEMs of the industry.	Clause as per tender prevails.
375	8.19.2	253	CT2WS5	Antenna Gain of Access Points must be +2dBm or better.	Typically +2dBi gain covers only distance upto 50 meter. Since the station access points are required to form mesh connection with in-coach access point, higher gain of antenna would help in extending the data transfer duration. Therefore we suggest to change the antenna gain requirement as "Antenna Gain of Access Points must be +7dBi". This feature is available with all leading OEMs.	Clause as per tender prevails.
376	8.19.2	253	CT2RF4	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization	Coverage hole detection and performance optimizations is the characteristics of WLC and already asked in WLC specifications Clause WCRF4. Request to remove this clause from AP specification as it is non-standard requirement for Access Points	Clause as per tender prevails.
377	8.19.2	253	CT2RF4	Should support configurable carrier sense threshold	Carrier sense threshold is a Layer 1 and Layer 2 protocol which is actually responsible to sense the medium, and it cannot be configured at Access Point level. Hence we request you to remove this clause	Clause as per tender prevails.
378	8.19.2	254	CT2E1	Access Points must support a distributed encryption/decryption model	We understand that distributed encryption /decryption is supported under AES, which comes under security feature. Please correct in case our understanding is wrong.	Clause as per tender prevails.
379	8.19.2	255	CT2O8	AP should have capability to split tunnel for both IPv4 and IPv6 tunnel to segregate the management and data traffic.	We understand that the requirement is to split tunnel for Data and management traffic for both IPv4 and IPv6, and not to separate tunnels for IPv4 and IPv6. Please correct in case our understanding is wrong	Clause as per tender prevails.
380	8.19.2	255	CT2O10	The AP shall support 200 concurrent Clients per AP	Generally Access points supports total 192 (128 on 5GHz and 64 on 2.4GHz) concurrent clients. Request to change the clause to "The AP shall support 192 concurrent Clients per AP" .	Clause as per tender prevails.
381	8.19.2	258	WCO15	shall support API's for NB and SNMP Integration with CNMS	Generally CNMS refers to cloud management system. In typical architecture, the network either have hardware based Wireless controller integrated with EMS, or cloud management (CNMS). WLC and CNMS doesn't exist together. Request to change the clause to: "Shall support API's for NB and SNMP Integration with EMS"	Clause as per tender prevails.
382	4.A.14.1.3 - Eligibility Criteria Requirements for OEM's	140	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	This is the product based software requirement for which ISO 9001 will suffice the requirement. CMMI Certification is required for customised software development which is not in the scope of the RFP , hence request you to please remove CMMI Certification requirement for software OEM.	Please refer Corrigendum-V.
383	8.3 Video Surveillance System (VSS)/CCTV System	241	8.3.1. 2	At each such cluster i.e. RPF/GRP Thana/Post location, bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras,	Does it means that each camera will run only one analytics resulting in total 40 analytics at each cluster, or one camera can run multiple analytics simultaneously ?	Clause is self explanatory.
384	RDSO Spec no. RDSO/SPN/TC/65/2019 (Revision 05)	30	10.1 Server Hardware	Video Analytics Server: one each for 32 nos. of Cameras	The minimum configuration is given for analytics of 32 no. of cameras. Does it mean that you can't run more analytics on the same configuration ? Please confirm	Clause as per tender prevails.

385	RDSO Spec no. RDSO/SPN/TC/65/2019 (Revision 05)	30	10.1 Server Hardware :	ii) For 128 Cameras: Minimum 16 Cores in Single Processor or 2 nos. of 8 Core Processor	The minimum server configuration is given for video recording. Cant we record more streams on the same configuration ? Please confirm	Clause as per tender prevails.
386	RDSO Spec no. RDSO/SPN/TC/65/2019 (Revision 05)	47	18.3.8	The Software shall be able to receive alarms of different types from equipment to start a recording. These alarms can be motion detection, video loss, unified picture and trigger input.	Bidder need to be clarified on meaning of "Unified Picture"	Clause is self explanatory.
387	RDSO Spec no. RDSO/SPN/TC/65/2019 (Revision 05)	46	18.2.20	The operator shall be able to click on an icon in a map to initiate PTZ Camera preset, run PTZ pattern, view Camera in an analog monitor or send an I/O stream.	Bidder needs to be clarified on the term "analog monitor" used here. Because analog monitor is a part of Matrix Switcher that is not in practice now a days.	Clause as per tender prevails.
388	RDSO Spec no. RDSO/SPN/TC/65/2019 (Revision 05)	46	18.2.19	The GUI software operator shall be able to view the Camera from a map into a video tile for live viewing in the same browser without opening a new browser.	Bidder needs clarification on the terminology used here "Browser". Because we use the term "Video Matrix" instead of browser in our solution.(User Specific Term)	Clause is self explanatory.
389	TenderNo.472Part-2	141	8.3.1.2	Video Surveillance System hardware sizing - Approximate number of cameras considered across 6124 Railway Stations are 89844 units	Bidder needs clarification on the camera count mentioned in this clause which is 89844 nos. whereas the total count coming in SOR is 81685 nos. We understand it is typographical mistake and quantity mentioned at SOR is correct. Please confirm	Bidder to quote as per SOR.
390	TenderNo.472Part-1	23	PACKAG E-II(WESTERN)/2.	Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post. VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII	Bidder Needs Clarification on the difference in quantity of VSS Hardware for VMS,VA,FRS in Supply and Installation Scope. In Supply portion quantity mentioned is :73 In ITC portion quantity mentioned is : 103	Please refer Corrigendum-V.
391	TenderNo.472 Part-2	140	8.3.1.1	There would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording.	Number of Stations with Category coming onto the individual Clusters is not available. Storage and Sizing will be done on the basis of same.	Bidder is required to quote as per SOR, technical and functional requirement of the tender. For Video Surveillance System hardware sizing, may pls. refer clause 8.3 of tender document.
392	TenderNo.472Part-1	PG-11 PG-24 PG-36 PG-48		Package1-Northern 2.b PC Workstation-53 Cluster(Thana Post Count) = 151 Package2-Western 2.b PC Workstation-58 Cluster(Thana Post Count) = 103 Package3-Eastern 2.b. PC Workstation-77 Cluster(Thana Post Count) = 149 Package4-Southern 2.b. PC Workstation-86 Cluster(Thana Post Count) = 149	Desktop/PC Workstation Count is not matching with the Total Cluster Number in all of 4 Regions. Atleast 1 No. of Desktop will be required for Viewing and operation at each cluster. Cluster Count :552 nos. Desktop Count : 274 nos.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
393	TenderNo.472Part-2	PG-141 PG-103		Break-up of these 6124 stations is as follows:- Category wise total Stations	Total Camera Units mentioned as per RFP is 89844 nos. BOQ wise Camera Count is 81865 nos. Station and Category Wise Calculation in Region for Camera is coming out to be 90114 nos. Please clarify the difference in above quantities.	Bidder to quote as per SOR.

394	Part 1, Chapter 3	92	3.B.5	CCTV System in Train Coaches Each coach will have switch to connect cameras and Wi-Fi access point for backhaul connectivity and video recording system. All these equipment's will be placed inside a concealed, powder coated metal enclosure with suitable ingress Protection for dust and water by providing gasket & sealing of cable entry/exit along with lock and key.	We request you to provide detailed specification of the metal enclosure/rack.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
395	Chapter-2 - Schedule of requirement: PACKAGE-I - IV	9,24,36 and 48	2 (b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	In subject tender, specifications of 500VA UPS Systems has not been specified in the RFP. Request to kindly share the technical Specifications of the same.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
396	Chapter-2 - Schedule of requirement: PACKAGE-I - IV	9,24,36 and 48	2 (b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	Request you to mention battery capacity in VAH. This will provide common platform to all prospective bidders.	Please refer Corrigendum-V.
397	Chapter-2 - Schedule of requirement: PACKAGE-I - IV	9,24,36 and 48	2 (b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	Kindly clarify the meaning of "spike buster" 500 VA UPS. Does it imply that 500 VA UPS is required with inbuilt surge protection device (SPD)?	Clause is self explanatory.
398	Chapter-8 - Technical, Functional Requirements & Specifications	249	8.16.1. 1KVA- S. No.-22/ 23	Battery Type - SMF Battery backup - 1 Hrs. on full load (Single bank)	We request you to kindly specify minimum VAH capacity. This will provide common platform to all prospective bidders. Please clarify whether this UPS would be installed on platform, if yes, then do bidder will keep Batteries inside 9U Rack. It seems than (U space would not be sufficient to house switch FMS and UPS in the same rack.	Please refer Corrigendum-V. (Battery VAH to be defined)
399	Chapter-8 - Technical, Functional Requirements & Specifications	249	8.16.1. 1KVA- S. No.-24 F	Size - not more than 2U rack mountable	We request you to consider Tower Type UPS which are mostly used for rugged use. Therefore we request you to kindly amend the UPS requirement to Tower Type/ Rack type UPS Systems.	Clause as per tender prevails.
400	Chapter-8 - Technical, Functional Requirements & Specifications	250	8.16.2 UPS 2KVA: S. No.-23 G	Size - not more than 2U rack mountable		Clause as per tender prevails.
401	Chapter-8 - Technical, Functional Requirements & Specifications	249	8.16.1. 1KVA- S. No.-25	Protection: A) Mechanical Parameter - EMI or equivalent BIS/IS standard B) Safety - EN or equivalent BIS/IS/IEC standard C) Performance - IEC/EN or equivalent BIS/IS standard	Kindly clarify if BIS certification would be sufficient to meet with these requirements.	Clause is self explanatory.
402	Chapter-8 - Technical, Functional Requirements & Specifications	250	8.16.2 UPS 2KVA: S. No.-21/ 22	Battery Type - SMF Battery backup - 1 Hrs. with full load	We request you to kindly specify minimum Battery VAH capacity. This will provide common platform to all prospective bidders. Please clarify whether this UPS would be installed on platform, if yes, then do bidder will keep Batteries inside 9U Rack. It seems than (U space would not be sufficient to house switch FMS and UPS in the same rack.	Please refer Corrigendum-V Battery to be installed in separate wall mount cabinet.
403	Chapter-8 - Technical, Functional Requirements & Specifications	251	8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis: S. No.-20	Over Load Memory - Default: Yes	Kindly clarify the "memory" requirement. We understand that UPS should provide overloading data on SNMP. Please confirm	Clause is self explanatory.

404	Chapter-8 - Technical, Functional Requirements & Specifications	251	8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis: S. No.-28	Battery backup - 2 Hrs. on full load with each UPS S	We request you to kindly specify minimum Battery VAH capacity. This will provide common platform to all prospective bidders.	Please refer Corrigendum-V.
405	CHAPTER – 5: TECHNICAL SPECIFICATION OF MAINTENANCE FREE EARTHING	291	Technical Specification and Drawing for provision of Earthing Arrangement	<p>II.5.3. Earth Resistance Acceptable earth resistance value at earth bus bar shall be less than two ohms for electrical installations and less than one ohm for telecom installations</p> <p>II.5.7. Construction of Unit Earth e) RDSO approved earth enhancing compound 10 kg. shall be filled in augured hole in slurry form and the resistance is measured. This will further deepened by adding one more earth rod if the resistance is not coming less around 3 ohms</p>	In the tender in subject, these two clauses are contradictory. In clause no. II.5.3 required earth resistance value will be 2 ohm for electrical installations and 1 ohm for telecom installations whereas in clause no. II.5.7 required earth resistance value is around 3 ohm. Please specify a common requirement for earth resistance.	Clause as per tender prevails.
406	CHAPTER – 5: TECHNICAL SPECIFICATION OF MAINTENANCE FREE EARTHING	291	II.5.4. Location for Earth	<p>Low laying closed to the building or the location box is good for locating earth electrodes. The location can be closed to any existing water bodies or water points. Earthing rod should not be fixed on high bank or made of soil</p>	<p>We understand that directed earthing location in clause no. II.5.4 is for equipment installed in railways equipment room/GRP Thana.</p> <p>Please provide the methodology to earth 9U rack which seems that it will be installed at height in midways of each platform.</p>	Clause is self explanatory.
407	SCHEDULE OF REQUIREMENT PACKAGE-I to IV	18,19,32,33,45,57,	7(g) 7.1 (g)	GI Pipe	We request you to provide class type and diameter of GI pipe.	Please refer Corrigendum-V.
408	CHAPTER - 4 TECHNIQUE FOR JOINTING OF OPTICAL FIBRE CABLE	284	II.4.2	Straight Joint Enclosure	We request you to add Straight Joint Enclosure in all the SOR Items as this is the major impact in Fiber laying cost.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
409	Package V (Coach)	SoR Item	General	Power Cable	We observed that Power cable is not included in SOR of Coaches. Request you to add the same in SoR of Package V	Please refer Item no. 1(d) & 1.1 (d) of SOR Head-I, Schedule-A of Package-V.
410	Package V (Coach)	SoR Item	General	PVC Pipe	We observed that Power cable is not included in SOR of Coaches. Request you to add the same in SoR of Package V	Please refer Item no. 1(d) & 1.1 (d) of SOR Head-I, Schedule-A of Package-V.
411	CHAPTER- 8 TECHNICAL, FUNCTIONAL REQUIREMENTS & SPECIFICATIONS	243-244	8.8, 8.9, 8.10	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	We understand that the specification for Type-I switch, Type-II switch & Type-III switch correspond to clauses 14.0 (III) Field Switches (8 ports), 14.0 (I) Aggregation Switch & 14.0 (II) Layer 2 Switches (24 ports) of RDSO/SPN/TC/65/2019 Revision 5.0 respectively. Please confirm if the understanding is correct. Also, kindly confirm the requirement of core switch in clause 13.0 of RDSO/SPN/TC/65/2019 Revision 5.0, as there's no mention of core switch in SOR	Please refer Corrigendum-II for clarity.
412	Chapter 2	14	6 (a)	Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per solution requirement & network design defined in clause 3.B of Chapter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Count of SFP is not given in RFP, we understand that Type 1 switch will be populated with 2x1Gig SFP-BX. Please confirm	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
413	Chapter 2	14	6 (b)	Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	<p>Distribution of different type of SFPs for total count is not given in RFP, kindly provide the SFP counts of following SFPs:</p> <p>1. SFP - BX (10KM) 2. SFP+ (10KM) 3. SFP+ (40KM)</p>	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
414	Chapter 2	15	6 (c)	Type-IV switches as defined in clause 8.11 of chapter 8, optics (SFP+ (10KM), SFP+ (40 KM) Single Fiber and SFP+ (350 mtr.) as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	<p>Distribution of different type of SFPs for total count is not given in RFP, kindly provide the SFP counts of following SFPs:</p> <p>1. SFP - 350 Mtr. 2. SFP+ (10KM) 3. SFP+ (40KM)</p>	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.

415	Chapter 2 (Annexure A)	72		Price Schedule for Indigenous Items	We understand, GST is also applicable on Freight & Insurance charges, hence the GST Column no. 11 & 12 should be shifted after Freight & Insurance Column.	Please refer Corrigendum-V.
416	Chapter 2 (Annexure A)	73		Price Schedule for Imported Items	We understand, GST is also applicable on Pkg & Inland Freight and Inland Insurance, hence the GST Column no. 9 & 10 should be shifted after Pkg & Inland Freight and Inland Insurance Column.	Please refer Corrigendum-V.
417	Chapter 3	80	3.A.1.7.1	Railways shall provide AC power supply at workspace for carrying out the awarded work. The successful bidder will have to pay the specified charges for the power supply as per the existing Railways Norms.	Kindly elaborate 'specified charges as per existing Railways norms' the charges of power supply at RPF/GRP Thana/Post.	Clause is self explanatory. Charges vary from time place to place and broadly are as per commercial rates.
418	Chapter 3	80	3.A.1.7.2	Railways shall provide for the space and power supply for the systems installed in the RPF/GRPThana/Post, Control Rooms and other locations at stations.	We understand that bidder to carry out only Installation work, civil work is not in the scope of bidder.	Clause is self explanatory.
419	Chapter 3	86	3.B.1	Architecture Overview As this is a highly visible project for Indian Government, Ministry of Railways and Rail-Tel, therefore, the proposed architecture must be secure end to end so that misuse of recorded video or video clips can be prevented.	Kindly specify the levels of security and their mechanism required here, there is no technical specification of any security component in RFP.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
420	Chapter 3	96	3.B.5.3	WiFi Core: DHCP & AAA	We understand that DHCP and AAA server will be provided by Railtel, please confirm and include in SoR (if required)	Clause as per tender prevails.
421	Chapter 3	97	3.B.6.1	At Railtel Datacenters - Data Centre Architecture In each Data Centre, there will be two Core Routers interfacing towards the RailTel MPLS network thorough DWDM in physical layer	We understand that these two core routers (MPLS) and related network components in data centres will be provided by Railtel. Please confirm. In case bidder has to provision, please share the specification and include the same in SoR.	Bidder to quote as per SOR.
422	Chapter 3	97	3.B.6.1	At Railtel Datacenters - Data Centre Architecture	In the data centre architecture given in page no. 97, the connectivity towards Railtel MPLS router is through Core Switch DC, which we understand to be provisioned by the Bidder. The technical specification of the the same in not given in the tender, please provide the technical specification of core switch.	Bidder to quote as per SOR.
423	Chapter 3	98	3.B.6.1	At Railtel Datacenters - Data Centre Architecture Resiliency is achieved by load balancing the network traffic between the tiers Security is achieved by placing firewalls between the tiers.	We understand that functionality of Firewall & Load Balancer will be catered by Railtel. Please confirm. In case bidder to provision the same, please share the detailed specification and include in SoR.	Bidder to quote as per SOR.
424	Chapter 3	87-91	3.B.3	Network Design for different type of station	We understand that Railtel will provision the SFPs required for connectivity between Station and Railtel IMPLS backbone. In case, the same needs to be provisioned by bidder, please share the count of interfaces and SFP types and include the same in SoR.	Please refer Corrigendum-V.
425	Chapter-3 - A. TECHNICAL REQUIREMENTS, SCOPE AND ARCHITECTURE OF VIDEO SURVEILLANCE SYSTEM	81	3.A.1.10	The training content to be designed and delivered by successful bidder at successful bidder's own cost.	We understand that training room and infra will be provided by Purchaser. Please confirm.	Clause is self explanatory.
426	Chapter-2 - Schedule of requirement: Note	70	XII(1)	Proof of Concept (PoC): Successful bidder has to successfully demonstrate the proposed solution within the 30 days from the date of LoI (letter of Intent).	Considering large production lead times of some of the key OEMs, 30 Days is very stringent timeline for PoC. Request you to extend POC timelines to 10 weeks.	Clause as per tender prevails.
427	Chapter-3 - A. TECHNICAL REQUIREMENTS, SCOPE AND ARCHITECTURE OF VIDEO SURVEILLANCE SYSTEM	79	3.A.1.5	The bidder with quality assurance should prepare Implementation Methodology covering: a) Schedule of Type Test/Acceptance Test/Inspection, supply, installation, SAT (Site Acceptance Test), trial runs, commissioning etc. b) Allocation of manpower for different activities. c) Submission of PERT chart indicating completion of various activities within targeted time frame.	We understand that these details will be required post award of contract.	Clause is self explanatory.

428	Section no. 2	252	8.18	RDSO specification rev. 1.0 for Coaches	<p>Clause no. 4.5/page no. 14/point no. ix of Storage (HDD/SSD of minimum 8 TB Capacity): If we go with 4 TB SSD than cost would be extremely high & also there is no vibration proof HDD variant available in 4 TB 2.5" capacity in the market.</p> <p>Recommendation for above query is 2TB SSD as this the recommended product for mobile surveillance application. Moreover the storage requirement as per tender RFP is approx. 3 TB thus we recommend 2 TB SSD X 2 for storage need & storage solution.</p>	Clause as per tender prevails.
429	Section 8.3.2.1	242	8.3.2	Data Offloading	<p>There is no clarity on functional requirement in tender RFP for data offloading. If we assume to transmit all available recording in MNVR to station than it would consume the all available bandwidth for Wi-Fi channel/4G Channel. Thus it is recommended to fetch/transmit recording on demand basis or on ticket basis from MNVR.</p>	Please refer Corrigendum-V.
430	Chapter 2 (SOR)	18,33,44,56,	7 (b)	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D)	<p>i) Please clarify the technical specification/data sheet and GR no. for the said cable.</p> <p>ii) Unit has mentioned in No. instaed of Mtr or Km, please clarify.</p>	Please refer Corrigendum-V.
431	Chapter 7	236	2	<p>Item no. 24 of Table-A of DoT Notification dated 29-08-2018, i.e. Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems, has not been defined by DoT. The item shall include, for the purpose of this RFP, following sub-items,</p> <p>a. Cameras (of all types),</p> <p>b. Application software VMS</p> <p>c. Application software VA</p> <p>d. Application software FR.</p> <p>e. Any other Application software such as AI etc. offered as part of above sub-items to improve the performance of the system</p>	<p>Item no. 24 of Table-A of DoT Notification dated 29-08-2018, i.e. Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems including all sub system meeting aggregate LC of 40% to be treated as locally manufactured.</p>	Clause as per tender prevails.
432	Chapter 7	236	5	<p>As item against "Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems" does not include products from one OEM, the Local Content shall be calculated as</p> <p>Value of Local Content in %ge =</p> $\frac{(\text{Total offered Value of all sub-items in the bid}) - (\text{Total value of Non-LC sub-items})}{\text{Total offered Value of all sub-items in the bid}}$ <p>If the value of Local Content, calculated above, is more than 40% (for FY 2019-20), the total value of the combined product (to qualify against item no. 24 of Table-A of DoT Notification) shall be considered as Local Content.</p>	<p>Please confirm our understanding that the formula given is for arriving at LC of 40% for Item no. 24 of Table-A of DoT Notification dated 29-08-2018 so that the cost of all the items can be taken under indigenous catagory.</p> <p>Please confirm our understanding that any sub system - Cameras, VMS, VA, FR and AI etc. individually meeting LC of 40% shall be treated as locally manufactured sub-item and shall also be considered as indigenous catagory and protected under PMA guidelines.</p>	Clause as per tender prevails.
433	4.A.14.1.3	139	3	The OEM(s) should be a profit making company and should have apositive net worth	<p>Local manufacturer of small passive items should be exempted from positive net worth criteria the way they are exempted from showing Work Experience & financial turnover.</p>	Clause as per tender prevails.
434	RDSO/SPN/TC/83/2014 , Revision 1.0	26	7.1	The LAN switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards.	<p>Kindly exempt products designed & developed in India and compliant to PMA policy from submitting UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards.</p> <p>Alternatively Router/Switch shall conform to IS 13252 (Part 1): 2010 for Safety requirements of Information Technology Equipment</p>	Clause as per tender prevails.
435	RDSO/SPN/TC/83/2014 , Revision 1.0	26	7.2	The LAN switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC.	<p>Router/Switch shall conform to IS 6873 (Part 7) : 2012 for EMC (Electromagnetic Compatibility) requirements."</p>	Clause as per tender prevails.
436	RDSO/SPN/TC/83/2014 , Revision 1.0		3.2.10	It shall have hot swappable fan tray.	<p>There isn't much advantage of this feature. Most switches come with in-built fan redundancy and PWM control to prolong the life of fans(8 years life expectancy), in which case there might never be a need to change the fans till network upgrade.</p> <p>This feature involves additional hardware which will make the switches costly and hence escalate the overall cost of solution</p>	Clause as per tender prevails.

437	Chapter 4: Preference to Domestic Manufacturers	53	4.A.45	<p>1. Bidders seeking Purchase preference (linked with Local content) (PPP-MII) shall be required to meet/exceed the target of Local Content (LC) of 70%.</p> <p>1.1 1.1.1 Such bidders shall furnish following certificates on its letter head along with their techno-commercial bid. The undertaking shall become a part of the contract. "We M/s. _____ (Name of bidder) hereby certify that we meet the mandatory minimum Local Content requirements of the tender i.e. 70% quoted vide offer No. _____ dated _____ against RailTel tender No. _____ by us."</p>	<p>policy issued vide their order No. P-45021/2/2017-PP (BE-II) dated 28-05-2018 quoted in this tender. Also this system qualifying as per the quoted policy that are applicable for this tender have been clearly specified. The tender specifies 70% as minimum Local Content (LC) for claiming eligibility in this tender. It may be noted that the quoted policy does not specify the eligibility in PPP-MIII as minimum 70% of Local Content. The applicable product for PPP-MIII have been specified to have LC varying from 40% to 60%.</p> <p>It is therefore requested that Local Content (LC) requirement for considering the bid as Make in India/PMA bid should ideally be average of the LC of specified product, which is around 50% and same should be sought as the minimum LC criteria for bid instead of 70%.</p> <p>So Request amend the 70% LC requirement for this bid to 50% as it was in the previously floated tender.</p>	Clause as per tender prevails.
438	4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	6	<p>The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process. Relevant Organizational Level Certificates to be provided</p>	<p>Since major OEMs like Qognify, Mirasys, Milestone, Genetec etc, does not have CMMI I -5 as required in the RFP.</p> <p>You are requested to remove this clause for VMS, VA and FRS OEMs.</p>	Please refer Corrigendum-V.
439	RDSO 5.0 2.6 (c) Schematic Diagram-3: (Cloud based architecture):	9	(1)	<p>The proposed implementation scheme of Video Surveillance System is meant for Cluster of Stations where Video Streams of Cameras of Stations are aggregated to a nearest suitable location such as RPF/GRP Thana/Posts for Video Management (Viewing and Monitoring) and Video Recording. Video Analytics and Face Recognition Software shall be deployed at the Cloud. Video Data shall be stored at RPF/GRP Thana/Posts on External Storage Devices/Servers/Network Video Recorders and at Cloud as per requirement</p>	Need Clarification on the Location of Cloud.	Clause is self explanatory.
440	Chapter 2	71	Note XVII	<p>Rack Space at Datacenters and associated charges: RailTel will provide Racks at Gurugram and Hyderabad datacenter for hosting CCTV Cloud infrastructure as defined in the tender. Bidders are requested to optimize the number of racks requirement in the datacenters. Rack requirements is associated with cost and bidder will be charged INR 8 Lacks/annum/rack for 8 years (for evaluation purposes) in the tender for the proposed rack/racks requirements. The Bidder must provide rack space requirements (in terms of Nos. of racks, in new SOR item 3(g) under the column Qty.) in their technical offer keeping load available on each rack (<=5KVA) for the complete solution (for DC & DR) for all components like Server, Switching, Routers, Storage etc. In case later the actual requirement is found to be more than the quoted Nos. of racks, bidder will be deducted the actual amount on additional racks out of their payment for the entire period of the contract including AMC period. Otherwise this cost shall be borne by RailTel/Railways.</p>	As per note XVII, The Bidder must provide rack space requirements (in terms of Nos. of racks, in new SOR item 3(g) under the column Qty.) in their technical offer. We would like to mention that there is no such column SOR item 3(g) in the tender, request you to add/include the same in SoR.	Please refer Corrigendum-V.
441	4.A.9.1.7	131	6	<p>Performing vulnerability scanning of all servers / devices (in-scope), which are IP based. Vulnerability assessment report should be share with RailTel every quarter.</p>	We suggest to provision proven vulnerability assessment tools for doing vulnerability scanning for all in scope IP based devices.	Clause as per tender prevails.

442	Generic	-	-	New Suggestion	We suggest RCIL to consider a network packet capture solution which should be ready from Day 1 to provide capturing and making visible the complete network traffic/logs, detailed packet inspection/ logs analysis for classification, for re construction/alerts of assets/data (transmitted or received), capability to apply filters to detect anomalies with a view to oversee what is happening in the network for faster incident response & risk based scoring, its resolution and its forensics (in case of a breach). The solution should integrate with the existing environment seamlessly	Not agreed.
443	Chapter 3	48	3.A.1.6	The bidder shall be responsible for transportation and storage of Equipment and all other items required for Installation and Commissioning of the network to RailTel's stores/sites as advised.	We request you to clarify whether Railtel/Railway will provide space/ store room at each station for storage of high value Material during I&C period.	Bidder is required to arrange their own store for the same.
444	Chapter 3	81	3.A.1.10	To provide professional training and development services at each stage of the project viz. installation, testing, operation and maintenance	We request you to kindly clarify whether the training to purchasers personnel to be conducted at centralised thana/RPF post locations or at each stations	Centralized as well as distributed locations such as Stations, Region HQ, RPF Chowkis etc. as per requirement.
445	Chapter 7	204	Region wise Table	Distribution of stations category wise in each Zone Stations NR WR ER SR A1 2 4 3 3 A 81 53 62 71 B 68 46 84 75 C 0 0 91 246 94 D 331 149 291 212 E 1321 771 1169 897 Total stations are 6124	With reference to Page No 204 "Tentative list of stations for the work of CCTV at stations are enclosed with the tender document." our observation is there is difference in total number of stations given in Table and station list given in annexure. For Southern region as per Table in page no 204 is 1352 stations as per annexure total souther stations are 1785 Break up Station A - 71 Nos as per table & 81 Nos as per annexure Station B - 75 Nos as per table & 90 Nos as per annexure Station C - 94 Nos as per table & 123 Nos as per annexure Station D - 212 Nos as per table & 291 Nos as per annexure Station E - 897 Nos as per table & 1198 Nos as per annexure Please confirm which data to be considered.	Clause as per tender prevails.
446	Chapter 8	241	8.3.1.2	with reference to clause 8.3.1.2 Video Surveillance System hardware sizing Approximate number of cameras considered across 6124 Railway Stations are 89844 units.	With reference to clause 8.3.1.2 Total camera quantity given 89844 units As per chapter 2 SOR Head I SL No 1(a),1(b),1(c),1(d) Norther region total camera = 20834 units Souther region total camera = 18929 units Eastern region total camera = 26389 units Western region total camera= 15533 units Total Camera quantity for all regions is 81685 Units Please confirm the Quantity of cameras	Bidder to quote as per SOR.
447	Chapter 8	240	8.3.1.1.1	Implementation scheme for Video Surveillance system will be RPF/GRP Thana/Post Clustered based architecture as mentioned in RDSO specification no. RDSO/SPN/TC/65/2019 Rev 5.0 or latest will all amendments. For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording. Therefore, bidder is required to propose a cluster based solution at RPF/GRP Thana/Post locations on the basis of following design parameters.	With reference to clause 8.3.1.1.1 of chapter 8 we request you to share the information on 552 clusters (Division, category of station , Station name) and also indicate how many stations of each category will be connected to each of these 552 cluster locations. This information is required to estimate the server & storage sizing at each Cluster location accordingly.	Bidder is required to quote as per SOR, technical and functional requirement of the tender. For Video Surveillance System hardware sizing, may pls. refer clause 8.3 of tender document.
448	Chapter1	48	SOR	SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid Total qty required for 149 RPF/THANA POSTS	SOR 2(b) for Southeren Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories - Qty indicated is 86 Nos we request you to confirm the distribution of 86 workstations in 149 Thana/RPF posts	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
449	Chapter 2	48	SOR	SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid Total qty required for 149 RPF/THANA POSTS	SOR 2(g) for Southeren Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation. QTY - 100 Nos we request you to confirm the distribution of 100 Nos of UPS in 149 Thana/RPF posts	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.

450	Chapter 2	48	SOR	SOR 2(a) for Southern, Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid Total qty required for 149 RPF/THANA POSTS	SOR 2(h) for Southern Supply of IT infrastructure, applications and associated items at RPF/GRP Thana/Post 19' 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment QTY - 100 Nos We request you to confirm the distribution of 100 Nos of RACKS in 149 Thana/RPF posts	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
451	Chapter 2	53	SOR	SOR 6(a) for Southern, Supply of IT infrastructure and associated items at Railway Stations Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter 8 and quantity as per solution requirement & network design defined in clause 3.B of Chapter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	With reference to clause 8.8 of chapter 8 TYPE-1 switch Type-I Switch specifications have to be as per RDSO Specification of IP Based Video Surveillance System Specification no.RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. As per RDSO/SPN/TC/65/2019 Revision 5.0 document TYPE -1 switch is not mentioned instead SL No 14(iii) page number 37 8 port field switch is mentioned. Please confirm whether Type-1 Switch and 8 Port field switch both are same.	Please refer Corrigendum-II for clarity.
452	Chapter 2	51	SOR	Type-III switches as Top of the Rack switch (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	With reference to clause 8.9 of chapter 8 TYPE-II switch specifications have to be as per RDSO Specification of IP Based Video Surveillance System Specification no.RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. As per RDSO/SPN/TC/65/2019 Revision 5.0 document TYPE -II switch is not mentioned instead SL No 14 (ii) page num 37 Layer 2 Switches (24 ports) is mentioned. Please confirm whether TYPE-II switch and Layer 2 Switch both are same	Please refer Corrigendum-II for clarity.
453	Chapter 8	241	8.3.1.2	Video Surveillance System hardware sizing for each such cluster i.e. RPF/GRP Thana/Post location, bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras, FRS with local matching capability with the watchlist database on up to 8 cameras stream at each RPF/GRP Thana/Post locations without any impact on the performance of the system and overall solution requirement	With reference to SOR, Video recording Unit / storage requirement is indicated only for RPF/THANA posts. Please confirm on requirement of video recording units/storage at Non RPF/Thana Locations	Clause as per tender prevails.
454	Chapter 4	144		The EMD will be payable by Bank Draft in favour of RailTel Corporation of India Limited, New Delhi.	Since the amount of EMD is above INR 50 Lacs for each region, we request to allow bidders to submit EMD in form of Bank Guarantee also.	Clause as per tender prevails.
455	8.11	244	14. x.	It shall also support SYNC Ethernet and SNMPv3.	Globally IEEE 1588v2 is more accepted for Ethernet Synchronization, so we suggest to modify the clause as " It shall also support SYNC Ethernet or IEEE-1588 v2 (PTP) and SNMPv3 " Please refer IEEE Site link for more details on PTP >> http://www.ieee802.org/1/files/public/docs2008/as-garner-1588v2-summary-0908.pdf	Please refer Corrigendum-V.
456	Package-V (Coach) SOR Head I	60	1.b	Managed PoE Ethernet Switch (8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector with reference to RDSO TP "IP BASED CLOSED CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM IN COACHES OF INDIAN RAILWAYS RDSO/SPN/TC/106/2019 Rev. 1.0")	Globally followed standard configuration for train coach is 4/6 port for M12/M23 With PoE. For Multi-OEM participation, it is requested to change this clause to 4/6 nos. or allow OEM to give 2 quantities of 4 port switch. This will help get more competitive bids	Clause as per tender prevails.
457	RDSO Specifications for IP based VSS Rev 5.0 Clause 5.1	14	xii.	8-50mm lens	Standard global practice is 12-50 mm request to modify the clause to accept 8/12-50mm lens	Clause as per tender prevails.
458	RDSO Specifications for IP based VSS Rev 5.0 Clause 7.0	28	xxxvi.	PoE	PTZ cameras need more power to operate. PoE specification will not suffice the requirement. Request to modify to PoE ++ or allow additional AC adaptor	Clause as per tender prevails.
459	Tender document	156	4.A.48	Make in India:	This clause was deleted in the last tender in 2018 to encourage the wider participation by the global OEM's Hence we request to delete this clause once again	Please refer Corrigendum-V.

460	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	1	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfillment, etc. The certification copy to be submitted.	We understand Helpdesk solution is one of the major component for ensuring SLA for various services like Camera uptime, etc. Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfillment, Availability Management, Event Management are critical components. Above processes are critical and key in an ITIL framework so a tool should be Pink Elephant verified atleast on above 10 processes. We would suggest you to please amend the criteria "The Helpdesk tool to have atleast 10+ ITIL certified process from Axelos Gold level/Pink Elephant/Serviceview".	Clause as per tender prevails.
461	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider	Auto Assignment to the Field Engineers is the Key Capability to Maximise the uptime and improve SLAs, So it is important to have Mobile App for Helpdesk Engineers and users to promptly start working on tickets.	Not agreed.
462	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/372	Auto assignment of tickets to field engineer to cut time to allocate ticket to the respective field engineer	Please refer Corrigendum-V.
463	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/372	Auto assignment must be based on logic for ticket allocation	Not agreed.
464	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/373	Auto Assignment of Tickets Based on his cluster (consisting of NEs/Sections)	Not agreed.
465	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/374	Auto Assignment of Tickets based on availability of engineer; as per shift & as per ongoing repairs for resolution	Please refer Corrigendum-V.
466	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/375	Auto Assignment of Tickets as per skillset required for the trouble ticket	Not agreed.
467	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/376	Auto Assignment of Tickets as per Time to Travel, from his present location (to be captured by his current lat-long by Smart Phone) to the fault section (Geo tagging of NE/Section)	Not agreed.
468	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/377	Auto Assignment of Tickets as per Roster management of Field staff to enable auto-allocation of relevant tickets.	Please refer Corrigendum-V.

469	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/378	Auto Assignment of Tickets as per Supervisors/Territory Manager of respective Territory to be given rights to manage (write/modify) shift duty of field engineers of their respective clusters	Please refer Corrigendum-V.
470	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/379	Offered system must have mobile web interface (with screen adaptation and notification) or App for field engineers for Work Order Issuance, ERT & resolution	Please refer Corrigendum-V.
471	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/380	The tool should integrate with a directory system to enable recording and accessing user records of information with capability to integrate with multiple LDAP.	Not agreed.
472	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/381	The solution should have capability to create cross launch in context to various internal portals from helpdesk UI.	Not agreed.
473	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/382	Solution should provide a Framework to create SLA Templates	Please refer Corrigendum-V.
474	8.23 Enterprise Management System (EMS) - Service Management (Help Desk) and SLA Management	265	General	Additional Capability on Helpdesk to consider as asked in RailTel tender no RailTel/Tender/OT/CO/Project/2016-17/OSS/383	Solution should offer collection framework for ease of integration with Alarm Management.	Please refer Corrigendum-V.
475		66			Whether each system 1+1 Required or only 2x10 KVA Required in parallel mode?	Clause is self explanatory.
476	8.16 UPS 8.16.1 1KVA	249	8.16.1/23	1 Hrs. on full load (Single bank)	VAh should be defined for 1 hour of backup for 1KVA UPS. Total VAh required for 1hour backup would be minimum 2304VAh, which should be incorporated into the specification	Please refer Corrigendum-V.
477	8.16 UPS 8.16.2 UPS 2KVA	250	8.16.2/22	1 Hrs. on full load (Single bank)	VAh should be defined for 1 hour of backup for 2KVA UPS. Total VAh required for 1hour backup would be minimum 4032VAh, which should be incorporated into the specification	Please refer Corrigendum-V.
478	8.16 UPS 8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis	251	8.16.3/28	2 Hrs. on full load (Single bank)	VAh should be defined for 2 hour of backup for 10KVA UPS. Total VAh required for 2hour backup would be minimum 36000VAh, which should be incorporated into the specification	Please refer Corrigendum-V.
479	500VA UPS	9, 11, 24, 25, 36, 37, 48, 50, 60, 62	1.1/b 2.1/b 2b 2.1/b 2b 2.1b 2b 2.1b		500VA UPS Specification is not incorporated within the Tender RFP, 500VA UPS Specification defined with VAh required for 30mins of backup should be incorporated in the tender RFP . VAh should be defined for 30min of backup for 500VA UPS. Total VAh required for 30Min backup would be minimum VAh, which should be incorporated into the specification	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
480	8.16 UPS 8.16.1 1KVA 8.16.2 UPS 2KVA 8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis	249, 250, 251	8.16.1/25 A,B,C 8.16.2/24 A,B,C 8.16.3/38		BIS Certificate, We have floor mounted UPS BIS Certificate, Rack mounted UPS has been asked for in Tender RFP.	Clause as per tender prevails.

481	8.16.2	251	23.G	Rackmount UPS	It should be tower/floor mount ups	Clause as per tender prevails.
482	4.A.14.1.3	139	2	OEM turnover	UPS company turnover has not mention. Kindly help to add the UPS OEM turnover which should be Min. INR 150 CR in financial year.	Please refer Corrigendum-V.
483	8.16.3	251	33	Battery shutdown voltage	It should be 10.5V as per industry standard	Please refer Corrigendum-V.
484				Addition request	According to foster & Sillivan report kindly consider top 6 brands	Clause as per tender prevails.
485				Addition request	Company owned service centre	Clause as per tender prevails.
486	Package-III (Eastern)	36	2.b	500VA & Spike buster	As spike buster is inbuilt. Its need not to put out side.	Clause is self explanatory.
487	Package-III (Eastern)	36	2.b	500VA with 30 mins backup	As per industry standard it will be 600VA UPS but if we talked about backup time of 30 mins. For that it should be 800VA UPS.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
488	Part 1	20	Pkg I, SOR Head I	Incremental AMC charges over & above 3.5% to be mentioned in the Price Schedule	Please clarify if zero incremental charges are declared in the Price schedule then is the MSI entitled to get 3.5% of the supply cost as the AMC charges	Clause is self explanatory.
489	Part 1	9	Pkg I, SOR Head I, 2a	VSS hardware & accessories	Please provide a BOQ for the same so that all the bidders can be evaluated based on a common BOQ.	Bidder to offer solution as per SOR, technical and functional requirement of the system as defined in the tender document.
490	Part 2	21	4A.5	Payment Terms	Proposed Payment terms: Advance: 20% Supply, Installation & Integration: 40% Field testing & Go Live: 20% O&M: 20%	Clause as per tender prevails.
491	Part 2	49	4.A.31	Termination for Default	We request that MSI should have right for termination of work in case the Railtel fails to release payments. We understand in case of termination by MSI due default of Railtel, Railtel shall pay MSI for all the services completed upto the date of termination & compensate for all the losses, except for loss of profit in consequences of the termination. We request the following shall constitute the events of default by Railtel, i) Railtel has failed to pay the Contractor any sum due under the Contract within the specified period, ii) Railtel has failed to approve any invoice or supporting documents without just cause, or commits iii) Railtel commits substantial breach of the Contract iv) Railtel fails to give ROW permissions	Clause as per tender prevails.
492	4.A.11	132		The timely delivery is the essence of this tender. Liquidated damages will be applicable at the rate of half percent per week or part thereof for undelivered portion of SOR subject to a maximum of 10% of the cost of Purchase order/LOA for any reason whatsoever attributed to failure of bidder. RailTel will have the right to cancel the order, place order on alternative source besides levying the liquidated damages as above.	We understand that LD will be 0.5 per week for the undelivered portion subject to a maximum of 10%.	Clause is self explanatory.
493				Termination right to bidder on default of purchaser	We propose that termination right to bidder on default by purchaser to be provided under the tender. Events of default by Purchaser to be provided in detail.	Clause as per tender prevails.
494				Delayed interest on late payment	We propose that interest rate equivalent 18 % Per annum to be paid by Purchase on delayed payments.	Clause as per tender prevails.
495	8.9 Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggregation Switch shall have following minimum	243		17. Minimum Operating Temperature 0 to 50 degree.	24 port switch comes with 0 to 45 degree Celsius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree Celsius will limit only one or two OEM's to participate with industrial grade devices.	Clause as per tender prevails.

496	8.10 Switches Type-IIIh As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggregation Switch shall have following minimum	243		20. Minimum Operating Temperature 0 to 50°C.	24 port switch comes with 0 to 45 degree Celsius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree Celsius will limit only one or two OEM's to participate with industrial grade devices.	Tender condition prevails
497	8.12 Managed PoE Ethernet Switch As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.	247		4.3 Managed PoE Ethernet Switch: ii. Ethernet Ports : a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	we understand Managed 8 port switch required with RJ45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All Leading OEMs have RJ-45 Interface which is industry standard.	Clause as per tender prevails.
498	NOT PRESENT IN CURRENT TENDER			ADDITION	The Server & Storage OEM should be listed in the Leader's Quadrant for Gartner Magic Quadrant report or Top 3 Server Infrastructure / Storage vendors of IDC in last 3 consecutive years.	Clause as per tender prevails.
499	NOT PRESENT IN CURRENT TENDER			Power Supply not more than 200W	The system would consume less energy, without compromising on the asked specification.	Clause as per tender prevails.
500	NOT PRESENT IN CURRENT TENDER			Cabinet Volume should be less than 8 Liters	The system would consume less desk space, without compromising on the asked specification.	Clause as per tender prevails.
501	NOT PRESENT IN CURRENT TENDER			Dust Filter for Dust protection	The system can be protected from possible wear and tear due to dust, which is generally the scenario at different stations PAN India.	Clause as per tender prevails.
502	NOT PRESENT IN CURRENT TENDER			Performance optimizer software	Helps in optimizing key ISV applications	Clause as per tender prevails.
503	NOT PRESENT IN CURRENT TENDER			The workstation should be certified to run popular ISV applications	Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Clause as per tender prevails.
504	NOT PRESENT IN CURRENT TENDER			Out-of-Band Systems Management (Intel vPro Technology)	Helps manage the Machine for Out-of-Band Management functionalities	Clause as per tender prevails.
505	NOT PRESENT IN CURRENT TENDER			New Clause - RDSO Specification does not have backend definition for storage system	Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, " Backend Interface – 12 Gbps or higher". This clause will ensure that Railtel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Clause as per tender prevails.
506	Section 4.2 Video Recorder Unit, Clause No. Vi			Storage: HDD/SSD of minimum 8 TB Capacity.	Storage : 4TB Internal Capacity HDD/SSD OR 8 TB Capacity Internal or External HDD/SSD option. Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU, Wifi AP & Managed PoE Switch shall be housed in concealed, powder coated metal enclosure with suitable Ingress Protection for dust and water. So it should be allowed to propose this capacity as internal OR External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile-NVR vendors.	Clause as per tender prevails.
507	Section 4.2 Video Recorder Unit, Clause No. Vi			Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration.	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 OR MIL-STD-810G for Rolling Stock application for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. It is our request to allow MIL-STD-810G certification to be considered here and there by not restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.

508	Clause 4.A.48. Make in India	156		<p>Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%</p>	<p>As per the clause "4.A.48 Make in India" in the RFP, we are under an obligation to give an undertaking to set up a manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in a planned manner from the third year.</p> <p>We would like to submit that most of the global leading IT manufacturers of server, storage & networking are already established in India.</p> <p>As a technology, we as OEMs of IT products are dependent on the other OEMs for the critical components which are used in these products like Processors, Motherboards, RAM, Flash Memory, Hard disk drive etc. which constitute the major cost in a product. These subcomponents are sourced from global OEM's like Intel, AMD, Samsung, Hynix, Toshiba and Seagate which are not manufactured in India. In that scenario achieving domestic value addition year on year basis as per tender clause is impossible.</p> <p>With the above clause, we believe, Indian Railway and public at large, will be deprived of world class technology which is being deployed for safety and security.</p> <p>Considering the above submissions, we request you to kindly consider our request and exempt the applicability of Clause 4.A.48 of the mentioned RFP.</p>	Please refer Corrigendum-V.
509	Clause 2(d) Monitor Size	10		Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8.	Monitor size should be 54.6" or higher as per general guidelines .	Clause as per tender prevails.
510	SPECIFICATION NO. RDSO/SPN/TC/65/2019 Revision 5.0 (RAILWAY STATIONS)			<p>19.25 a) The Face Recognition Algorithm vendor should have participated in the latest Face Recognition Algorithm Evaluation conducted by NIST (National Institute of Standards and Technology, U.S. Department of Commerce) for nonco-operative subjects. The benchmarking parameters such as acceptable Error rate/Ranking in NIST report as applicable are to be specified by the purchaser. For assessing the benchmarking criteria, proof of concept trials/ demo etc. may be asked by the purchaser.</p>	<p>19.25 a) The Face Recognition Algorithm vendor should have participated in the latest Face Recognition Algorithm Evaluation conducted by NIST (National Institute of Standards and Technology, U.S. Department of Commerce) for nonco-operative subjects. The benchmarking parameters such as acceptable Error rate/Ranking in NIST report as applicable are to be specified by the purchaser. For assessing the benchmarking criteria, proof of concept trials/ demo etc. may be asked by the purchaser.</p> <p>For Facial Recognition at Railway Stations scenario - it's important to consider a vendor who can detect complete side profile (yaw: +/- 90 degrees), Can detect partially occluded faces, Software should be independent of eye zone which allows Software to be more robust to face occlusions due to Helmet, Burqa, sun glasses, makeup. Software should detect such faces even if they are visible for just 1/10th of a second in a CCTV camera running at 30 fps since most people crossing a railway station might look at various angles from the camera.</p> <p>We also advise you to add multicasting support as a part of the Facial Recognition Software specifications since it will help to save bandwidth for a project of this scale and thereby lead to savings on bandwidth utilisation.</p> <p>In fact, for such a large deployment of Facial Recognition Technology (2000+ FRS), strongly suggest looking and evaluating the real on-ground accuracies of participating vendors by conducting a POC instead of relying solely on academic / research benchmarks like NIST done from a nonIndian agency which at times simply creates an entry barrier</p>	Clause as per tender prevails.
511	RailTel Tender Clause 8.3.1.4:			<p>The Face Recognition Algorithm quoted by the bidder must have participated in the in the NIST face Recognition Benchmarking for non-cooperative dataset type (walking at a travel concourse) in live CCTV video feed. The algorithm must have shown less than 50% FNIR at Less than 0.1% False positive rate for Rank 1 matching in a database size of 48,000 or more in the latest relevant NIST benchmarking.</p>	<p>The Face Recognition Algorithm quoted by the bidder must have participated in the in the NIST face Recognition Benchmarking tests. FIVE / IJB-A 1:N / FRVT etc for non-cooperative dataset type (walking at a travel concourse) in live CCTV video feed. The algorithm must have shown less than 50% FNIR at Less than 0.1% False positive rate for Rank 1 matching in a database size of 48,000 or more in the latest relevant NIST benchmarking. Request to allow Facial Recognition Vendors who have participated in any NIST tests for Facial Recognition – FIVE / IJB-A 1:N / FRVT.</p> <p>Attached an extract from NIST report where NIST themselves testify this claim that it should not be the means of deciding performance: "Readers are cautioned that, as documentation of a laboratory test of core technology, these FIVE reports is not a guide to the procurement of a face recognition enabled video-based system, nor is it a complete mechanism to predict performance." (Page 15, NIST FIVE Report Caveats)</p>	Clause as per tender prevails.

512	SPECIFICATION NO. RailTel/Tender/OT/CO/P/20 18- 19/CCTV at stations & in Coaches/472 dated 22.02.2019 139)4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	Page No:139	Point No:2	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender.	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. Open the Opportunity for Start-up Organisation that uses the technology uses computer vision, face recognition and deep learning algorithms to imitate the human brain. The Organisation that leverage on research and extensive operational experience. Request to allow Facial Recognition Vendors that provides video analysis in real-time for multiple face recognition in Mass crowd events. AnyVision is an Israeli AI company with Face recognition and video analytics solutions "in the wild". Attached is our company presentation. More info can be found on our website www.anyvision.co	Clause as per tender prevails.
513	8.9 Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggression Switch shall have following minimum	243	8.9	17. Minimum Operating Temperature 0 to 50 degree.	24 port switch comes with 0 to 45 celcius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Clause as per tender prevails.
514	8.10 Switches Type-IIIh As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggression Switch shall have following minimum	243	8.1	20. Minimum Operating Temperature 0 to 50°C.	24 port switch comes with 0 to 45 celcius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Tender condition prevails
515	8.12 Managed PoE Ethernet Switch As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.	247	8.12	4.3 Managed PoE Ethernet Switch: ii. Ethernet Ports : a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	we understand Managed 8 port switch required with RJ45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All Leading Oems have RJ-45 Intercae which is industry standard.	Clause as per tender prevails.
516	RDSO/SPN/TC/65/2019- New Clause to be added	29 of 61	10.1	Server Specifications	The Server Platform OEM should be listed in the Top 3 Server Infrastructure vendors of IDC/Gartner in last 3 consecutive quarters.	Clause as per tender prevails.
517	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Power Supply not more than 200W	The system would consume less energy, without compromising on the asked specification.	Clause as per tender prevails.
518	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Cabinet Volume should be less than 8 Liters	The system would consume less desk space, without compromising on the asked specification.	Clause as per tender prevails.
519	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Dust Filter for Dust protection	The system can be protected from possible wear and tear due to dust, which is generally the scenario at different stations PAN India.	Clause as per tender prevails.
520	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Performance optimizer software	Helps in optimizing key ISV applications	Clause as per tender prevails.

521	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	The workstation should be certified to run popular ISV applications	Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Clause as per tender prevails.
522	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Out-of-Band Systems Management (Intel vPro Technology)	Helps manage the Machine for Out-of-Band Management functionalities	Clause as per tender prevails.
523	RDSO/SPN/TC/65/2019	34 of 61	12.2	Storage Specifications+E19	Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, " Backend Interface – 12 Gbps or higher". This clause will ensure that Railtel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Clause as per tender prevails.
524	RDSO/SPN/TC/106/2019	11 of 21	4.2 (vi)	Storage: HDD/SSD of minimum 8 TB Capacity.	Storage : Internal or External HDD/SSD of minimum 8 TB Capacity. Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU, Wifi AP & Managed PoE Switch shall be housed in concealed, powder coated metal enclosure with suitable Ingress Protection for dust and water. So it should be allowed to propose this capacity as internal OR External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile-NVR vendors.	Clause as per tender prevails.
525	RDSO/SPN/TC/106/2019	11 of 21	4.2 (xvi)	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration.	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 OR MIL-STD-810G for Rolling Stock application for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. It is our request to allow MIL-STD-810G certification to be considered here and there by not restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.
526	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	8.3.2.1 System description and General Requirement As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN /TC/106/2019, Revision 1.0 or latest with all amendments)	Clarification related to the RDSO clauses raised below Multiple clarification as below	Clause as per tender prevails.
527	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integragtd AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.

528	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well. Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication. Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.	Clause as per tender prevails.
529	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box. Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.
530	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR. Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount	Clause as per tender prevails.
531	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xi) RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraggted AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application. Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection. Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna. It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."	Clause as per tender prevails.

532	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
533	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
534	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.
535	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (Note) RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

536	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
537	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
538	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : <ul style="list-style-type: none"> - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.
539	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (i) RDSO/SP N/TC/106/2019	Ethernet Port: 10/100/1000 Base T auto-sensing	To achieve AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic, AP to support Two numnbers of GigE ports. Request to change it to "Must support 2X10/100/1000BASE-T autosensing (M12 8P female connector with X-coding per IEC 61076-2), PoE/PoE+ In) for shock proof deployment with PoE Out at one port."	Clause as per tender prevails.

540	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	The Bandwidth Requirement is not specified in the AP specifications Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic	Clause as per tender prevails.
541	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	Kindly Suggest Antenna Type and Antenna Mounting. As the Train Body are made of metallic, we would recommend to mount the Antenna outside the train. Kindly confirm Kindly Suggest Antenna Type and Antenna Mounting.	Clause as per tender prevails.
542	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (Note) RDSO/SP N/TC/106/2019	Note: In case the NVR has embedded system architecture with system on Chipv(SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
543	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in Rx and Tx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.

544	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well. Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication.	Clause as per tender prevails.
545	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box. Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.
546	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR. Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount	Clause as per tender prevails.

547	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xv) of RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	<p>"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraqgtd AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application.</p> <p>Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection.</p> <p>Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p>	Clause as per tender prevails.
548	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) of RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
549	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) of RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network.</p> <p>Strong endpoint security</p> <p>Support for the following:</p> <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.

550	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.
551	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): Note: RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
552	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs: RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Please refer Corrigendum-II for clarity.

553	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 11	Switch Should Support Security Features like Broadcast/Multicast/Unicast Storm Control, Traffic segmentation, TLS, DoS attack prevention, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control.	<p>We understand <u>Traffic Segmentation</u> is in terms of different VLAN for types of traffic and Auto QoS. Kindly CLarify. Kindly clarify <u>DOS attack prevention</u> or equivalent like Rate limiting , ACL and Storm control is acceptable. TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement DHCP Server Screening: Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping"</p> <p>Please change the clause to "Switch Should Support Security Features like "Broadcast/Multicast/Unicast Storm Control, Traffic segmentation/Auto QoS, DoS attack prevention/Rate Limiting, Storm Control, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening/ DHCP snooping, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control"</p> <p>We understand Traffic Segmentation is in terms of different VLAN for types of traffic and Auto QoS. Kindly CLarify. Kindly clarify DOS attack prevention or equivalent like Rate limiting , ACL and Storm control is acceptable. TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement DHCP Server Screening: Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping"</p> <p>Please change the clause to "Switch Should Support Security Features like "Broadcast/Multicast/Unicast Storm Control, Traffic segmentation/Auto QoS, DoS attack prevention/Rate Limiting, Storm Control, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening/ DHCP snooping, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control"</p>	Clause as per tender prevails.
554	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 12	Switch Should Support features IPv4 & IPv6 Inspection, SSH v2 feature, Flow Control governed by IEEE 802.3x.	<p>IPv4 and IPv6 inspection is not clear. Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection</p>	Clause as per tender prevails.
555	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 12	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	<p>Kindly Include Industrial Grade Switches for getting better performance and long run of this project, as per the environmental situation in Train Station Kindly Include Industrial Grade Switches for getting better performance and long run of this project,</p>	Clause as per tender prevails.

556	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Please refer Corrigendum-II for clarity.
557	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.1	Should have minimum 24 x GE SFP based ports	As per the network architecture, 12x1GE SFP would be sufficient instead of 24x1GE SFP Ports. Kindly change the port requirement from 24 to 12x 1GE SFP. Kindly change the port requirement from 24 to 12x 1GE SFP.	Clause as per tender prevails.
558	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.2	Should have minimum 4 nos. SFP+ based 10 GE ports.	As per the network architecture, 2x10GE SFP would be sufficient instead of 4x10GE SFP+ Ports. Kindly change the port requirement from 4 to 2x 10GE SFP+. Kindly change the port requirement from 4 to 2x 10GE SFP+.	Clause as per tender prevails.

559	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.3	Should have at least 64 Gbps full duplex line rate traffic.	Kindly change the capacity of the Switch as per the port requirement to 52Gbps, instead of 64 Gbps Kindly change the capacity of the Switch as per the above port requirement to 52Gbps, instead of 64 Gbps	Clause as per tender prevails.
560	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.11	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.	THERE IS A LESS FEASIBILITY OF GETTING TWO POWER SUPPLY FEED AT STATION PLATFORM. Kindly change the clause as per below "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz". Kindly change to: "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz".	Clause as per tender prevails.
561	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.	ERPS is a must support Technology required for this kind of switches to achieve ring protection in less than 50 ms. ERPS is not be compared with RSTP which have protection switching time in seconds. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must Kindly change to: Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies. and IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must	Clause as per tender prevails.

562	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.	Kindly include EN61000-3-2 and EN61000-3-3 spec. These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection". These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection" Kindly change the clause as below: "Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard or EN61000-3-2 and EN61000-3-3 standard and as per requirement at Indian Railway Station.	Clause as per tender prevails.
563	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019 Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019	Clause as per tender prevails.
564	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity. Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity.	Clause as per tender prevails.

565	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	Kindly suggest Switch configuration as RDSO specs is described 1G SFP+, whether 10G SFP+ or 1G SFP port to be considered? Kindly confirm 4x 10G SFP+ to be considered	Please refer Corrigendum-V.
566	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	If we consider Switch configuration of 4x10GE+24x1GE = 64 *2 = 128 Switching Bandwidth. Kinly suggest whether switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps Kindly suggest switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps	Clause as per tender prevails.
567	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	As this switch to be located at RPF Location for Server and PC connectivity, Please suggest whether POE/POE+ is required or not? Please remove Power budget for POE/POE+ requirement	Please refer Corrigendum-V.

568	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 20	Minimum Operating Temperature 0 to 50°C.	AsThis switch would be located at RPF DC Location, where server /NVR operating temperature asked below 30 DegreeC. We would request to revise requirement from 50 DegreeC to 45 DegreeC Kindly change the requirement as per Environmental condition Minimum Operating Temperature 0 to 45°C.	Clause as per tender prevails.
569	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 8	Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate.	Kindly include " Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate." On 70 Gbps Box, the 64 Byte Packet length mpps caapcity should be 70x1.488 mpss = 100 mpss Kindly change to : Switch shall have minimum 100 million packets (64 Byte packets) per second forwarding rate.	Please refer Corrigendum-V.
570	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 10	Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 45 degree (minimum).	Kindly include The temperature should be increased to 50 Degree C, as per other switches enviromnemntal condition is considered. Kindly change to : Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 50 degree (minimum).	Clause as per tender prevails.
571	Chapter -8	RFP Page no. 245 and 246	8.11 Switches Type-IV clause no. 15 (iv), 16 (i)	iv. Support for IEEE 802.1 D spanning tree protocol.	Kindly suggest 802.1D/ 802.1 s MSTP is acceptable Support for IEEE 802.1 D spanning tree protocol / 802.1 s MSTP	Please refer Corrigendum-V.
572	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xiv. Support 4 group of embedded RMON (history, static's and alarms).	RMON is a very old standard, We would request to add better and advanced level monitoring like Performce monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data Kindly include as below: Support 4 group of embedded RMON (history, static's and alarms) or advanced level monitoring like Performce monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data	Please refer Corrigendum-V.
573	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2 (Confirmed roadmap within a year time is also acceptable for ITU-T G.8032 v2 with no additional cost to RailTel).	As it was changed during last year CCTV RFP, OEM should already developed the feature , kindly remove the roadmap acceptability. This feature should be from Day-1 Kindly change the clause to: xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2	Clause as per tender prevails.
574	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 17	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Deleted. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. Deleted.	Kindly include follow certifications as well Switches should be NEBS certified. IPv6 feature should be ready from day 1. Kindly change the clause to: Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Switches should be NEBS certified. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. IPv6 feature should be ready from day 1.	Clause as per tender prevails.

575	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2WS5	CT2WS5 : wireless Standard: Antenna Gain of Access Points must be +2dBm or better. Must support following minimum transmit power for both 2.4Ghz and 5Ghz radios. (i) 2.4-Ghz band : +21dBm (ii) 5.0-Ghz band: +24dBm	24 dBm and 21 dBm are for indoor coverage, not suitable for outdoor coverag, where the connectivity with Train AP is required. Kindly include Antenna Gain of Access Points must be 5dBm or better. Must support following minimum EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB. This will give advantage on Higher coverage with Higher power to connect the Train AP. Kindly change the clause to: CT2WS5 : wireless Standard: EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB.	Clause as per tender prevails.
576	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2M3	CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet	Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet with RF-45 console port for local troubleshoosting . This will helps in local troubleshooting, when the AP is not reachable at WLC. Kindly change the clause to: CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet. Additionally Access point shall have Management console port (RJ-45)	Clause as per tender prevails.
577	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS1	WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	WEP is obsolete standard, request to remove the clause. Kindly change the clause to: WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	Please refer Corrigendum-V.
578	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS5	Security: Controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points	Different OEM have different method for RF security. We secure RF perimeter through from ROGUE AP's , ROGUE client, etc. Kindly change the clause "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points". Kindly change the clause to: "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points".	Clause as per tender prevails.
579	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO1	Operational: Must support AP over-the-air packet capture for export to a tool such as Wire shark.	As the Wireshark Packet Capture implementation differs from OEM to OEM. We would recomnd following changes in the clause: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark." Kindly change the clause to: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark."	Please refer Corrigendum-V.
580	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO15	Operational: shall support API's for NB and SNMP Integration with CNMS	As the NBI generally send by EMS not WLC. We would recomnd following changes in the clause: "shall support API's for NB / SNMP Integration with CNMS" Kindly change the clause to: "shall support API's for NB / SNMP Integration with CNMS"	Clause as per tender prevails.
581	4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	Point 6	6. The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process. Relevant Organizational Level Certificates to be provided	Since the globally renowned independent software companies like Qognify, Mirasys, Milestone, Genetec , Axxonsoft, OnSSI , SeeTec , who are having significant presence in this vertical(Railways / Metros Globally) does not have certifications like CMMI level -5 & ISO which is asked in tender. So we request you to kindly remove this clause for software OEMS.	Please refer Corrigendum-V.

582	PACKAGE-V (Coach) SOR HEAD I: IP BASED CLOSED CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM IN COACHES	63-64,69	3. Supply of IT infrastructure, applications and associated items at RailTel Secunderabad and Gurugram datacentre(s).	(a) VSS Server Hardware for Video Management and Recording system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. - Lot 2 (g) Software for Video Management, Video recording and Facial Recognition system for the server hardware quoted in Item no. A.3.I(a), A.3.I(b) and A.3.I(c) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. Lot 2	Here in Coaches BOQ, at Data centre Video management and recording servers with software asked. While, As per RFP only alerts and on demand viewing is required at datacentre same as like stations Datacentre requirement. Also, same is disclosing in the Datacentre architecture for coaches (page 99). Kindly confirm do we need to record the coach cameras at VPU/mNVR in coaches and Datacentre both side? or not?	Clause as per tender prevails.
583	PACKAGE I : NORTHERN REGION	14	Point 5	5. Supply of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	Are the Divisional HQ Clients are included in this BOQ item of NR? Same query for WR, ER and SR.	Please refer Corrigendum-V. (Graphical user interface client numbers need to be changed also including clients for A1 & A stations)
584	8.3.1.1 General Parameters	240	Point 8.3.1.1.2	8.3.1.1.2 Bidder to propose server(s) as Video Management servers with 1:1 redundancy (HA mode) in RailTel Datacentre for centralized management of such multiple clusters.	One of the roles of management server is to manage the failover functionality by receiving the signal from recorder server of failure and giving the signals to failover servers to get active. As per design all the recording servers and failover servers will be placed at RPF/GRP Thana/Posts and their management server will be at RailTel Data centre. If any recording server gets fail and at that particular time if the MPLS connectivity is also down from that RPF/GRP Thana/Post to RailTel Datacentre then How can we achieve the failover as the Management will not get the alert for this failure? Please clarify.	Clause as per tender prevails.
585	8.3.1.2 Video Surveillance System hardware sizing	241	8.3.1.2	Approximate number of cameras considered across 6124 Railway Stations are 89844 units. Refer Chapter-7 Annexure-I for station category, Region wise camera breakup.	In this clause total cameras are 89844 however as per BOQ and total station and number of cameras per station calculations (page 169) it is coming different. i. As per this clause it is 89844 ii. As per BOQ it is 81685 iii. As per calculation with number of cameras per station and total stations it is 90114 Kindly clarify.	Bidder to quote as per SOR.
586	3.B.3.6 Surveillance VPN on RailTel Backbone	92	3.B.3.6	IP Video Surveillance is traffic hungry and delay sensitive service. To ensure proper functioning of this project, network architecture must have features like Multicast VLAN Registration, IP SLA, Auto-QoS, Auto Ports configuration to detect end device type connected to port and configuring QoS automatically on basis of device. Network should have IPv4 and IPv6 port and time based access list with time ranges.	The VMS Software Should support ThruCast and MAX smooth Feature for bandwidth management. Kindly consider: IP Video Surveillance is traffic hungry and delay sensitive service. To ensure proper functioning of this project, network architecture must have features like Multicast VLAN Registration, ThruCast, MAX smooth feature , IP SLA, Auto-QoS, Auto Ports configuration to detect end device type connected to port and configuring QoS automatically on basis of device. Network should have IPv4 and IPv6 port and time based access list with time ranges.	Clause as per tender prevails.
587	8.3.1 VSS/CCTV System for Stations	239	8.3.1	This includes Video Management Software, Video Recording Software, Video Analytic Software, GUI Client Software, Facial Recognition System (FRS) etc. for IP based Video Surveillance at stations.	Kindly consider: This includes Video Management Software, Video Recording Software, Video Analytic Software, GUI Client Software, Facial Recognition System (FRS) etc. for IP based Video Surveillance at stations. Also, the software platforms should be a certified partner of OS provider for last 3 years for tight integration and stability of the overall system.	Clause as per tender prevails.
588	3.B.3.6 Surveillance VPN on RailTel Backbone	91	Point 3.B.3.6	3.B.3.6 Surveillance VPN on RailTel Backbone	Kindly consider: As Cyber security threat is common these days. We suggest to add the data encryption from server to server and server to client. The VMS software should have data encryption of 256 bit AES and video should export in SEF (Secured Export Format) with password protection of up to 20 alphanumeric characters.	Clause as per tender prevails.

589	4.A.14.1.1 Bidding for more than one packages: In case the tenderer wants to quote for multiple packages i.e. Northern, Western, Southern, Eastern and Coaches, then with the submitted financial capability (4.A.14.1(5)) and technical capability (4.A.14.1(5)) credentials, bidder is allowed to quote in all the packages separately meeting the eligibility criteria.	137	4.A.14.1.1	<p>Case-I Single Work Experience of Rs. 40 Crore is submitted</p> <p>(package) (requisite single work experience) (qualifying status)</p> <p>1)NORTHERN 28 Q 2)WESTERN 31.5 Q 3)EASTERN 42 NQ 4)SOUTHERN 38.5 Q 5)COACHES</p>	<p>If the Single Work Order of Rs. 68 Crore is submitted (package) (requisite single work) (qualifying)</p> <p>1. northern 63.48cr Q 2. western 42.39cr Q 3. eastern 70.37cr NQ 4.southern 55.56cr Q 5. coaches 85.25cr NQ</p> <p>Please clarify according to the above case showing technical capability qualification then will we qualify for all the three package (i.e., Northern, Western, and Southern) as mentioned above if single work order of 68 Crores is submitted.</p>	Clause is self explanatory
590	CHAPTER- 2	69	V	<p>Bidder is allowed to quote only for a single Make/Model of the quoted items along with the offer. Offers without particulars of Make/Model or multiple OEMs of same item shall be liable to summarily rejected.</p>	<p>Since the scale of this project is quite high, the single OEM meeting the delivery target of the RFP is very minimal. Hence, we request you to kindly allow equivalent Make/Model along with the primary Make/Model.</p> <p>Since as System Integrator, We are responsible to meet the technical specification and SLA levels for the entire technical Solution, we request you not to insist for single make /model in the contract. Alternatively, you may kindly approve at least three makes and models for each of the equipment to be provided for this project.</p> <p>This will help the SI to offer a very competitive price to the customer by taking aggressive risks on their costs, which will totally benefit the customer. If only one make is insisted the vendor does not support the SI in times and therefore the cost go up considerably.</p> <p>For your Kind information, in almost all of the government contracts there is a list of Compendium of Suppliers approved for each of the item required for the Project. This list is made part of the contract. During execution of the contract, the SI/Contractor shall have to supply materials of makes/OEMs who are mentioned in that list only. This is followed in MPMKVCL/ GoMPRD/ PGCIL/ NTPC/ NPCIL/ DoIT-GoMP/ MPTD. None of the government project where vigilance/RTI is applicable have single make to be provided during bid submission. Hence we request you to kindly accept and amend the same.</p>	Please refer Corrigendum-V.
591	CHAPTER- 3	118	4.A.4 Delivery/Implementation timelines	<p>Timeline: Category A1 & A Stations: Submission of Final Design documents - D+2M Installation, T&C - D+4M Category B & C Stations: Submission of Final Design documents - D+6M Installation, T&C - D+8M Category D & E Stations: Submission of Final Design documents - D+10M Installation, T&C - D+ 15M</p>	<p>The provided Timeline is very challenging considering the quantum of works. So, we request you to provide the below mentioned timeline:</p> <p>Category A1 & A Stations: Submission of Final Design documents - D+2M 4M Installation, T&C - D+4M 6M Category B & C Stations: Submission of Final Design documents - D+6M 9M Installation, T&C - D+8M 12M Category D & E Stations: Submission of Final Design documents - D+10M 16M Installation, T&C - D+ 15M 20M</p>	Clause as per tender prevails.
592	CHAPTER- 4	164	Clause 4.A.19	<p>Quantity Variation: Purchaser's Right to Vary Quantities - up to a maximum extent of +/- 30% of contract quantity.</p>	<p>Please confirm that the variation of scope of work under this clause shall be limited to ± 10% only, beyond which the quoted price shall be subject to variation and bidder shall be asked to submit revised prices.</p>	Clause as per tender prevails.

593	General	General	General	Additional Clause	<p>In order to have better working capital for the project we propose an Assignment clause as below to be included in the Payment Schedule, which shall allow us to factor the bill with financing institution, and therefore enable us to participate in the Tender.</p> <p>Assignment Clause (new Clause proposed) :</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 there under, 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 Employer shall acknowledge the intimation letter it may receive from such financial institution(s) or Bank(s) or NBFC (s). If the Employer does not reply within 15 days of the receipt of the intimation letter, it can be considered as "acknowledged by the Employer". Furthermore the Employer will provide an indicative date by when the funds will be released to the Contractor as a measure of comfort for the decisions of Financial Institution(s) or Bank(s) or NBFC(s)".</p>	Clause as per tender prevails.
594	CHAPTER- 2	81	3.A.1.7.9	Any land required by the bidder will be made available by Railways, if available, at the lease cost as per the latest norms of Railways.	We understand that all the charges including lease cost shall be paid over and above the contract price by Railways to bidder including statutory payment to be made to authorities. Bidder shall only be responsible for co-ordination with concerned authorities. Please Confirm.	Clause is self explanatory
595	General	General	General	Right of way	We understand that all permission / licenses / local approval and ROW shall be made available to the Contractor by Client.Delay on account of getting such permission shall be considered for time extension. Please confirm.	ROW shall be arranged by RailTel, however, submission of desired documents for ROW shall be responsibility of the bidder.
596	CHAPTER- 3	139	4.A.14.1.3 Eligibility Criteria Requirements for OEM's 4	<p>OEMs PQ:</p> <p>The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. The same should have been working satisfactorily for at least six (6) months.</p>	We request you to revise the clause to include OEMs with similar experience in other fields too since that will make the bid more competitive for OEMs, which will result in better solution at relatively lesser cost.	Clause as per tender prevails.
597	General	General	General	Mounting of Cameras	We understand that all the camera mounts will be in Ceiling or Wall Mount in all stations. Hence bidder need not consider any poles for mounting. Request confirmation on the same.	Clause as per tender prevails.
598	CHAPTER- 2	69	V	Bidder should submit the soft copy (Word/Excel/PDFs format) of offer in DVDs/USB's. Bill of Material (BOM) must be in PDF as well as Excel format.	<p>Since RailTel invites E-tenders, we request for the soft copy offer (scan copy offer) shall be submitted ONLINE. Also we request for Bill of material (BOM) shall be in PDF only and submitted ONLINE. Kindly Confirm.</p> <p>No hard copy is required to be submitted apart from mentioned in 4.B.8 Offline Submission.</p>	Clause as per tender prevails.
599	CHAPTER-3	80	3.A.1.7.1	Railways shall provide AC power supply at workspace for carrying out the awarded work. The successful bidder will have to pay the specified charges for the power supply as per the existing Railways Norms.	We understand that Railways will provide construction power supply for execution on chargeable basis. However, Recurring charges of electricity during 8 years (1 Year Supervised Maintenance + 2 Years warranty + 5 Years AMC) support shall be borne by Railways. Kindly confirm.	Clause is self explanatory
600	CHAPTER-3	80	3.A.1.7.2	Railways shall provide for the space and power supply for the systems in-stalled in the RPF Thana/Chowkis, Control Rooms and other locations at stations.	We understand that Railways will provide site office and warehouse space at Railway Stations for execution on free of cost basis.	Bidder is required to arrange their own store for the same.
601	CHAPTER 4	117	4.A.3.3	Separate agreement for AMC after warranty period shall be entered with OEM or Bidder specifically authorized by OEM by RailTel. A fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 months (4 months beyond the AMC period of 5 years) from the date of issue of LOA shall be required to be submitted by Bidder/OEM for due fulfillment of long term maintenance support obligation	We request to allow bidders to provide a fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 Months (4 months beyond the AMC period of 5 years) and the same shall be reduced yearly after payment has been made for that year till 5th Year. Please confirm.	Clause as per Tender prevails

602	CHAPTER- 2	69	IV	<p>Since, RailTel is also implementing Wi-Fi work at railway stations, therefore, the existing available infrastructure may be utilized by the purchaser for implementation of VSS system and such items used may not be considered as a part of Supply orders.</p>	<p>Please provide the details of existing infrastructure viz.</p> <ol style="list-style-type: none"> 1. Availability of Power Supply from existing UPS/DCPS 2. Junction box, cabling along with protection 3. PoE switch port availability 4. Make,model, interface available with existing system 5. Nos. of sites where existing system are available and can be used 	<p>Bidder to quote as per SOR. Tentative list of VSS stations is being uploaded. WI-FI stations work is completed almost at all A1/A sttions and some B, C D & E stations (approx. 600+ stations, names of stations are available on RailTel website)</p>
603	Chapter 6 & Chapter 3	197	5-2 & 4.A.4	<p>OEM agrees to support successful bidder throughout the entire duration of this project, starting with bid preparation process up until project implementation and maintenance of the same. The project duration comprises of 90 days of implementation, 12 months of maintenance supervision period, 2 years for warranty and 5 years for AMC starting from date of issuance of LoA. However, if the implementation phase gets extended (for whatsoever reason), OEM shall extend their support on best effort basis for the same period.</p> <p>Delivery/Implementation timelines: Milestones for Design, Supply, Installation and Commissioning from the date of award of the Contract (LOA) are tabulated as under.</p>	<p>Both statements are contradictory to each other. Please clarify the same and suggest which timeline & milestone we have to follow for Design, Supply, Installation and Commissioning. We request you increase the implementation schedule to 15 months to complete the entire activity which shall encourage participation of bidders without any overloading of bid.</p>	<p>Clause as per tender prevails.</p>
604	CHAPTER-3	80	3.A.1.7.1	<p>Railways shall provide AC power supply at station/cabin/panel room/midsection buildings for carrying out the awarded work. The successful bidder will have to pay the nominal charges for the power supply as per the existing Railways Norms.</p>	<p>We understand that Railways will provide construction power supply for execution on chargeable basis. However, Recurring charges of electricity during 8 years (1 Year Supervised Maintenance + 2 Years warranty + 5 Years AMC) support shall be borne by Railways. Kindly confirm.</p>	<p>Clause is self explanatory</p>
605	CHAPTER-3	80	3.A.1.7.2	<p>Railways shall provide for the space and power supply for the systems in-stalled in the RPF Thana/Chowkis, Control Rooms and other locations at stations.</p>	<p>We understand that Railways will provide site office and warehouse space at Railway Stations for execution on free of cost basis. Kindly confirm.</p>	<p>Bidder is required to arrange their own store for the same.</p>
606	CHAPTER 4	83,84	4.A.5.1.1	<p>4.A.5. Payment Terms 4.A.5.1 Payment Terms for Supply portion of items supplied under Schedule – 'A' of SOR-Head-I of packages as per BOM and Price Schedule details (Chapter- 2, SOR, Note-VII and Annexure-A & B) submitted along with price bid. 4.A.5.1.1 For hardware items, payments will be made on the basis of stations covered under a RPF/GRP Thana/Post for the material supplied in stages for various items supplied. 75% payment of the items would be made on receipt of material by the consignee duly inspected and on submission..... 4.A.5.1.2 In case payment is to be made in foreign currency, 75% of the CIF value of imported equipment/materials would be paid through irrevocable Letter of Credit (LC) on submission 4.A.5.1.3 15% payment of the value of items of Schedule – A shall be made by RailTel on installation & commissioning of stations/sites including at the concerned RPF/GRP Thana/Post of the cluster for CCTV at stations, 5% payment on issue of Provisional Acceptance Certificate (PAC) and the last 5% payment shall be made by Rail-Tel/REL on issue of Final Acceptance Certificate (FAC) which will be issued by respective Executive Director of the concerned region. In case of foreign currency, payment will be paid through TT/Wire Transfer (SWIFT) from Corporate Office. (15% + 5%) payment of value % of items of Schedule – A which could not be installed for want</p>	<p>We request for the following Payment terms for items supplied as below:</p> <p>10% of payment as mobilization advance against equivalent Bank Guarantee. (This BG will be valid for 18 Months). 75% payment of the items would be made on receipt of material 5% payment of on installation & commissioning of station/site 5% payment on issue of Provisional Acceptance Certificate (PAC) 5% payment on issue of Final Acceptance Certificate (FAC) or against submission of Bank Guarantee of equivalent value valid till 30 days beyond FAC</p>	<p>Clause as per Tender prevails</p>

607	CHAPTER-2 & 4	141	4.A.15.1	Foreign exchange and/or import license if required, will be released/ provided to the contractor in connection with this contract. Part of Schedule (for imported items) can be quoted in any of the major foreign currencies viz USD, British Pound, EURO or Japanese YEN etc. In such a case, bidder should clearly specify the components of Foreign exchange and Indian currency for each item.	1. As per clause 4.A.15.1, we can quote prices in USD, British Pound, EURO or Japanese YEN but in Price Schedule Format (CHAPTER-2) it is not properly identified in which currency we have to quote. We request you to kindly consider quoting in INR only for the sake of clarity. 2. Also please confirm that the payments to the bidders shall be released on the quoted currency i.e (USD, British Pound, EURO , Japanese YEN or INR)	Clause as per tender prevails.
608	CHAPTER-4	160	4.B.9	Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted in RailTel before Tender opening date & time. Bids without these off line submissions are liable to be rejected.	Since RailTel invites E-tenders, we request for Eligibility criteria related documents as applicable shall only be scanned and submitted ONLINE. Hard copy will not be submitted. Kindly confirm. No hard copy is required to be submitted apart from the ones mentioned in 4.B.8 Offline Submission.	Clause is self explanatory and prevails
609	CHAPTER 5	164	4.A.19	Purchaser's Right to Vary Quantities - up to a maximum extent of +/- 30% of contract quantity.	1. We request you to keep the variation of scope of work under this clause to be limited to \pm 10% only, beyond which the quoted price shall be subject to variation. 2. Also please confirm that such variation shall be communicated within 30 days from the date of award of contract.	Clause as per Tender prevails
610	CHAPTER 4	110	4.A.32	If the contractor fails to deliver the equipment or honor the contractual commitment within the period fixed for such delivery in the contract, the Purchaser may terminate the LOA/ contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of bidder shall be forfeited/ Performance Bank Guarantee shall be encashed. The failed bidder shall not be permitted to take part in the tender for balance work. The Maximum Liability of bidder to any Loss/Damages to RailTel including Liquidity Damages and Performance Guarantee shall be limited to 100% of Value of contract.	We propose modification as follows: If the contractor fails to deliver the equipment or commits material breach of contractual commitment solely due to the gross or willful negligence within the period fixed for such delivery in the contract, the Purchaser may terminate the LOA/ contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of bidder shall be forfeited/ Performance Bank Guarantee shall be encashed giving 5 working days prior written intimation . The failed bidder shall not be permitted to take part in the tender for balance work. The Maximum Liability of bidder to any Loss/Damages to RailTel including Liquidity Damages and Performance Guarantee shall be limited to 100% of Value of contract contract value received by the bidder.	Clause as per Tender prevails
611	CHAPTER 8	238	Note 3	All the IP cameras as quoted by the bidder against SORChapter-2 must be sourced from the same OEM.	Request you to kindly amend the clause as "All the IP cameras as quoted by the bidder against SORChapter-2 shall be sourced from multiple OEM's" considering the challenging implementation schedule and competitiveness of the bid .	Clause as per Tender prevails
612	CHAPTER 6	166	4	PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND 4." it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee."	The Performance BG in effect may prove to be open-ended. Therefore, we kindly request to restrict the discharge of the PBG to within 4 months beyond the date of expiry of warranty period as under Cl. 4.A.6. Please Confirm.	Clause as per Tender prevails
613	CHAPTER 3	77	3.A.1.4.8	Bidder may also be required to extend fiber/network connectivity from the nearest station to the RPF/GRP Thana/Post	Please confirm whether the location RPF/ GRP Thane/ Chowki shall be within the station area which shall be used to store the video feed. Also please provide typical distance of these location from station platform.	Bidder to quote as per SOR. Item to be payable as per actual lengths of items.
614	CHAPTER 3	78	3.A.1.4.12 3.A.1.4.13 3.A.1.4.14	Maintenance supervision period of 12 months from the date of award of PAC of the RPF/GRP Thana/ Warranty period of 24 months from the date of expiry of maintenance supervision period of installed system at no cost to Railways/ RailTel. AMC (including repair / replacement of all consumables) for 5 years after the completion of 24 months of warranty period.	We understand that Maintenance period of RPF/GRP Thana shall start as soon as the PAC happens for a particular RPF/GRP Thana. Hence Warranty & AMC of that particular RPF/GRP Thana shall start respectively Kindly confirm.	Clause is self explanatory

615	CHAPTER 3	153	1	1. Bidders seeking Purchase preference (linked with Local content) (PPP-MII) shall be required to meet/exceed the target of Local Content (LC) of _70%_ %.	Bidders seeking Purchase preference (linked with Local content) shall be required to meet/exceed the target of Local Content (LC) of 70% 50%. We believe this will provide right balance between Preference for Make in India and providing products of renowned OEMs located across the world.	Clause as per tender prevails.
616	CHAPTER - 8	241	8.3.1.2	Approximate number of cameras considered across 6124 Railway Stations are 89844 units. Refer Chapter-7 Annexure-I for station category, Region wise camera breakup.	In this clause total cameras are 89844 however as per BOQ and total station and number of cameras per station calculations (page 169) it is coming different. i. As per this clause it is 89844 ii. As per BOQ it is 81685 iii. As per calculation with number of cameras per station and total stations it is 90114 Kindly clarify.	Bidder to quote as per SOR.
617	CHAPTER - 2	63-64,69	3	Supply of IT infrastructure, applications and associated items at RailTel Secunderabad and Gurugram datacentre(s). (a) VSS Server Hardware for Video Management and Recording system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. - Lot 2 (g) Software for Video Management, Video recording and Facial Recognition system for the server hardware quoted in Item no. A.3.I(a), A.3.I(b) and A.3.I(c) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. Lot 2	Here in Coaches BOQ, at Data centre Video management and recording servers with software asked. Whether video recording to be happen continuous or only alerts (as per architecture page 99) to mobile NVR and Datacenter and RPF . Please confirm	Please refer Corrigendum-V.
618	CHAPTER - 8	240	8.3.1.1.2	Bidder to propose server(s) as Video Management servers with 1:1 redundancy (HA mode) in RailTel Datacenter for centralized management of such multiple clusters	Please confirm whether 1:1 redundancy servers are required required for Facial recognition system and video analytics system	Clause as per Tender prevails
619	CHAPTER - 3	86	3.B.1	To implement IP based CCTV system in train coaches, frequent video data and alarms are required to be sent from train coaches to command and control center (CCC) and Datacenter locations. Each train coach recorded video, alerts/alarms shall be offloaded from on board video recorder unit through available network i.e. Wi-Fi and 4G (LTE).	How many days of storage to be considered for the train coaches camera. Do we need to consider 30 days of storage for all the train coaches camera at the Data center. Kindly clarify.	Clause as per tender prevails.
620	CHAPTER - 3	86	3.B.1		Kindly clarify train coaches video to be stored both at Gurugram and Secunderabad?	Clause as per tender prevails.
621	CHAPTER - 3	86	3.B.1		Kindly clarify 4G communication to be considered as part of the scope. If yes, 4G SIM cards and operational charges for the monthly rental will be in whose scope? Kindly clarify	LTE(4G) SIM will be provided by purchaser.
622	CHAPTER - 3	99	3.B.7	Below is the tentative VSS architecture for system to be deployed in Train Coaches:	As per the architecture shown, panic buttons are shown in train coaches. But the same is not replicated in the BoQ. Kindly clarify panic buttons are to be considered inside the train coaches and also mention the number of panic buttons and associated cables quantity to be considered .	Please refer Corrigendum-V.
623	CHAPTER - 3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Kindly clarify there is no mention of Core routers, core switches, Firewall, Wireless controllers, etc. that are to be considered in the data centers of Gurugram and Secunderabad. Also the specifications for the same is not provided.	Bidder to quote as per SOR.
624	CHAPTER - 8	242	8.3.1.4	RDSO/SPN/TC/65/2019, Revision 9.0	kindly clarify 1. How many offline licenses to be considered. 2. Number of subjects/ hotlist to be considered for Face recognition database.	Clause as per tender prevails.
625	General	General	General	General	Please clarify wireless access points will be deployed at all RPF / Thana stations.	Wireless Access Points will be deployed at Stations. Distribution list shall be provided to successful bidder.
626	CHAPTER - 2	70	VII	The Bill of Material will be prepared for Schedule of Requirement against each item of SOR. This Bill of Material will be called "Bill of Material for Schedule of Requirement". And will be prepared according to Note (I) to (IV) above. The Unpriced copy of the same BOM should be submitted with the technical/credential Bid for evaluation. The Bid (credential without the BOM will be summarily rejected). The Format of "Bill of Material for Schedule of Requirement" is as below:	We request you to kindly elaborate the format of BOM to be submitted.	Clause is self explanatory

627	CHAPTER - 3	156	4.A.48.	Make in India: Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%	We request you to amend the clause as below, Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 05% Year 3 - > 10% Year 4 - > 15% Year 5 - > 25%	Please refer Corrigendum-V.
628	8.11 Switches Type -IV	244	6	Switch shall have 6 Nos. of Gigabit SFP ports and 4 Nos. 10/100/1000 Base – TX with 6 Nos. of 10 Gigabit SFP+ ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard , supporting half duplex mode, full duplex mode and auto negotiation on each port of 1G to optimize bandwidth.	Switch shall have 12 Nos. of Gigabit SFP ports and 4 Nos. 10/100/1000 Base –TX with 4 Nos. of 10 Gigabit SFP+ ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard , supporting half duplex mode, full duplex mode and auto negotiation on each port of 1G to optimize bandwidth.	Clause as per tender prevails.
629	8.11 Switches Type -IV	244	7	Switch shall have minimum of 70 Gbps (full duplex) forwarding bandwidth at layer 2 switching fabric.	Switch shall have minimum of 60 Gbps (full duplex) forwarding bandwidth at layer 2 switching fabric.	Clause as per tender prevails.
630	8.11 Switches Type -IV	244	14	Shall support at least 32K MPLS labels.	Shall support at least 1K MPLS labels.	Clause as per tender prevails.
631	8.11 Switches Type -IV	245	14	Shall support 32K for IPv4 routes and 3.2K for IPv6 r	Shall support 30K for IPv4 routes and 14K for IPv6 routes/FIB.	Clause as per tender prevails.
632	8.11 Switches Type -IV	246	17	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies.	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 compliance or IEEE standards or higher certification from authorized agencies.	Clause as per tender prevails.
633	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	8.3.2.1 System description and General Requirement As per RDSO Specification of IP based Closed Circuit Television (CCTV) SurveillanceSystem in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN /TC/106/2019, Revision 1.0 or latest with all amendments)	Clarification related to the RDSO clauses raised below Multiple clarification as below	Clause as per tender prevails.
634	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integragtd AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.

635	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well.</p> <p>Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point.</p> <p>Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface</p> <p>Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface</p> <p>Please include : WLC should detect if a user try to impersonate a management frame.</p> <p>Please include : WLC should detect if a user try to impersonate a management frame.</p> <p>Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device.</p> <p>Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device.</p> <p>Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication.</p> <p>Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication.</p> <p>Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.</p>	Clause as per tender prevails.
636	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box.</p> <p>Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing</p>	Clause as per tender prevails.
637	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR.</p> <p>Access Point shall support Non-WiFi Interferer detection, Interferer classification and mitigation</p> <p>Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount</p>	Clause as per tender prevails.

638	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xi) RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	<p>"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraqgtd AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application.</p> <p>Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection. eletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p>	Clause as per tender prevails.
639	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.</p>	Clause as per tender prevails.
640	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>The Switches would be placed in the train coaches and Security features are not asked in the Switch.</p> <p>Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following:</p> <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
641	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p> <p>Calculation as below :</p> <ul style="list-style-type: none"> - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W <p>Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p>	Clause as per tender prevails.

642	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (Note) RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
643	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
644	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
645	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : <ul style="list-style-type: none"> - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.

646	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (i) RDSO/SP N/TC/106/2019	Ethernet Port: 10/100/1000 Base T auto-sensing	To achieve AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic, AP to support Two numnbers of GigE ports. Request to change it to "Must support 2X10/100/1000BASE-T autosensing (M12 8P female connector with X-coding per IEC 61076-2), PoE/PoE+ In) for shock proof deployment with PoE Out at one port."	Clause as per tender prevails.
647	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	The Bandwidth Requirement is not specified in the AP specifications Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic	Clause as per tender prevails.
648	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	Kindly Suggest Antenna Type and Atenna Mounting. As the Train Body are made of metalic, we would recommend to mount the Antenna outside the train. Kindly confirm Kindly Suggest Antenna Type and Atenna Mounting.	Clause as per tender prevails.
649	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (Note) RDSO/SP N/TC/106/2019	Note: In case the NVR has embedded system architecture with system on Chipv(SOC) and microprocessor together, deviation can be accepted if full functionalityvis achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advatange for Embeded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advatange for Embeded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

650	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integragqted AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.
651	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well. Please include : WLC should able to detect, if someone connect a Rogue Acss Point in network and able to take appropriate action to contain rogue Acss point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized acss/authentication. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized acss/authentication. Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.	Clause as per tender prevails.
652	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achive the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box. Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.

653	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR. Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount	Clause as per tender prevails.
654	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xv) of RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 stanard for rolling stock application and this is critical for this project. Moreover integraqgtd AP may not be able to provide right throughpt due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with with EN50155 for rolling stock application. Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose speciality is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection. Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna. It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."	Clause as per tender prevails.
655	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) of RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.

656	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
657	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.
658	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): Note: RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

659	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Please refer Corrigendum-II for clarity.
660	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 11	Switch Should Support Security Features like Broadcast/Multicast/Unicast Storm Control, Traffic segmentation, TLS, DoS attack prevention, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control.	<u>We understand Traffic Segmentation is</u> in terms of different VLAN for types of traffic and Auto QoS. Kindly CLarify. Kindly clarify <u>DOS attack prevention</u> or equivalent like Rate limiting , ACL and Storm control is acceptable. TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement <u>DHCP Server Screening:</u> Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping" Please change the clause to "Switch Should Support Security Features like "Broadcast/Multicast/Unicast Storm Control, Traffic segmentation/Auto QoS, DoS attack prevention/Rate Limiting, Storm Control, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening/ DHCP snooping, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control" We understand Traffic Segmentation is in terms of different VLAN for types of traffic and Auto QoS. Kindly CLarify. Kindly clarify DOS attack prevention or equivalent like Rate limiting , ACL and Storm control is acceptable. TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement DHCP Server Screening: Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping"	Clause as per tender prevails.
661	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RDSO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 12	Switch Should Support features IPv4 & IPv6 Inspection, SSH v2 feature, Flow Control governed by IEEE 802.3x.	IPv4 and IPv6 inspection is not clear. Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection	Clause as per tender prevails.

662	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports);, clause no. 12	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	Kindly Include Industrial Grade Switches for getting better performance and long run of this project, as per the environmental situation in Train Station Kindly Include Industrial Grade Switches for getting better performance and long run of this project,	Clause as per tender prevails.
663	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Please refer Corrigendum-II for clarity.
664	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.1	Should have minimum 24 x GE SFP based ports	As per the network architecture, 12x1GE SFP would be sufficient instead of 24x1GE SFP Ports. Kindly change the port requirement from 24 to 12x 1GE SFP. Kindly change the port requirement from 24 to 12x 1GE SFP.	Clause as per tender prevails.

665	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.2	Should have minimum 4 nos. SFP+ based 10 GE ports.	As per the network architecture, 2x10GE SFP would be sufficient instead of 4x10GE SFP+ Ports. Kindly change the port requirement from 4 to 2x 10GE SFP+. Kindly change the port requirement from 4 to 2x 10GE SFP+.	Clause as per tender prevails.
666	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.3	Should have at least 64 Gbps full duplex line rate traffic.	Kindly change the capacity of the Switch as per the port requirement to 52Gbps, instead of 64 Gbps Kindly change the capacity of the Switch as per the above port requirement to 52Gbps, instead of 64 Gbps	Clause as per tender prevails.
667	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.11	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.	THERE IS A LESS FEASIBILITY OF GETTING TWO POWER SUPPLY FEED AT STATION PLATFORM. Kindly change the clause as per below "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz" Kindly change to: "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz"..	Clause as per tender prevails.

668	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.	ERPS is a must support Technology required for this kind of switches to achieve ring protection in less than 50 ms. ERPS is not be compared with RSTP which have protection switching time in seconds. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must Kindly change to: Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies. and IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must	Clause as per tender prevails.
669	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.	Kindly include EN61000-3-2 and EN61000-3-3 spec. These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection". These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection" Kindly change the clause as below: "Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard or EN61000-3-2 and EN61000-3-3 standard and as per requirement at Indian Railway Station.	Clause as per tender prevails.
670	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019 Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019	Please refer Corrigendum-II for clarity.

671	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity. Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity.	Clause as per tender prevails.
672	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	Kindly suggest Switch configuration as RDSO specs is described 1G SFP+, whether 10G SFP+ or 1G SFP port to be considered? Kindly confirm 4x 10G SFP+ to be considered	Please refer Corrigendum-V.
673	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better, forwarding rate 41.7 MPPS or better	If we consider Switch configuration of 4x10GE+24x1GE = 64 *2 = 128 Switching Bandwidth. Kinly suggest whether switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps Kindly suggest switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps	Clause as per tender prevails.

674	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	As this switch to be located at RPF Location for Server and PC connectivity, Please suggest whether POE/POE+ is reqired or not? Please remove Power budget for POE/POE+ requirement	Please refer Corrigendum-V.
675	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 20	Minimum Operating Temperature 0 to 50°C.	AsThis switch would be located at RPF DC Location, where server /NVR operating temperature asked below 30 DegreeC. We would request to revise requirement from 50 DegreeC to 45 DegreeC Kindly change the requirement as per Environmental condition Minimum Operating Temperature 0 to 45°C.	Clause as per tender prevails.
676	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 8	Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate.	Kindly inclue " Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate." On 70 Gbps Box, the 64 Byte Packet length mpps caapcity should be 70x1.488 mpss = 100 mpps Kindly change to : Switch shall have minimum 100 million packets (64 Byte packets) per second forwarding rate.	Please refer Corrigendum-V.
677	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 10	Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 45 degree (minimum).	Kindly include The temperature should be increased to 50 Degree C, as per other switches enviromnemntal condition is considered. Kindly change to : Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 50 degree (minimum).	Clause as per tender prevails.
678	Chapter -8	RFP Page no. 245 and 246	8.11 Switches Type-IV clause no. 15 (iv), 16 (i)	iv. Support for IEEE 802.1 D spanning tree protocol.	Kindly suggest 802.1D/ 802.1 s MSTP is acceptable Support for IEEE 802.1 D spanning tree protocol / 802.1 s MSTP	Please refer Corrigendum-V.
679	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xiv. Support 4 group of embedded RMON (history, static's and alarms).	RMON is a very old standard. We would request to add better and advanced level monitoring like Performce monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data Kindly include as below: Support 4 group of embedded RMON (history, static's and alarms) or advanced level monitoring like Performce monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data	Please refer Corrigendum-V.

680	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2 (Confirmed roadmap within a year time is also acceptable for ITU-T G.8032 v2 with no additional cost to RailTel).	As it was changed during last year CCTV RFP, OEM should already developed the feature , kindly remove the roadmap acceptability. This feature should be from Day-1 Kindly change the clause to: xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2	Clause as per tender prevails.
681	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 17	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Deleted. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. Deleted.	Kindly include follow certifications as well Switches should be NEBS certified. IPv6 feature should be ready from day 1. Kindly change the clause to: Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Switches should be NEBS certified. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. IPv6 feature should be ready from day 1.	Clause as per tender prevails.
682	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2WS5	CT2WS5 : wireless Standard: Antenna Gain of Access Points must be +2dBm or better. Must support following minimum transmit power for both 2.4Ghz and 5Ghz radios. (i) 2.4-Ghz band : +21dBm (ii) 5.0-Ghz band: +24dBm	24 dBm and 21 dBm are for indoor coverage, not suitable for outdoor coverag, where the connectivity with Train AP is required. Kindly include Antenna Gain of Access Points must be 5dBm or better. Must support following minimum EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB. This will give advantage on Higher coverage with Higher power to connect the Train AP. Kindly change the clause to: CT2WS5 : wireless Standard: EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB.	Clause as per tender prevails.
683	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2M3	CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet	Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet with RF-45 console port for local troubleshooting . This will helps in local troubleshooting, when the AP is not reachable at WLC. Kindly change the clause to: CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet. Additionally Access point shall have Management console port (RJ-45)	Clause as per tender prevails.
684	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS1	WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	WEP is obsolete standard, request to remove the clause. Kindly change the clause to: WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	Please refer Corrigendum-V.
685	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS5	Security: Controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points	Different OEM have different method for RF security. We secure RF perimeter through from ROGUE AP's , ROGUE client, etc. Kindly change the clause "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points". Kindly change the clause to: "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points".	Clause as per tender prevails.
686	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO1	Operational: Must support AP over-the-air packet capture for export to a tool such as Wire shark.	As the Wireshark Packet Capture implementation differs from OEM to OEM. We would recomnd following changes in the clause: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark." Kindly change the clause to: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark."	Please refer Corrigendum-V.

687	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO15	Operational: shall support API's for NB and SNMP Integration with CNMS	As the NBI generally send by EMS not WLC. We would recomnd following changes in the clause: "shall support API's for NB / SNMP Integration with CNMS" Kindly change the clause to: "shall support API's for NB / SNMP Integration with CNMS"	Clause as per tender prevails.
688	Section 8.9	243	RDSO Point 17. Minimum Operating Temperature 0 to 50 degree.	Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggression Switch shall have following minimum	DELL SUGgestion : 24 port switch comes with 0 to 45 celecius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Clause as per tender prevails.
689	Section 8.10	244	RDSO Point 20. Minimum Operating Temperature 0 to 50°C.	Switches Type-III As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggression Switch shall have following minimum	DELL SUGgestion : 24 port switch comes with 0 to 45 celecius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Clause as per tender prevails.
690	Section 8.12	247	RDSO Point 4.3 Managed PoE Ethernet Switch: ii. Ethernet Ports : a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	Managed PoE Ethernet Switch As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.	we understand Mananged 8 port switch required with Rj45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All Leading Oems have RJ-45 Intercae which is industry standard.	Clause as per tender prevails.
691	Section 4.2 Video Recorder Unit		Clause Number Vi	Storage: HDD/SSD of minimum 8 TB Capacity.	Storage : 4TB Internal Capacity HDD/SSD OR 8 TB Capacity Internal or External HDD/SSD option. Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU, Wifi AP & Managed PoE Switch shall be housed in concealed, powder coated metal enclosure with suitable Ingress Protection for dust and water. So it should be allowed to propose this capacity as internal OR External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile-NVR vendors.	Clause as per tender prevails.

692	Section 4.2 Video Recorder Unit		Clause Number Vi	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration.	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 OR MIL-STD-810G for Rolling Stock application for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. It is our request to allow MIL-STD-810G certification to be considered here and there by not restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.
693	Section 4.A.48. Make in India	156		Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%	As per the clause "4.A.48 Make in India" in the RFP, we are under an obligation to give an undertaking to set up a manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in a planned manner from the third year. We would like to submit that most of the global leading IT manufacturers of server, storage & networking are already established in India. As a technology, we as OEMs of IT products are dependent on the other OEMs for the critical components which are used in these products like Processors, Motherboards, RAM, Flash Memory, Hard disk drive etc. which constitute the major cost in a product. These subcomponents are sourced from global OEM's like Intel, AMD, Samsung, Hynix, Toshiba and Seagate which are not manufactured in India. In that scenario achieving domestic value addition year on year basis as per tender clause is impossible. With the above clause, we believe, Indian Railway and public at large, will be deprived of world class technology which is being deployed for safety and security. Considering the above submissions, we request you to kindly consider our request and exempt the applicability of Clause 4.A.48 of the mentioned RFP.	Please refer Corrigendum-V.
694	Clause 2(d) Monitor Size	10		Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8.	Monitor size should be 54.6" or higher as per general Industry guidelines .	Clause as per tender prevails.
695	NOT PRESENT IN CURRENT TENDER			ADDITION	The Server & Storage OEM should be listed in the Leader's Quadrant for Gartner Magic Quadrant report or Top 3 Server Infrastructure / Storage vendors of IDC in last 3 consecutive years.	Clause as per tender prevails.
696	NOT PRESENT IN CURRENT TENDER			Power Supply not more than 200W	The system would consume less energy, without compromising on the asked specification.	Clause as per tender prevails.
697	NOT PRESENT IN CURRENT TENDER			Cabinet Volume should be less than 8 Liters	The system would consume less desk space, without compromising on the asked specification.	Clause as per tender prevails.
698	NOT PRESENT IN CURRENT TENDER			Dust Filter for Dust protection	The system can be protected from possible wear and tear due to dust, which is generally the scenario at different stations PAN India.	Clause as per tender prevails.
699	NOT PRESENT IN CURRENT TENDER			Performance optimizer software	Helps in optimizing key ISV applications	Clause as per tender prevails.
700	NOT PRESENT IN CURRENT TENDER			The workstation should be certified to run popular ISV applications	Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Clause as per tender prevails.
701	NOT PRESENT IN CURRENT TENDER			Out-of-Band Systems Management (Intel vPro Technology)	Helps manage the Machine for Out-of-Band Management functionalities	Clause as per tender prevails.
702	NOT PRESENT IN CURRENT TENDER			New Clause - RDSO Specification does not have backend definition for storage system	Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, " Backend Interface – 12 Gbps or higher". This clause will ensure that Railtel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Clause as per tender prevails.
703	Tender Clause No: 8.12 RDSO:RDSO/SPN/TC/106/2019 Rev1 Section 4 (Technical Requirement)	12	iii	Power Supply: The switch should be able to work on power provided as per clause 3.16.	We have not found relevant information at clause 3.16 of the tender as well as in RDSO specification, hence hereby request you to please clarify Switch power requirement	Clause as per tender prevails.
704	SoR Package (v)	60	SoR Package (v) Clause-1 (b)	Items (Video Recorder Unit, Managed PoE Ethernet switch, Wi-Fi Access Point, Mobile Network Video Recorder) for train coaches and all accessories required for their installation as defined in clause 8.2, 8.12, 8.18, and 8.19 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	NVR (Network Video Recorder) or DVR (Digital Video Recorder) are the important component of any Surveillance system. NVR/DVR main components are server/storage, switch and control software. Kindly confirm the categorization of NVR for the PMA/(Make in India) purpose to categorize the PMI and VA.	Clause as per tender prevails.

705	SoR Package (v)	60	SoR Package (v) Clause-1 (b)	Items (Video Recorder Unit, Managed PoE Ethernet switch, Wi-Fi Access Point, Mobile Network Video Recorder) for train coaches and all accessories required for their installation as defined in clause 8.2, 8.12, 8.18, and 8.19 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	As per the standard network architecture, the components of video surveillance, switching, wi-fi and storage are separate. The same architecture has been followed in station surveillance as well in the tender. Kindly provide the detailed BoQ for individual line items required to be implemented in coach surveillance as well.	Clause as per tender prevails.
706	Section:3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Design architecture includes Core switch, but these switches are not asked in the SoR. Hence request you to please clarify if these switches would be part of the supply or not, if yes what would be the quantity.	Bidder to quote as per SOR.
707	RDSO Specification-RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	4	Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, 802.3ae 10 GbE, 802.3an 10GBASE-T, IEEE 802.3x Flow Control for Full-Duplex Mode, Auto-negotiation	As tender is referring RDSO specification for switches "RDSO/SPN/TC/65/2019 Revision 5.0" Clause no-1 & 4 of the Core Switch RDSO specification contradict to each other. Clause 1 specifies ports as SFP+ based while clause no-4 mentions Fast Ethernet & 1000BaseT port. We understand low rate electrical interface would not be part of the core switch, please clarify.	Bidder to quote as per SOR.
708	RDSO Specification-RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	38	Operating Temp.: 0 °C to 50 °C.	We understand core switch would be installed in controlled environment hence should be consider generic standard rather than extreme Standard.	Clause as per tender prevails.
709	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	The EMS Solution (Hardware & Software) shall provide future scalability with the capacity to handle 20,000 devices from Day 1 without major architectural changes. Whenever required, the additional device licenses can be procured & added respectively.	As tender is asking around 28000 Switches in total. And clause is asking EMS capacity for 20000 from day one. 1) So request you please clarify if EMS scalability is for the whole network or package wise. 2) If it's for entire network, EMS scalability should be more than asked Qty (ie 28000 Switches).Hence we request you to specify EMS scalability as certain percentage higher than the asked quantity. 3) If it's package wise then our humble suggestion to optimize the scalability, because in a particular package total switch count is not more than 8000 and today's technology advancement scalability remains pay & grow hence at day one to consider 20000 is wastage of resources. So requesting please share optimized scalability of EMS architecture in terms of %.	Please refer Corrigendum-V.
710	Tender Clause No: 8.23 Enterprise Management System (EMS)		General	SoR is asking EMS as two set of hardware & two set of software in each package.	We understand two sets means one at Gurgaon & one at Secunderabad. Means server configuration 1+0 at Gurgaon & 1+0 at Secunderabad). Please confirm.	Clause is self explanatory.
711	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	Solution shall be open, distributed, scalable, and multi-platform and open to third party integration	We understand EMS remains technology wise, multi-platform & open to third party integration remains part of the NMS or OSS. Please clarify.	Clause is self explanatory.
712	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolidated Dashboard	Instruction Text (knowledge base) integrated into events /alarms for which incident tickets were created with ability to define trouble shooting steps.	Switch EMS will provide Fault Management and will send the events and alarms from the network to an NMS in real time. Ticket generation & management is not in the context of EMS. Please clarify.	Clause is self explanatory.
713	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolidated Dashboard	Tool should be able to highlight Priority of an event. Priority is based on both the event severity and the business impact. CI Business Impact is calculated based on Business Criticality of all affected business services, applications and business process CIs and eg. SLAs.	Tool will provide the severity (Major/Minor/Critical) for an event. Business Impact is not in the scope of EMS. That is taken care by OSS. Please clarify	Clause is self explanatory.
714	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Consolidated Dashboard	The system must allow modification and enhancement events during event processing.	Requirement is not clear need to elaborate please.	Clause is self explanatory.
715	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reporting templates for performance, availability, inventory, operation, virtualization and configuration	Requesting to please elaborate "what is meant by Virtualization" here.	Clause is self explanatory.
716	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reports that can prove IT service quality levels, such as application response times and server resource consumption	Requesting to please elaborate "What is application response time" for switches.	Clause as per tender prevails.

717	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should be able to deliver comprehensive, long-term, and customizable cross-domain reporting.	Requesting to please elaborate. "What is meant by cross-domain reporting" here.	Clause is self explanatory.
718	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should provide reports from both Network devices and Servers from the same console.	We understand, reports are generated from EMS UI. The reports will have information about the devices. Please confirm that this is what's required.	Clause as per tender prevails.
719	Tender Clause No: 8.23 Enterprise Management System (EMS)	269	Asset Management	Asset Management, Inventory Management, Asset record detail	Switch EMS will provide Fault Management and will send the events and alarms from the network to an NMS in real time. Asset/inventory record management etc is not in the context of EMS. Please clarify.	Clause is self explanatory.
720	Tender Clause No: 8.11 TECHNICAL, FUNCTIONAL REQUIREMENTS & SPECIFICATIONS	246	17	For Type-IV Switch Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies.	Telecom Engineering Centre (TEC) the standardization body of dept. of Telecom has made exhaustive specification for various equipment being offered in the tender. The Type/TSEC approval certification against tender/GR specifications involves detailed Lab testing and field trials which takes even months. Kindly confirm OEM having TSEC/Type approval certificates taken against similar networking project are acceptable and can be submitted against the clause. However no relaxation in RDSO technical specs or compliance/certification is envisaged. Kindly confirm.	Clause as per tender prevails.
721	Tender Clause No: 4.A.14.1 Eligibility Criteria Requirements for Bidders	133	2	Working of Model Offered Each offered model or its im-mediate predecessor in the same series/family (an undertaking by the OEM has to be submitted in support in case of immediate predecessor) of equipment for camera, server,storage, switches, video recorder unit/Mobile Network Video Recorder, Network Video Recorder (NVR) and Access Point should have been working for at least six months in India or Abroad.	Telecom Engineering Centre (TEC) the standardization body of Dept. of Telecom has made exhaustive specification for various equipment being offered in the tender. The Type/TSEC approval certification against tender/GR specifications involves detailed Lab testing and field trials which takes even months. Kindly confirm OEM having TSEC/Type approval certificates taken against similar project against the specific GR are also eligible to offer their equipment. However no relaxation in RDSO technical specs or compliance/certification is envisaged.	Clause as per tender prevails.
722	RailTel/Tender/OT/CO/P/20 18-19/CCTV at Stations & in Coaches/472	243	8.9 Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	17. Minimum Operating Temperature 0 to 50 degree.	24 port switch comes with 0 to 45 celcius temperature across leading OEM's with enterprise class product. Kindly modify the operating Temp 0 to 45 degree celcius as asked for in Type 4 switch in the RFP. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Clause as per tender prevails.

723	RailTel/Tender/OT/CO/P/2018-19/CCTV at Stations & in Coaches/472	243	8.10 Switches Type Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	20. Minimum Operating Temperature 0 to 50°C.	24 port switch comes with 0 to 45 celcius temperature across leading OEM's with enterprise class product. Kindly modify the operating Temp 0 to 45 degree celcius as asked for in Type 4 switch in the RFP. Operating temperature up to 50 degree celcius will limit only one or two oem's to participate with industrial grade devices.	Clause as per tender prevails.
724	RailTel/Tender/OT/CO/P/2018-19/CCTV at Stations & in Coaches/472	247	8.12 Managed PoE Ethernet Switch As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.	4.3 Managed PoE Ethernet Switch: ii. Ethernet Ports : a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	We understand Managed 8 port switch required with RJ45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All Leading Oems have RJ-45 Intercae which is industry standard.	Clause as per tender prevails.
725	RDSO/SPN/TC/65/2019-New Clause to be added	29 of 61	10.1	New Clause to be added in Server Specifications	The Server Platform OEM should be listed in the Top 3 Server Infrastructure vendors of IDC/Gartner in last 3 consecutive quarters.	Clause as per tender prevails.
726	RDSO/SPN/TC/65/2019-New Clause to be added	33 of 61	11.3	New Clause to be added-Power Supply not more than 200W	The system would consume less energy, without compromising on the asked specification.	Clause as per tender prevails.
727	RDSO/SPN/TC/65/2019-New Clause to be added	33 of 61	11.3	New Clause to be added-Cabinet Volume should be less than 8 Liters	The system would consume less desk space, without compromising on the asked specification.	Clause as per tender prevails.
728	RDSO/SPN/TC/65/2019-New Clause to be added	33 of 61	11.3	New Clause to be added-Dust Filter for Dust protection	The system can be protected from possible wear and tear due to dust, which is generally the scenario at different stations PAN India.	Clause as per tender prevails.
729	RDSO/SPN/TC/65/2019-New Clause to be added	33 of 61	11.3	New Clause to be added-Performance optimizer software	Helps in optimizing key ISV applications	Clause as per tender prevails.
730	RDSO/SPN/TC/65/2019-New Clause to be added	33 of 61	11.3	New Clause to be added-The workstation should be certified to run popular ISV applications	Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Clause as per tender prevails.

731	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Out-of-Band Systems Management (Intel vPro Technology)	Helps manage the Machine for Out-of-Band Management functionalities	Clause as per tender prevails.
732	RDSO/SPN/TC/65/2019	34 of 61	12.2	New Clause to be added- Storage Backend Connectivity	Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, " Backend Interface – 12 Gbps or higher ". This clause will ensure that Railtel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Clause as per tender prevails.
733	RDSO/SPN/TC/106/2019	11 of 21	4.2 (vi)	Storage: HDD/SSD of minimum 8 TB Capacity.	Storage : 4TB Internal Capacity HDD/SSD OR 8 TB Capacity Internal or External HDD/SSD option. Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU, Wifi AP & Managed PoE Switch shall be housed in concealed, powder coated metal enclosure with suitable Ingress Protection for dust and water. So it should be allowed to propose this capacity as internal OR External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile-NVR vendors.	Clause as per tender prevails.
734	RDSO/SPN/TC/106/2019	11 of 21	4.2 (xvi)	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration.	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application OR MIL-STD-810G for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. MIL-STD-810G focuses on tailoring military equipments from different environments to transportation conditions such as shocks. MIL-STD-810G testing methodologies calls for the use of multiple vibration exciters for performing multi-axis shaking to excite test article resonances and simulate real-world vibrations. This method combines three distinct tests on the x, y, and z axis into one. It is our request to allow MIL-STD-810G certification to be considered here and there by not restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.
735	RDSO/SPN/TC/65/2019	29 of 61	9.3	Large Format Display Monitors shall be LED backlight type- Screen Size- 55" (inches) or larger	Since Our Display Screen size is 54.6". Kindly change the "Screen Size - 54 inches or bigger".	Clause as per tender prevails.
736	RailTel/Tender/OT/CO/P/20 18-19/CCTV at Stations & in Coaches/472	156	Clause 4.A.48. Make in India	Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%	As per the clause "4.A.48 Make in India" in the RFP, we are under an obligation to give an undertaking to set up a manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in a planned manner from the third year. We would like to submit that most of the global leading IT manufacturers of server, storage & networking are already established in India. As a technology, we as OEMs of IT products are dependent on the other OEMs for the critical components which are used in these products like Processors, Motherboards, RAM, Flash Memory, Hard disk drive etc. which constitute the major cost in a product. These subcomponents are sourced from global OEM's like Intel, AMD, Samsung, Hynix, Toshiba and Seagate which are not manufactured in India. In that scenario achieving domestic value addition year on year basis as per tender clause is impossible. With the above clause, we believe, Indian Railway and public at large, will be deprived of world class technology which is being deployed for safety and security. Considering the above submissions, we request you to kindly consider our request and exempt the applicability of Clause 4.A.48 of the mentioned RFP.	Please refer Corrigendum-V.
737	RailTel/Tender/OT/CO/P/20 18-19/CCTV at Stations & in Coaches/472	241	Clause 8.3.1.2 Video Surveillance System Hardware Sizing	Bidder to also propose a redundant server/NVR in 1:1 per RPF/GRP Thana/Post location to ensure uninterrupted recording and playback functionality in case of failure of any Server/NVR.	Kindly clarify if redundant server is to be offered for Video Analytics and Face Recognition System also.	Clause as per tender prevails.

738	RailTel/Tender/OT/CO/P/20 18-19/CCTV at stations & in Coaches/472 dated 22.02.2019	10, 24, 36, 49	Point e	Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Requesting to define minimum usable capacity on Storage systems at each RPG/ GRP Thana. This will help in specifying clear requirements for each bidder and will rule out any ambiguity for the capacity requirement. However, the bidder can offer more capacity as per the solution design. Therefore, requesting to add the clause as, " Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. The minimum usable capacity should be 150 TB and bidder may offer more as per their sizing requirement"	Please refer Corrigendum-V.
739	8.8 Switches Type-I	RDSO-38	1	Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP ports	Request you to kindly modify this clause as "Switch Should Support 8 10/100/1000BASE-T PoE and 2 x 1G/10G SFP+ ports" The uplink port should be scalable so that when the railtel wants to upgrade the backbone connectivity, they don't required to change the hardware.	Clause as per tender prevails.
740	8.8. Switches Type-I	RDSO-38	2	Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS	Request you to kindly modify this clause as "Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS with 1Gbps DRAM and 512 internal Flash" As per industry standard , Switch should have sufficient amount of DRAM and Flash to insure bidder to propose enterprise grade switch to meet Railtel project requirement	Clause as per tender prevails.
741	8.10 Switches Type-III	RDSO-37	1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	May be typo error because SFP+ tends to 1G/10G ports. Kindly change "The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G/10G SFP+ ports". The uplink port should be scalable so that when the railtel wants to upgrade the backbone connectivity, they don't required to change the hardware.	Please refer Corrigendum-V.
742	8.10 Switches Type-III	RDSO-37	1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	The Type-III switch is POE or non-PoE because RFP referred to to RDSO specs RDSO/SPN/TC/65/2019 Revision 5.0 or latest and in RDSO it is PoE switch. Please clarify.	Please refer Corrigendum-V.
743	8.10 Switches Type-III	RDSO-38	18	IPv6 feature should be ready from day 1.	Type 3 switch will be deployed to connect Server & applications in DC & RPF/Thana. Switch should have Ipv6 routing capabilities work in DC environments. Pls modify the clause as "IPv6 feature should be ready and & 5K Ipv6 routing enteries from day 1."	Tender condition prevails
744	8.11. Switches Type-IV	144	6	Switch shall have 6 Nos. of Gigabit SFP ports and 4 Nos. 10/100/1000 Base – TX with 6 Nos. of 10 Gigabit SFP+ ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard , supporting half duplex mode,full duplex mode and auto negotiation on each port of 1G to optimize bandwidth.	Since 10 Mbps and 100 Mbps is old technology and obsolete. Now 1G (1000 Mbps) is new technology and most of the users are using Gigabit ethernet ports. Request you to kindly modify the clause as "Switch shall have 6 Nos. of Gigabit SFP ports and 4 Nos. 1000 Base – TX with 6 Nos. of 10 Gigabit SFP+ ports complying to 802.3z and 802.3ab standard , supporting half duplex mode,full duplex mode and auto negotiation on each port of 1G to optimize bandwidth."	Clause as per tender prevails.
745	8.11. Switches Type-IV	145	14- (x.)	It shall also support SYNC Ethernet and SNMPv3.	Request you to kindly remove the SYNC Ethernet as this is not required in the solution and modify the clause as "It shall also support SNMPv3"	Please refer Corrigendum-V.
746	8.11. Switches Type-IV	145	14- (x)	Shall support at least 32K MPLS labels.	We understand that 1K labels can able to meet the soluton requirement.Also same has been considered in earlier Tender specifications.Kindly modify the clause as "Shall support at least 4K MPLS labels" to allow leading bidder to participate..	Clause as per tender prevails.
747	General Guidelines			Additional Recommendation for Railtel Network Project	As per Industry standard ,Network should be build in such a way that each and every user should connect & access the network securily based on the user identity Kindly add the clause as "The system should allow only authorized users & devices to access the Multivendor Network based on Type ,Identity, Time, Location and Railtel Security compliance policy to prevent unauthorize malicious activities. Each authorize user will be rated based on their access behaviour across multi-vendor network utilizing system/device logs, network packet logs & AI -ML analytics."	Not agreed. Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
748	10.0 Server Hardware and Network Video Recorders	29	RDSO	Additional Recommendation for Railtel Network Project	Security is an important aspect, since the requirement is for CCTV we would like to recommend following Security functionalities : a. For firmware security, system should support a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable. b. Should maintain repository for firmware and drivers recipes to aid rollback or patching of compromised firmware. Should also store Factory Recovery recipe preloaded to rollback to factory tested secured firmware c. System should support Encryption of the data (Data at rest) on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management for enterprise-wide data encyption deployment.	Not agreed. Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
749	10.0 Server Hardware and Network Video Recorders	29	RDSO	Additional Recommendation for Railtel Network Project	Offered Server must have been listed in industry standard Benchmarks like :Spec Benchmark	Clause as per tender prevails.
750	12.0 External Storage Device	34	RDSO	Additional Recommendation for Railtel Network Project	The Storage must support 6 Gbps or Higher Backend SAS Ports, and should offer minimum 48 Gbps of Backend Bandwidth	Clause as per tender prevails.

751	8.23 Enterprise Management System (EMS)	265	Service Management (Help Desk) and SLA Management	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted.	As per the Industry standards, it is a best practice in most of the Central / State Government's initiative to select the ITSM tool, which is certified on minimum 10+ ITIL 2011 processes, out of total 16 processes, to ensure product's ITIL compatibility for workflows, functionality, terminology and documentation against general platform, core and integration criteria. This is so as minimum 10 ITIL processes are essential to design an effective ITSM framework to cover all the basic aspects of IT & users. Pls consider the same as : " The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 10+ ITIL 2011 processes (undertaking on OEM's letter head to be submitted) of all the ITIL processes: Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted."	Clause as per tender prevails.
752	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "The solution must have at least 3 deployments in Indian Government/ Public Sector, monitoring & managing 10,000+ network nodes in each of such deployments. Customer names, solution details and OEM undertaking needs to be provided at the time of bidding." This is to ensure that the EMS solution is proven at the scalability required for the said project and is operational in the Indian Public Sector space and thereby avoid risk of being a test bed for solutions not known to scale up to the requisite levels.	Please refer Corrigendum-V.
753	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "All the NMS/EMS components must be from the single OEM." Since NMS/EMS consists of multiple components, having all these components from the same OEM will ensure that the components are pre-integrated and adequately tested and hence time to value realization is quick and issues of integration does not arise.	Clause as per tender prevails.
754	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "NMS should support out of the box monitoring of at least 3000+ devices from at least 150+ vendors." Since this is a network intrinsic project, with target infrastructure scaling to 20,000 devices from a unified console, it is extremely crucial to have devices profile coverage from variety of vendors out of the box from single tool which will provide simplicity in managing NOC. This would avoid the complexity of managing multiple tools and technologies and also avoid the requirement of various element managers.	Clause as per tender prevails.
755	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "The proposed solution must be an industry standard solution from an OEM that is ISO 27034 certified." ISO 27034-1 standard helps organizations integrate security controls in the software through their software development cycle, by defining security frameworks & vulnerability management processes. This certification protects customer assets from potential cyber breaches & security threats while complying with the Application security standards.	Clause as per tender prevails.
756	8.21	261	4	Front door - Rack should have front door tough and transparent glass fitted on MS/CRCA sheet on sides with Lock MS/CRCA door plain having ventilation holes bottom side with dust filters.	Kindly clarify. The door shall be having a Glass Window at top and at bottom deflector with filter is required.	Clause as per tender prevails.
757	8.21	261	5	Top & Bottom	No. of Glands and size required. Also providing Gland at top in IP cabinet is not possible, the same should be at the bottom or at side wall only. Also confirm the same need to be provided at Front Side or Rear Side	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
758	8.21	261	8	Cable Manager	Vertical Cable Manager been asked is to be fixed which side (Front / Rear).	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
759	8.22	262	9	Power Distribution Unit (PDU)	Kindly clarify on the PDU Amp Rating with Number and Type of socket required i.e. Indian Round Pin combination socket of 5/15 Amp or IEC Type Socket.	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
760	8.16.1 & 8.16.2 & 8.16.3	248/249 & 250 (1kva & 2kva UPS)	10	Input Voltage range shall be mentioned as this is missing in the RFP	It shall be 80 to 280Vac for 50 to 100% load	Please refer Corrigendum-V.

761	8.16.3	251 (10kva)	5	330-460 VAC (3-phase) @ 100% load	It shall be 305 to 475 VAC for full load & is as per latest industry standards	Please refer Corrigendum-V. (Single Phase)
762	8.16.1 & 8.16.2 & 8.16.3	248 & 250 & 251 (1kva , 2kva & 10kva UPS)	1	Output Power Factor	for 1 & 2kva , it is mentioned as 0.8PF whereas for 10kva it is asked as 0.9PF	Please refer Corrigendum-V.
763	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	10(only 1kva)	Bypass Voltage(160 to 270Vac)	FOR 1kva -> This shall be replaced with Input range as wider range of bypass voltage is not recommended	Please refer Corrigendum-V.
764	8.16.3	251 (10kva UPS)	28	10kva	2 Hrs. on full load with each UPS System.	Clause as per tender prevails.
765	8.16.3	252 (10kva)	36	Nominal Recharging current 12A (1± 10%)	It shall be min. 12A as 120ah batteries need to be connected for 2 hrs back-up time	Please refer Corrigendum-V. (Minimum 10% of the offered battery AH capacity.)
766	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	4	Display - LED/LCD	LCD shall only be asked as per the latest industry standards	Please refer Corrigendum-V. (Display-LCD)
767	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	12(1kva) /11 (2kva)	>=0.9	PI clarify is this Output PF of UPS	Please refer Corrigendum-V. (Clause to be deleted)
768	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	14(1kva) /13(2kva)	AC-ACEfficiency - 85%	It shall be 88% or more	Clause as per tender prevails.
769	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	21 (1kva) /20 (2kva)	Port	Only USB is asked	Clause as per tender prevails.
770	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	25 (1kva) & 24 (2kva)	Mech/Safety /Performance	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
771	8.16.3	252 (10kva UPS)	38, 39 & 40	ESD/Safety	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
772	3.A.1.4.14	78		AMC	MC (including repair / replacement of all consumables) for 5 years after the completion of 24 months of warranty period.	Clause as per tender prevails.
773	4.A.3.	Long Term Maintenance Support (AMC)	116	Long Term Maintenance Support (AMC)	PI clarify whether battery replacement (for UPS systems) shall be part of AMC Contract	Yes. Bidder to provide AMC support for complete system including UPS and Battery.
774	3.D.6.	107	Site Acceptance Testing (SAT)	Site Acceptance Testing (SAT)	During SAT, the parameters which are possible at site shall only be the part of testing as not all parameters can be tested at site. The query is more specific to Battery Back-up or THD test which can be done at FAT(at factory only) & can't be repeated at site	Clause is self explanatory.
775	CHAPTER- 2 SCHEDULE OF REQUIREMENT	9,24,36 & 48	Item 2(b)	500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	Request you to kindly confirm the load to be considered for back-up time of 30 min. Since this is for Single PC so shall we consider a load of 150-200watts for 30 min back-up time	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.

776	SPECIFICATION NO. RDSO/SPN/TC/106/2019; 4.1 Full HD Fixed Dome type IP Colour Camera:	9	vii.	Wide Dynamic Range, ≥ 90 dB	At least, it should make the WDR as True WDR 120dB, which is standard as per CCTV industry. What's more, As higher the WDR the better the image /video captured in strong light, which also results in better VMS and FR performance.	Clause as per tender prevails.
777	SPECIFICATION NO. RDSO/SPN/TC/65/2019; 5.4 Full HD Bullet type IP Colour Camera:	21	xxvi.	Wide Dynamic Range, ≥ 90 dB	At least, it should make the WDR as True WDR 120dB, which is standard as per CCTV industry. What's more, As higher the WDR the better the image /video captured in strong light, which also results in better VMS and FR performance.	Clause as per tender prevails.
778	SPECIFICATION NO. RDSO/SPN/TC/65/2019; 5.5 4K UHD Bullet type IP Colour Camera:	23	xxvi.	Wide Dynamic Range, ≥ 90 dB	At least, it should make the WDR as True WDR 120dB, which is standard as per CCTV industry. What's more, As higher the WDR the better the image /video captured in strong light, which also results in better VMS and FR performance.	Clause as per tender prevails.
779	SPECIFICATION NO. RDSO/SPN/TC/65/2019; 6.0 Full HD Fixed Dome Type IP Colour Camera:	25	xxvi.	Wide Dynamic Range, ≥ 90 dB	At least, it should make the WDR as True WDR 120dB, which is standard as per CCTV industry. What's more, As higher the WDR the better the image /video captured in strong light, which also results in better VMS and FR performance.	Clause as per tender prevails.
780	SPECIFICATION NO. RDSO/SPN/TC/65/2019; 7.0 Full HD P/T/Z (Pan/Tilt/Zoom) IP Colour Camera:	28	xxxii.	Wide Dynamic Range, ≥ 90 dB	At least, it should make the WDR as True WDR 120dB, which is standard as per CCTV industry. What's more, As higher the WDR the better the image /video captured in strong light, which also results in better VMS and FR performance.	Clause as per tender prevails.
781	RDSO/SPN/TC/65/2019	34	12.2	Storage drive-SAS HDD, 7000 RPM or higher	Whether we can offered NLSAS drive for storage of recorded video? Pls confirm.	Clause as per tender prevails.
782	RDSO/SPN/TC/65/2019	38	14(II)	(b) Field Switches (8 ports) :SN	These switches will be installed in Non-AC environment on the platform. These switches should be of industrial grade standard. Kindly change the environmental conditions as per industrial grade switch	Clause as per tender prevails.
783	Chapter 2	71	XVII	The Bidder must provide rack space requirements (in terms of Nos. of racks, in new SOR item 3(g) under the column Qty.) in their technical offer keeping load available on each rack (<=5KVA) for the complete solution (for DC & DR) for all components like Server, Switching, Routers, Storage etc.	There is no line item in four package as 3(g) and in Package V, item 3(g) is "Software for Video Management, Video recording and Facial Recognition system for the server hardware quoted in Item no. A.3.I(a), A.3.I(b) and A.3.I(c) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.". Kindly confirm where to cater this rack requirement.	Clause as per tender prevails.
784	Chapter 2	77	3.A.1.4.2	The bidder should prepare a site plan showing exact location of different type of cameras, switches etc. at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey. The proposed site plan should have an optimum number of cameras so as to cover Railway Station from security point of view.	This may not be possible before bidding. Only possible while execution. Kindly clarify	Clause as per tender prevails.
785	Chapter 2	78	3.A.1.4.2.2	The bidder should prepare a drawing as per the standard layout provided in the tender showing exact location of cameras, switch, video recorder unit(VRU)/Mobile Network Video Recorder (Mobile NVR), Wi-Fi Access Point, Switch etc. inside a AC, Non AC, EMU coaches in consultation with RailTel.	This may not be possible before bidding. Only possible while execution. Kindly clarify	Clause as per tender prevails.
786	Chapter 3	81	3.A.1.7.9	Any land required by the bidder may be made available by Railways, if available, at the lease cost as per the latest norms of Railways.	Details of prices has to be settled / mentioned by railway official prior to bidding	Clause is self explanatory.
787	Chapter 3	82	3.A.1.10	Continuous training and retraining -"As and when required by RailTel"	Kindly define a proper timeline for training period	As per tender/ corrigendum clauses and as per requirement/slots available
788		126	4.A.8.6	For CCTV at stations, for any specific camera location, the down time should not be more than 12 hours per day. In case the down time exceeds more than 12 hours then Rs.500 per day or part thereof would be deducted for each day for each camera until the failure is restored at the reported location.	Downtime should be considered atleast 24 hrs	Clause as per tender prevails.

789	Chapter 4	144	4.A.22.1 & 4.A.22.2	All the bidders have to pay minimum amount of EMD (lowest among all the packages, as also given in IREPS tendering portal) online through IREPS tendering portal. After that, IREPS site will allow the bidder to bid in the said Tender.	Kindly confirm whether we can submit all EMD amount in the form of DD instead of online transfer.	Clause as per tender prevails.
790	Chapter 4	156	4.A.48	Bidder may note that their acceptance of the "Make in India" Clause described below is a mandatory requirement for considering the bidder eligible. The bidder is free to choose all products from either Indian Manufacturer or from Foreign Manufacturer. The foreign manufacturer/OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider), of the successful bidder, in case of each offered item, is required to set up the manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in planned manner from the third year as shown below:	Whether it is mandatory to submit this undertaking if the bidder is not claiming the PMA purchase preference. Pls confirm	Please refer Corrigendum-V.
791	II	278		PREPARATION OF AS-BUILT ROUTE PLANS	Whether this drawings includes the GPS coordinate of the route or not	Clause is self explanatory.
792	II	291	II.5.2	The earth pit shall be of permanent and maintenance free (PMF) type. The earth pit shall include the components, such as – earth rods, compression couplers, earth enhancement material and connecting wires, earth-bus bar and all accessories. It is meant to be used for earthing for equipments	Qty not specified	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
793	Corrigendum 1	1,2		Mode of Submission of EMD	As per corrigendum EMD has to be submitted online. Kindly confirm whether bidder can submit the EMD in the form of BG or DD	Clause as per tender prevails.
794	General			Detailed BOQ	Kindly provide the station wise Camera BOQ for stitching an optimal technical solution	Bidder to quote as per SOR.
795	General			OS and Database	Kindly add OS and Database also in the SOR as line items	Clause as per tender prevails.
796	General			Method of submission of Bid	Kindly confirm if any firm is participating more than one package, then the technical bid should submit as many number of package or single bid will be sufficient for multiple package.	Clause is self explanatory.
797	General			Physical Bid Submission	Kindly confirm whether all technical brochures, OEM details etc has to be submitted as physical copy. Kindly confirm whether multiple technical bid has to be submitted as physical copy if the bidder is participating more than one package	Clause is self explanatory.
798	General			Earthing	Earthing is major compoenet in this project. Kindly add earting as main line item in the SOR	Kindly refer SOR Head-I, item no. 6(h) and 6.1 (h) of packages.
799	General			All types of Switches	Whether all types of switches should be from same OEM or not? Pls confirm	Clause is self explanatory.
800	SPECIFICATION NO. RDSO/SPN/TC/65/2019 Revision 5.0	32	10.2	Mobile Network Video Recorder (Mobile NVR)- Storage : HDD/SSD of minimum 8 TB Capacity.	Since Mobile Network Video Recorder will be installed in train,It will face vibration.Installing HDD in moving train cause frequent failure. So Request you to remove HDD requiremnt of Storage and put mandatory requirement of SSD from Mobile Network Video recorder.	Clause as per tender prevails.
801	Chapter 2 Schedule Of Requirement	70	XII	Proof Of Concept	1) As POC is required as per the tender, pl confirm if any of the component of proposed solution is implemented at railways and is in working condition, pl confirm if POC of that component is required or not.	Clause is self explanatory.
802	Chapter3 Scope Of Work	77	3.A.1.4.2	The bidder should prepare a site plan showing exact location of different type of cameras	1) As bidder has to provide the layouts with exact marking of the loaction of cameras for approval before the start of work, we understand that base layout of stations in AutoCAD format would be provided by Railtel for doing the needful, pl confirm.	Clause as per tender prevails.
803	Chapter3	86	3.B.2	Power and Fiber Distribution Design for Railway Stations	1) Pl confirm area/room where UPS on each platform would be installed 2) Pl confirm installation methodology for laying cables, installing cameras wherever sheds are not available.	Clause as per tender prevails.
804	Chapter3	100	3.B.8	Installation of Panic Button and associated VMS requirements for stations	1) Pl confirm 2C X 1.5 sq. mm cable required for connecting panic button & hooter with camera as per the schematic need to be considered against which SOR line item.	Clause as per tender prevails.
805	Chapter 5	293	II.5.10	Earth bus bar and connection to pit	1) Pl confirm size & type of cable to run from earth pit to copper bus bar and from copper bus bar to electronic equipments	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
806	Chapter 5	293	II.5.10 Notes	Notes	1) Pl confirm if SPDs need to be considered for every ethernet port	Clause is self explanatory.

807	Chapter 5	291	II.5.2	The earth pit shall be of permanent & maintenance free (PMF) type including components such as earth rods, compression couplers, earth enhancement material and connecting wires, earth-bus bar and all accessories.	1) PI confirm earthing has to be done as per the tender requirement or as per the RDSO specifications vide RDSO/SPN/197 Ver: 01 for the earthing system 2) As per schedule of requirement (SOR), quantities of earthing mentioned is almost 50% of the number of stations against each package, pi confirm exact quantity of earthing need to be considered against each package & station.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
808	Chapter 5	291 & 292	II.5.6	Earth Enhancement Material shall have a resistivity of less than 4.7 ohm-mtr	As per RDSO specifications vide RDSO/SPN/197 Ver: 01, (specifications for signalling equipment) and as per IS 3043:2018, the earth enhancement material shall have a resistivity of less than 0.12 ohm-mtr. PI confirm either tender or RDSO specification need to be followed.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
809	Chapter 5	292	II.5.7	Construction of Unit Earth b & c) Two electrodes of 6' each shall be joined together using a compression coupler	We would suggest to have a rod of 12 feet in a single length as the use of coupler will hinder the continuity of the current dissipation.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
810	Chapter 5	292	II.5.7	Construction of Unit Earth e) RDSO approved earth enhancing compound 10 kg.	As per the tender requirement, bore dia shall be of 4 to 6 inch and enhancing compound shall be 10 KG whereas RDSO specifications for earthing calls for 30-40kg of earth enhancing material to achieve the desired values to cover the total length of rod with compound.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
811	Chapter 5	292 & 293	II.5.9	Inspection Chamber a) A 300x300x300mm concrete box with smooth cement plaster finish along with a steel plate of 4 to 6mm thickness hinged cover with lockable management. One padlock of Godrej/link make with three keys shall be supplied for locking.	We recommend to go for the whole set of earthing as per RDSO/SPN/197 Ver: 01 as using SS pit cover will increase the cost of the earthing substantially and availability of such bigger size and heavy cover would be a challenge.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
812	Chapter 5	293	II.5.10	Earth Bus bar and connection to pit The copper earth bus bar will be 300x25x6 mm size with tin coating and holes for fixing it to the wall of the equipment room with insulation studs.	PI confirm what conductor and of what size shall be used to interconnect main earth bus bar to the end equipment.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
813	Chapter 4	140	4.A.14.1.3	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	We would request to kindly consider CMMI Level-3 OEM for face recognition system	Please refer Corrigendum-V.
814	Chapter 2	59	1 (a)	PACKAGE-V (Coach) Fixed dome type IP colour camera Qty. 50456	To know the break up of Qty. 50456 cameras, please confirm the quantity of cameras to be installed in each coach of 4620 coaches of premium train and each coach of 2400 Suburban EMU train.	Bidder to quote as per SOR.
815	Chapter 2	61	2 (a)	PACKAGE-V (Coach) Graphical User Interface based Client Software of VMS System Qty. 390	The quantity of GUI based client software given in SOR is 390 (to be installed at Thana cluster). However, the total number of Thana clusters is 552. Please confirm the criteria of distribution of 390 nos. GUUI in 552 nos. cluster locations.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
816	Chapter 2	66	4 (b)	PACKAGE-V (Coach) Supply of IT infrastructure and associated items at Railway Stations Wireless Access Point per specification defined in clause 8.19 of chapter 8 Qty 1325	As Wireless Access Point has to exist/ installed at platform, please confirm the distribution of each type of station A1, A, B etc. for the given quantity of 1325 nos.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
817	Section 8.3.2.1	242	8.3.2	Data Offloading	There is no clarity on functional requirement in tender RFP for data offloading. If we assume to transmit all available recording in MNVR to station Access point once train reaches at station, it would be very difficult to offload the entire data in such a short span of time. Please explain this requirement in details for better understanding.	Please refer Corrigendum-V.
818	2		7 (a)	STP CAT-6, Unit :- No.	STP CAT-6 usually come either in meter or in a box of 305 meters. Does Railtel want 601838 number of boxes. If not than Unit should be changed to meter.	Please refer Corrigendum-V.
819	2		7(b)	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D), Unit :- No.	Unit for 12 Core OFC can either be in meters or in Kilometers. Kindly suggest whether Railtel want 1466345 meter of OFC or 1466345 Km of OFC . Unit should be changed to meter or Km.	Please refer Corrigendum-V.
820	2		7(c)	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards), Unit :- No.	Kindly suggest whether Railtel want 1157318 meter of Copper Cable or 1157318 no of boxes/bundles. We request that unit should be changed to accordingly.	Please refer Corrigendum-V.
821	2		7 (e)	32mm PVC flexible pipe	Specification/Grade of PVC flexible Pipe has not been given. Kindly suggest whether it should have spring into it or not. It would be desirable if we can get complete specifications for the same.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.

822	2		7.1 (a)	STP CAT-6, Unit :- No.	STP CAT-6 services usually calculate based upon per meter or per Km basis. Request Railtel to changed the unit accordingly and in case of no. of boxes, quantity should be changed accordingly	Please refer Corrigendum-V.
823	2		7.1 (b)	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D), Unit :- No.	12 Core OFC services can either be calculate in meters or in Kilometers. Request Railtel to change the unit to either meter or Km.	Please refer Corrigendum-V.
824	2		7.1 (C)	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards), Unit :- No.	Request railtel to change the unit to meter/km or in case of boxes/bundles, quantity should be changed accordingly.	Please refer Corrigendum-V.
825	2 & 8		7 (g) & 7.1	GI Pipe	Specification/Grade of GI Pipe has not been given.	Please refer Corrigendum-V.
826	3 & 7		3.A.1.4.9	RailTel shall provide the interconnection facility at their POP to integrate the station network. However, the bidder is expected to mention the bandwidth requirement at each station in their technical bid proposal	While no. of camera's have been given, however FPS will be required to calculate bandwidth requirement. Thus, kindly suggest what FPS has to be taken for the bandwidth calculations.	Clause as per tender prevails.
827	4		4.A.14.1.3	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	We would like to request from Authority to kindly consider CMMI Level -3 Companies as well.	Please refer Corrigendum-V.
828	8		8.22 9 (42U Rack)	Adequate and Redundant power distribution units with electronically controlled circuits for surge and spike protection, isolated input to ground and output to ground.	Required Sockets Indian Round pin or C13 & C 19 Combination with IP (Rack level) or switched PDU	Bidder to quote as per SOR, technical and functional requiremnet of the system as defined in the tender document.
829	Additional Queries			Tentative List of Stations & Trains	Although Tentative list of Stations & Trains have been given, Various cables and it's accessories list per station/trains are missing. Request Railtel to either give us breakup of OFC,CAT-6 & PVC Copper cable along with various pipes like HDPE/GI/PVC on Per station and Per train basis or Give us layout drawings of each station.	Bidder to quote as per SOR, technical and functional requiremnet of the system as defined in the tender document.
830	Chapter 3	48	3.A.1.6	The bidder shall be responsible for transportation and storage of Equipment and all other items required for Installation and Commissioning of the network to RailTel's stores/sites as advised.	We request you to clarify whether Railtel/Railway will provide space/ store room at each station for storage of high value Material during I&C period.	Bidder is required to arrange their own store for the same.
831	Chapter 3	81	3.A.1.10	To provide professional training and development services at each stage of the project viz. installation, testing, operation and maintenance	We request you to kindly clarify location of the training to be conducted or is the training to be done at each Thana/RPF post locations	Centralized as well as distributed locations such as Stations, Region HQ, RPF Chowkis etc. as per requirement.
832	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total A category Stations in southern region are 71 Nos	With reference to the List of stations annexure document , there is diffierence in Number of Category A stations in southern region. As per table given in page 204- Cataagory A station- 71 Nos As per annexure document Category A Station - 81 Nos Help us to understand the qty of Category A stations in Southern.	Bidder to quote as per SOR.
833	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total Bcategory Stations in southern region are 75 Nos	With reference to the List of stations annexure document , there is diffierence in Number of Category B stations in southern region. As per table given in page 204- Cataagory B station- 75 Nos As per annexure document Category B Station - 90 Nos Help us to understand the qty of Catagory B stations in Southern.	Bidder to quote as per SOR.

834	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total C category Stations in southern region are 94 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in southern region. As per table given in page 204- Cataagory C station- 94 Nos As per annexure document Category C Station - 103 Nos Help us to understand the qty of Catagory C stations in Southern.	Bidder to quote as per SOR.
835	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total D category Stations in southern region are 212 Nos	With reference to the List of stations annexure document , there is difference in Number of Category D stations in southern region. As per table given in page 204- Cataagory D station- 212 Nos As per annexure document Category D Station - 291 Nos Help us to understand the qty of Catagory D stations in Southern.	Bidder to quote as per SOR.
836	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total E category Stations in southern region are 897 Nos	With reference to the List of stations annexure document , there is difference in Number of Category E stations in southern region. As per table given in page 204- Cataagory E station- 897 Nos As per annexure document Category E Station - 1198 Nos Help us to understand the qty of Catagory E stations in Southern.	Bidder to quote as per SOR.
837	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total A category Stations in Eastern region are 62 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in Eastern region. As per table given in page 204- Cataagory A station- 62 Nos As per annexure document Category A Station - 53 Nos Help us to understand the qty of Catagory A stations Eastern reg.	Bidder to quote as per SOR.
838	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total B Category Stations in Eastern region are 84 Nos	With reference to the List of stations annexure document , there is difference in Number of Category B stations in Eastern region. As per table given in page 204- Cataagory B station- 84 Nos As per annexure document Category B Station - 69 Nos Help us to understand the qty of Catagory B stations in Eastern	Bidder to quote as per SOR.
839	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total C category Stations in Eastern region are 246 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in Eastern region. As per table given in page 204- Cataagory C station- 246 Nos As per annexure document Category C Station - 217 Nos Help us to understand the qty of Catagory C stations in Eastern.	Bidder to quote as per SOR.

840	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total D category Stations in Eastern region are 291 Nos	With reference to the List of stations annexure document , there is difference in Number of Category D stations in Eastern region. As per table given in page 204- Cataagory D station- 291 Nos As per annexure document Category D Station - 210 Nos Help us to understand the qty of Catagory D stations in Eastern.	Bidder to quote as per SOR.
841	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total E category Stations in Eastern are 1169 Nos	With reference to the List of stations annexure document , there is difference in Number of Category E stations in Eastern region. As per table given in page 204- Cataagory E station- 1169 Nos As per annexure document Category E Station - 868 Nos Help us to understand the qty of Catagory E stations in Eastern	Bidder to quote as per SOR.
842	Chapter 8	241	8.3.1. 2	with reference to clause 8.3.1.2 Video Surveillance System hardware sizing "Approximate number of cameras considered across 6124 Railway Stations are 89844 units "	With reference to clause 8.3.1.2 Total camera quantity given 89844 units As per chapter 2 SOR Head I SL No 1(a),1(b),1(c),1(d) Norther region total camera = 20834 units Souther region total camera = 18929 units Eastern region total camera = 26389 units Western region total camera= 15533 units Total Camera quantity for all regions is 81685 Units Please confirm the Quantity of cameras	Bidder to quote as per SOR.

843	Chapter 8	240	8.3.1.1.1	<p>Implementation scheme for Video Surveillance system will be RPF/GRP Thana/Post Clustered based architecture as mentioned in RDSO specification no. RDSO/SPN/TC/65/2019 Rev 5.0 or latest with all amendments.</p> <p>For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording.</p> <p>Therefore, bidder is required to propose a cluster based solution at RPF/GRP Thana/Post locations on the basis of following design parameters.</p>	<p>With reference to RFP clause 8.3.1.1.1 of chapter 8 we request you to share the information on 552 clusters (Division, category of station , Station name) and also indicate how many stations of each category will be connected to each of these 552 cluster locations.</p> <p>This information is required to estimate the server & storage sizing at each Cluster location accordingly.</p>	Bidder to quote as per SOR.
844	Chapter 2	9	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	<p>SOR2.1(b)</p> <p>PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.</p>	<p>As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for North there are 151 RPF/GRP/Thana Posts and PC workstation are only 53 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.
845	Chapter 2	50	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	<p>SOR2.1(b)</p> <p>b)PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.</p>	<p>As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for South there are 149 RPF/GRP/Thana Posts and PC workstation are only 86 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.
846	Chapter 2	37	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	<p>SOR2.1(b)</p> <p>PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.</p>	<p>As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for EAST there are 149 RPF/GRP/Thana Posts and PC workstation are only 77 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.
847	Chapter 2	25	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	<p>SOR2.1(b)</p> <p>b)PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.</p>	<p>As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and PC workstation are only 58 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.
848	Chapter 2	25	SOR	<p>SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.</p>	<p>As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in no. of UPS at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and UPS are only 71 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.
849	Chapter 2	50	SOR	<p>SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.</p>	<p>As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in no. of UPS at RPF/GRP/Thana Posts, i.e. for Sothern there are 149 RPF/GRP/Thana Posts and UPS are only 100 . Kindly clarify point for better understanding.</p>	Bidder to quote as per SOR.

850	Chapter 2	37	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in UPS at RPF/GRP/Thana Posts, i.e. for EASTERN there are 149 RPF/GRP/Thana Posts and UPS are only 107 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
851	Chapter 2	10	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in UPS at RPF/GRP/Thana Posts, i.e. for Northern there are 151 RPF/GRP/Thana Posts and UPS are only 70 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
852	Chapter 2	25	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. of Rack at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and Racks are only 71 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
853	Chapter 2	50	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. of RACKS at RPF/GRP/Thana Posts, i.e. for Southern there are 149 RPF/GRP/Thana Posts and RACKS are only 100 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
854	Chapter 2	37	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. Racks at each RPF/GRP/Thana Posts, i.e. for EASTERN there are 149 RPF/GRP/Thana Posts and RACKS are only 107 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
855	Chapter 2	10	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One 19" Rack per RPF/Thana Post But as per BoQ there is mismatch in Racks at RPF/GRP/Thana Posts, i.e. for Northern there are 151 RPF/GRP/Thana Posts and 19" RACKS are only 70 . Kindly clarify point for better understanding.	Bidder to quote as per SOR.
856	Chapter 4	144		The EMD will be payable by Bank Draft in favour of RailTel Corporation of India Limited, New Delhi.	Since the amount of EMD is above INR 50 Lacs for each region, we request to allow bidders to submit EMD in form of Bank Guarantee also.	Clause as per tender prevails.
857	Chapter 2	9	2.1 a) and e) SCHEDULE OF REQUIREMENT	a) VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System. e) Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days	At RPF/GRP/ Thana Post we are giving 30 days recording through NVR or server but as per BoQ there is separate storage system mentioned. Kindly help us to provide better clarification for these points for understanding.	Clause is self explanatory.
858	Chapter 2	9	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	a)VSS Hardware and all accessories required for installation purposes for Video Recording, Video Analytic and Facial Recognition System as defined in clause 8.2 and 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII b)PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories. d)Large Format Display Monitor (55" or Higher) as defined in clause 8.7 of chapter 8.	As per tender there will be atleast 1 work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for North there are 151 RPF/GRP/Thana Posts and PC workstation are only 53 and 106 display Monitor as well as if we are using 24" screen at PC work station then we are unable to find out use of 55" screen. Kindly clarify point for better understanding.	Bidder to quote as per SOR.

859	Chapter 2	61	2.1 a) SCHEDULE OF REQUIREMENT Coaches	a) Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	As per Tender there will be Work station at RPF/GRP/Thana Post but according to BOQ, quantity for PC work station is 390 whereas total RPF/GRP/Thana Post is 552. Kindly help us to understand point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
860	Chapter 2	13	3.1 a) SCHEDULE OF REQUIREMENT	a) VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes.	As per BOQ, VMS and FRS system are separate for all Regions at Data center. Kindly clarify whether we need to give single VMS and FRS system for all zones or we need to keep it separate. Kindly clarify point for better understanding.	Clause as per tender prevails.
861	Chapter 8	248	8.13.4	SFP+ (350mtrs) Should support 350m optical distance.	Every Major OEM use technology of 850nm wavelength in 10GB module for transmission and 850nm will work efficiently if we keep optical distance 300m. Hence, request you to kindly amend clause as Should support min. 300m or more optical distance. Keeping 350m will restrict specific OEM to participate, also it will increase the undue cost.	Clause as per tender prevails.
862	Chapter 3	101	3.B.1 Architecture Overview	RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System	There are two Railtel Datacenter, one at Secunderabad and other at Gurugram, please help to clarify that how many zones (North, South, East or West) will be supported by each Datacenter. We recommend to have two zones in each datacenter which will help to balance the bandwidth load and should support Video Management Redundancy in each datacenter.	Bidder to quote as per SOR.
863	Chapter 3	99	3.B.7 Architecture of VSS/CCTV system for stations and Coach:	The tentative VSS architecture for system to be deployed in Train Coaches	The VSS architecture for system to be deployed in Train Coaches mentions the usage of the panic button inside the coaches, same has not been reflected in the BOQ of the coaches, please help us to clarify this point.	Please refer Corrigendum-V.
864	Chapter 8	239	8.2.2 Mobile Network Video Recorder for Coach:	Each Coach shall be provided with a Video Recorder Unit or Mobile Network Video Recorder (Mobile NVR) along with System Software	For optimized solution and to avoid hardware complexity of network architecture, we suggest to provide an option of using one Video Recorder Unit or Mobile Network Recorder for two coaches without affecting the solution and storage requirements as per Tender. It will also help to design a Economical/Cost-effective Solution.	Clause as per tender prevails.
865	Chapter 8	253	8.19.2 Wi-Fi Access Point and Wireless Controller	Specification of Cloud/Appliance based Wireless Controller	As per architecture and solution provided in tender the Wireless Controller is required at each Datacenter, but same is not reflected in the Tender BOQ. Thus, please help to clarify the exact quantity of the Wireless Controller required in the BOQ.	Please refer Corrigendum-V.
866	Chapter 8	275	8.26.2	Remote viewing on Web and Mobile App for CCTV system at Stations	Kindly help to Specify below Points 1) Total No of Users. 2) Total no concurrent logins.	Please refer Corrigendum-V.
867	Chapter 8	253	3.B.5, 8.3.2.1, 8.19	Wi-Fi Access Point and Managed PoE Ethernet Switch Wifi AP :- 10/100/1000 Base T auto-sensing Switch :- a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	As per architecture and solution, all 8 cameras, VRU or MNVR and Wi-Fi Access Point will be connected to the managed PoE Ethernet switch. Please clarify about Wi-Fi Access Point connection to the switch, as the Ethernet/RJ45 interface for Wi-Fi Access Point is required for connection, but as per RDSO specifications switch contains all M12/M23 connectors.	Clause as per tender prevails.
868	Chapter 8	262	8.23 Enterprise Management System(EMS):	The EMS Solution (Hardware & Software) shall provide future scalability with the capacity to handle 20,000 devices from Day 1 without major architectural changes.	Tender is asking for 2 sets of EMS. License of 20,000 devices are required for each data centers?	Clause is self explanatory.

869	Chapter 8	265	8.23 Enterprise Managem ent System(E MS)	Recording every access to a device including not only scripted and automated access, but a full keystroke log. Who made what change, the reason for the change and associated ticket number must be captured.	This clause actually seems to be proprietary one. We request you to kindly remove this vendor specific clause.	Clause as per tender prevails.
870	Chapter 2	14	SOR	SOR 6 (b)Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for North is 1961, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
871	Chapter 2	28	SOR	SOR 6(b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for western is 1314, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
872	Chapter 2	41	SOR	SOR 6(b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for Eastern is 2288 Based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
873	Chapter 2	53	SOR	SOR 6 (b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for Southern is 1617, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A , 3B.3.3 for B , 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
874	Chapter 2	49	SOR	SOR 2 (f)Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 2(f) Type III switches for Southern is 247, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A , 3B.3.3 for B , 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
875	Chapter 2	38	SOR	SOR 2 (f)Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for Eastern is 256 Based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
876	Chapter 2	24	SOR	SOR 2 (f)Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for western is 174, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
877	Chapter 2	11	SOR	SOR 2 (f)Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for North is 219, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
878	8.3.1.5 Recording Parameters	242	8.3.1.7	The FRS will get the UHD feed from Recording Server/NVR at RPF/GRP Thana/Post for running Face Recognition algorithm and send alarms to designated clients at RPF/Div. HQ (Control Room) /others.	We request to allow FRS system to take video stream also directly from camera without compromising speed and accuracy of the system.	Clause as per tender prevails.
879	8.3.1.5 Recording Parameters	242	8.3.1.7	The FRS will get the UHD feed from Recording Server at RPF/GRP Thana/Post for running Face Recognition algorithm and send alarms to designated clients at RPF/Div. HQ (Control Room)/others.	We request you to kindly allow bidder to optimise the c UHD camera feed usage in the FRS software in a manner to optimise the compute and overall cost of ownership of the project for railtel without compromising the accuracy of the system.	Clause as per tender prevails.

880	8.3.1. 2 Video Surveillance System hardware sizing	241	8.3.1.2	At each such cluster i.e. RPF/GRP Thana/Post location, bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras, FRS with local matching capability with the watchlist database on up to 8 cameras stream at each RPF/GRP Thana/Post locations without any impact on the performance of the system and overall solution requirement.	Should we understand that each FRS server at RPF/GRP thana/Post shall have 8 FRS camera licenses by default? Please suggest.	Clause is self explanatory.
881	8.3.1. 2 Video Surveillance System hardware sizing	241	8.3.1.2	Bidder to also propose a redundant server/NVR in 1:1 per RPF/GRP Thana/Post location to ensure uninterrupted recording and playback functionality in case of failure of any Server/NVR. The recording and playback availability should not be affected in case of failure of any Server/ NVR. The recording of last 30 days at any given point of time should be available through redundant Server/NVR in case of Server/NVR failure.	Should FRS server be in redundangt mode or only 1 server for FRS is required at each RPF/GRP thana/Post ? Please suggest.	Clause is self explanatory.
882	8.8 Switches Type-I	RDSO-38	1	Switch Should Support 8 10/100/1000BASE-T PoE and 2 SFP ports	Request you to kindly modify this clause as "Switch Should Support 8 10/100/1000BASE-T PoE and 2 x 1G/10G SFP+ ports" The uplink port should be scalable so that when the railtel wants to upgrade the backbone connectivity, they don't required to change the hardware.	Clause as per tender prevails.
883	8.8. Switches Type-I	RDSO-38	2	Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS	Request you to kindly modify this clause as " Switch Should Support Min. 20 Gbps Switching Capacity and Maximum 64 Byte Packet Forwarding Rate is 14.88 MPPS with 1Gbps DRAM and 512 internal Flash " As per industry standard , Switch should have sufficient amount of DRAM and Flash to insure bidder to propose enterprise grade switch to meet Railtel project requirement	Clause as per tender prevails.
884	8.10 Switches Type-III	RDSO-37	1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	May be typo error because SFP+ tends to 1G/10G ports. Kindly change "The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G/10G SFP+ ports". The uplink port should be scalable so that when the railtel wants to upgrade the backbone connectivity, they don't required to change the hardware.	Please refer Corrigendum-V.
885	8.10 Switches Type-III	RDSO-37	1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	The Type-III switch is POE or non-PoE because RFP referred to to RDSO specs RDSO/SPN/TC/65/2019 Revision 5.0 or latest and in RDSO it is PoE switch. Please clarify.	Please refer Corrigendum-V.
886	8.10 Switches Type-III	RDSO-38	18	Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	Type 3 switch will be deployed to connect Server & applications in DC & RPF/Thana. Switch should have sufficient amount Packet Buffer for High video streaming to meet Railtel project requirement . Request you to kindly modify this clause as " Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better with 12 Mb packet buffer . "	Tender condition prevails
887	8.11. Switches Type-IV	144	6	Switch shall have 6 Nos. of Gigabit SFP ports and 4 Nos. 10/100/1000 Base – TX with 6 Nos. of 10 Gigabit SFP+ ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard , supporting half duplex mode,full duplex mode and auto negotiation on each port of 1G to optimize bandwidth.	Since 10 Mbps and 100 Mbps is old technology and obsolete. Now 1G (1000 Mbps) is new technology and most of the users are using Gigabit ethernet ports. Request you to kindly modify the clause as "Switch shall have 6 Nos. of Gigabit SFP ports and 4 Nos. 1000 Base – TX with 6 Nos. of 10 Gigabit SFP+ ports complying to 802.3z and 802.3ab standard , supporting half duplex mode,full duplex mode and auto negotiation on each port of 1G to optimize bandwidth."	Bidder to quote as per SOR, technical and functional requiremnet of the system as defined in the tender document.
888	8.11. Switches Type-IV	145	14- (x.)	It shall also support SYNC Ethernet and SNMPv3.	Request you to kindly remove the SYNC Ethernet as this is not required in the solution and modify the clause as " It shall also support SNMPv3 "	Please refer Corrigendum-V.
889	8.11. Switches Type-IV	145	14- (x)	Shall support at least 32K MPLS labels.	We understand that 1K labels can able to meet the soluton requirement.Also same has been considered in earlier Tender specifications.Kindly modify the clause as " Shall support at least 4K MPLS labels " to allow leading bidder to participate..	Clause as per tender prevails.
890	General Guidelines			Additional Recommendation for Railtel Network Project	As per Industry standard ,Network should be build in such a way that each and every user should connect & access the network securly based on the user identity Kindly add the clause as " The system should Support only authorized users & devices to access the Multivendor Network based on Type ,Identity, Time, Location and Railtel Security compliance policy to prevent unauthorized malicious activities. Each authorize user will be rated based on their access behaviour across multi-vendor network utilizing system/device logs, network packet logs & AI - ML analytics. "	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.

891	General Guidelines			Additional Recommendation for Railtel Network Project	As per Industry standard, Network should be build in such a way that each and every user should connect & access the network securely based on the user identity. Kindly add the clause as "Proposed Network infrastructure including both Wired and Wireless should fully support the access security features to meet RFP security compliance and behaviour analytics requirements mention in the above clause."	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
892	No. of Cores & No. of Processors	ii.		Minimum 16 Cores in Single Processor or 2 nos. of 8 Core Processor (Dual Socket)	SUGGESTION -Minimum 16 Cores in Single Processor or 2 nos. of 8 Core Processor (Dual Socket) or Minimum 256 cores GPU or higher GPU	Clause as per tender prevails.
893	8.2.1 Server for CCTV at Stations			As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments and as specified in tender document.		Clause as per tender prevails.
894	8.3.1.4 Facial Recognition System software			As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.		Clause as per tender prevails.
895	8.3.2.3 Video Analytic Software and Facial Recognition System			As per RDSO Specification of P Based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.)		Clause as per tender prevails.
896				Cryptography & Encryption for both wired & Wireless based IP Video Surveillance solution.	The tender design has not considered the importance of encryption for the video surveillance solution of both the station and the coaches. We suggest paying more attention on the data security side, since data is very critical & confidential, and we should protect it and keep it safe for the compliance of cyber security & keep some certifications like FIPS 140-2 for end to end security protocol to ensure secured CCTV system on the network & guarantee the system cyber security, The OEM should have an FIPS140-2 certificate for Information Security System to ensure security system is not compromised.	Clause as per tender prevails.
897				Hard disk drive Hot Pluggable SAS HDD, 4x600 GB, 10000 RPM or higher with minimum 06 nos. or higher internal drive bays.	Please allow SSD Drive, SSD will increase the efficiency, Accuracy & performance, as in FRS solution we need to search & compare the face from library of face storage which has analytics as well as of deep learning. Also same has been already considered/mentioned in the COACH final DRFAT. Hence, allow Hard Disk Drive: SSD/SAS HDD	Clause as per tender prevails.
898				DVD R/W Drive & USB Ports Required	USB 3.0 more advance and more popular and commonly used, whereas DVD R/W is already outdated & obsolete no one use DVD's now a days. Also same has been already considered/mentioned in the COACH final DRFAT. Hence, allow USB 3.0 and make DVD R/W as optional.	Clause as per tender prevails.
899	Hard Disk Drive	ix		Hot Pluggable SAS HDD, 4x600 GB, 10000 RPM or higher with minimum 06 nos. or higher internal drive bays.		Clause as per tender prevails.
900	DVD R/W Drive & USB Ports	xi.		Required		Clause as per tender prevails.
901	7 (a)		2	STP CAT-6, Unit :- No.	STP CAT-6 usually come either in meter or in a box of 305 meters. Does Railtel want 601838 number of boxes. If not then Unit should be changed to meter.	Please refer Corrigendum-V.
902	7(b)		2	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D), Unit :- No.	Unit for 12 Core OFC can either be in meters or in Kilometers. Kindly suggest whether Railtel want 1466345 meter of OFC or 1466345 Km of OFC . Unit should be changed to meter or Km.	Please refer Corrigendum-V.
903	7(c)		2	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards), Unit :- No.	Kindly suggest whether Railtel want 1157318 meter of Copper Cable or 1157318 no of boxes/bundles. We request that unit should be changed to accordingly.	Please refer Corrigendum-V.
904	7 (e)		2	32mm PVC flexible pipe	Specification/Grade of PVC flexible Pipe has not been given. Kindly suggest whether it should have spring into it or not. It would be desirable if we can get complete specifications for the same.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
905	7.1 (a)		2	STP CAT-6, Unit :- No.	STP CAT-6 services usually calculate based upon per meter or per Km basis. Request Railtel to change the unit accordingly and in case of no. of boxes, quantity should be changed accordingly	Please refer Corrigendum-V.
906	7.1 (b)		2	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D), Unit :- No.	12 Core OFC services can either be calculate in meters or in Kilometers. Request Railtel to change the unit to either meter or Km.	Please refer Corrigendum-V.

907	7.1 (C)		2	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards), Unit :- No.	Request railtel to change the unit to meter/km or in case of boxes/bundles, quantity should be changed accordingly.	Please refer Corrigendum-V.
908	7 (g) & 7.1 (g)		2 & 8	GI Pipe	Specification/Grade of GI Pipe has not been given.	Please refer Corrigendum-V.
909	3.A.1.4.9		3 & 7	RailTel shall provide the interconnection facility at their POP to integrate the station network. However, the bidder is expected to mention the bandwidth requirement at each station in their technical bid proposal	While no. of camera's have been given, however FPS will be required to calculate bandwidth requirement. Thus, kindly suggest what FPS has to be taken for the bandwidth calculations.	Clause as per tender prevails.
910	4.A.14.1.3 (6)		4	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	We would like to request from Authority to kindly consider CMMI Level -3 Companies as well.	Please refer Corrigendum-V.
911	8.22 9 (42U Rack)		8	Adequate and Redundant power distribution units with electronically controlled circuits for surge and spike protection, isolated input to ground and output to ground.	Required Sockets Indian Round pin or C13 & C 19 Combination with IP (Rack level) or switched PDU	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
912			Additional Queries	Tentative List of Stations & Trains	Although Tentative list of Stations & Trains have been given, Various cables and it's accessories list per station/trains are missing. Request Railtel to either give us breakup of OFC, CAT-6 & PVC Copper cable along with various pipes like HDPE/GI/PVC on Per station and Per train basis or Give us layout drawings of each station.	Bidder to quote as per SOR. Item to be payable as per actual lengths of items. Station Layout & drawings preparation are under bidder scope.
913	8.21	261	1	Closed Telecom Rack wall mounted.	Apart from Wallmount Please confirm does the rack shall be having a provision of Pole Mount as well.	Please refer Corrigendum-V.
914	8.21	261	4	Front door - Rack should have front door tough and transparent glass fitted on MS/CRCA sheet on sides with Lock MS/CRCA door plain having ventilation holes bottom side with dust filters.	Kindly clarify. The door should be having a Glass Window at top, and at bottom deflector with filter is required.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
915	8.21	261	5	Top & Bottom	Providing Glands at Top is not recommended in IP Cabinet, the same should be at bottom or at sides. Required No. of Gland and size details. The Glands need to be provided at the cabinet front side or rear side.	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
916	8.21	261	8	Cable Manager	Vertical Cable Manager been asked is to be fixed which side (Front / Rear).	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
917	8.22	262	9	Power Distribution Unit (PDU)	Kindly clarify on the PDU Amp Rating with Number and Type of socket required i.e. Indian Round Pin combination socket of 5/15 Amp or IEC Type Socket (C13 / C19).	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
918	8.16.1 1KVA	248	2	Technology - PWM IGBT	Customer can get better output	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
919	8.16.1 1KVA	249	12	PF >=0.9	It is contradictory with point 1, please change it to 0.8	Please refer Corrigendum-V.
920	8.16.1 1KVA	249	18	Battery , health of UPS, any critical parameter change	UPS Manufacture should supply software of same Make for centralized Monitoring of Multi Location UPS. Please clarify if central monitoring is required for all UPS from single location. Software should have capability to generate report in various format like PDF, Excel & word, etc. All reported logs , alerts and alarms should be stored in central location.	Clause as per tender prevails.
921	8.16.1 1KVA	249	23	1 Hrs. on full load (Single Bank)	Please mention the VAH according to the UPS Efficiency.	Please refer Corrigendum-V.
922	8.16.2 2KVA	250	11	PF >=0.9	It is contradictory with point 1, please change it to 0.8	Please refer Corrigendum-V.
923	8.16.2 2KVA	250	17	Battery , health of UPS, any critical parameter change	UPS Manufacture should supply software of same Make for centralized Monitoring of Multi Location UPS. Please clarify if central monitoring is required for all UPS from single location. Software should have capability to generate report in various format like PDF, Excel & word, etc. All reported logs , alerts and alarms should be stored in central location.	EMS as asked in SOR shall also monitor UPS being installed at stations & RPF/GRP Thana/Post.
924	8.16.2 2KVA	250	22	1 Hrs. with full load	Please mention the VAH according to the UPS Efficiency.	Please refer Corrigendum-V.
925	8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis	251	28	2 Hrs. on full load with each UPS System	Please mention the VAH according to the UPS Efficiency.	Please refer Corrigendum-V.

926	Corrigendum 3	6	13. Tender Clause no. 4.A.48 (Make in India)	Further, in pursuance of the clause above, towards fulfillment of conditions pertaining to Domestic value addition, the bidder shall have to submit additional Bank Guarantee (format attached as Annexure VI) of INR 50 Cr valid for a period of Six Years and Four Months from the date of signing of contract. Bidder who has been awarded the contract is found to have violated the provision, shall be subject to financial penalty in the form of forfeiture of above referred Bank Guarantee.	We request you to delete this clause for additional BG of 50 Crs as Bidders are already providing one Bank Guarantee as a part of RFP conditions. This is a restrictive clause and will restrict in having a competitive bid in place. As a part of bid submission, bidder shall submit "Undertaking for compliance to Make In India (4.A.48)" in which bidder shall provide the confirmation that they shall be in full compliance to RFP conditions. Also bidder shall submit a Performance Bank Guarantee (PBG) to respective Executive Director/Regional General Manager within 15 days from the date of issue of LOA for AMC @ 10% of the value of the AMC contract's annual value valid for a period of 64 months (4 months beyond the AMC period of 5 years) from the date of issue of LOA.	Please refer Corrigendum-V.
927	Corrigendum 3	7	4.B.10.1.1	In addition to the instructions given in above, the bids shall be processed through Two Stage Reverse Auction method, to be implemented through IREPS portal. Two packets system shall be followed for the 1st stage of reverse auction, which means that Techno-commercial bid will be opened first; and after deciding the suitability or otherwise of the technical bids, the financial bids of only those firms which are found to be suitable shall be opened.	We request you to remove the reverse auction process from bid evaluation due to the following reasons, 1. Bidder's focus will be more shifted towards reducing prices and likely to compromise on quality. 2. Reverse auctions are more appropriate in case of product procurement rather technology related customised systems where defining variables are more. 3. OEM may not share their best quote in first instance of bidding and may hold their final no regret price level till last moment. This will affect selection of appropriate OEM. Kindly consider our request for same.	Clause as per tender prevails.
928	CHAPTER- 2	69	V	Bidder is allowed to quote only for a single Make/Model of the quoted items along with the offer. Offers without particulars of Make/Model or multiple OEMs of same item shall be liable to summarily rejected.	Since the scale of this project is quite high, the single OEM meeting the delivery target of the RFP is very minimal. Hence, we request you to kindly allow equivalent Make/Model along with the primary Make/Model. Since as System Integrator, We are responsible to meet the technical specification and SLA levels for the entire technical Solution, we request you not to insist for single make /model in the contract. Alternatively, you may kindly approve at least three makes and models for each of the equipment to be provided for this project. This will help the SI to offer a very competitive price to the customer by taking aggressive risks on their costs, which will totally benefit the customer. If only one make is insisted the vendor does not support the SI in times and therefore the cost go up considerably. For your Kind information, in almost all of the government contracts there is a list of Compendium of Suppliers approved for each of the item required for the Project. This list is made part of the contract. During execution of the contract, the SI/Contractor shall have to supply materials of makes/OEMs who are mentioned in that list only. This is followed in MPMKVCL/ GoMPRD/ PGCIL/ NTPC/ NPCIL/ DoIT-GoMP/ MPTD. None of the government project where vigilance/RTI is applicable have single make to be provided during bid submission. Hence we request you to kindly accept and amend the same.	Please refer Corrigendum-V.
929	CHAPTER- 3	118	4.A.4 Delivery/ Implementation timelines	Timeline: Category A1 & A Stations: Submission of Final Design documents - D+2M Installation, T&C - D+4M Category B & C Stations: Submission of Final Design documents - D+6M Installation, T&C - D+8M Category D & E Stations: Submission of Final Design documents - D+10M Installation, T&C - D+ 15M	The provided Timeline is very challenging considering the quantum of works. So, we request you to provide the below mentioned timeline: Category A1 & A Stations: Submission of Final Design documents - D+2M 4M Installation, T&C - D+4M 6M Category B & C Stations: Submission of Final Design documents - D+6M 9M Installation, T&C - D+8M 12M Category D & E Stations: Submission of Final Design documents - D+10M 16M Installation, T&C - D+ 15M 20M	Clause as per tender prevails.
930	CHAPTER- 4	164	Clause 4.A.19	Quantity Variation: Purchaser's Right to Vary Quantities - up to a maximum extent of +/- 30% of contract quantity.	1. We request you to keep the variation of scope of work under this clause to be limited to \pm 10% only, beyond which the quoted price shall be subject to variation. 2. Also please confirm that such variation shall be communicated within 30 days from the date of award of contract.	Clause as per tender prevails.

931	General	General	General	Additional Clause	<p>In order to have better working capital for the project we propose an Assignment clause as below to be included in the Payment Schedule, which shall allow us to factor the bill with financing institution, and therefore enable us to participate in the Tender.</p> <p>Assignment Clause (new Clause proposed) :</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 there under, 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 Employer shall acknowledge the intimation letter it may receive from such financial institution(s) or Bank(s) or NBFC (s). If the Employer does not reply within 15 days of the receipt of the intimation letter, it can be considered as "acknowledged by the Employer". Furthermore the Employer will provide an indicative date by when the funds will be released to the Contractor as a measure of comfort for the decisions of Financial Institution(s) or Bank(s) or NBFC(s)".</p>	Clause as per tender prevails.
932	CHAPTER- 2	81	3.A.1.7.9	Any land required by the bidder will be made available by Railways, if available, at the lease cost as per the latest norms of Railways.	We understand that all the charges including lease cost shall be paid over and above the contract price by Railways to bidder including statutory payment to be made to authorities. Bidder shall only be responsible for co-ordination with concerned authorities. Please Confirm.	Clause is self explanatory.
933	General	General	General	Right of way	We understand that all permission / licenses / local approval and ROW shall be made available to the Contractor by Client.Delay on account of getting such permission shall be considered for time extension. Please confirm.	ROW shall be arranged by RailTel, however, submission of desired documents for ROW shall be responsibility of the bidder.
934	CHAPTER- 3	139	4.A.14.1.3 Eligibility Criteria Requirements for OEM's 4	<p>OEMs PQ:</p> <p>The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender.</p> <p>The same should have been working satisfactorily for at least six (6) months.</p>	We request you to revise the clause to include OEMs with simialr experience in other fields too since that will make the bid more competitive for OEMs, which will result in better solution at relatively lesser cost.	Clause as per tender prevails.
935	General	General	General	Mounting of Cameras	We understand that all the camera mounts will be in Ceiling or Wall Mount in all stations. Hence bidder need not consider any poles for mounting. Request confirmation on the same.	Clause as per tender prevails.
936	CHAPTER- 2 CHAPTER - 4	69, 160	V	<p>Bidder should submit the soft copy (Word/Excel/PDFs format) of offer in DVDs/USB's. Bill of Material (BOM) must be in PDF as well as Excel format.</p> <p>4.B.8 Offline Submissions:</p> <p>The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, Institutional Area, Plot 143, Sector 44, Gurgaon, before due date & time of submission of bids specified in this tender document, in a Sealed Envelope. The envelope shall bear (the tender name), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).</p>	We understand that for Offline submission, only documents mentioned in" Clause 4.B.8 Offline Submissions" shall be submitted. We are submitting the Bill of material on the online portal and it need not be submitted again in softcopy. Request you to confirm the same.	Clause is self explanatory.
937	CHAPTER-3	80	3.A.1.7.1	Railways shall provide AC power supply at workspace for carrying out the awarded work. The successful bidder will have to pay the specified charges for the power supply as per the existing Railways Norms.	We understand that Railways will provide construction power supply for execution on chargeable basis. However, Recurring charges of electricity during 8 years (1 Year Supervised Maintenance + 2 Years warranty + 5 Years AMC) support shall be borne by Railways. Kindly confirm.	Yes.

938	CHAPTER-3	80	3.A.1.7.2	Railways shall provide for the space and power supply for the systems in-stalled in the RPF Thana/Chowkis, Control Rooms and other locations at stations.	We understand that Railways will provide site office and warehouse space at Railway Stations for execution on free of cost basis.	Bidder is required to arrange their own store for the same.
939	CHAPTER 4	117	4.A.3.3	Separate agreement for AMC after warranty period shall be entered with OEM or Bidder specifically authorized by OEM by RailTel. A fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 months (4 months beyond the AMC period of 5 years) from the date of issue of LOA shall be required to be submitted by Bidder/OEM for due fulfillment of long term maintenance support obligation	We request to allow bidders to provide a fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 Months (4 months beyond the AMC period of 5 years) and the same shall be reduced yearly after payment has been made for that year till 5th Year. Please confirm.	Clause as per tender prevails.
940	CHAPTER- 2	69	IV	Since, RailTel is also implementing Wi-Fi work at railway stations, therefore, the existing available infrastructure may be utilized by the purchaser for implementation of VSS system and such items used may not be considered as a part of Supply orders.	Please provide the details of existing infrastructure viz. 1. Availability of Power Supply from existing UPS/DCPS 2. Junction box, cabling along with protection 3. PoE switch port availability 4. Make,model, interface available with existing system 5. Nos. of sites where existing system are available and can be used	Bidder to quote as per SOR.
941	Chapter 6 & Chapter 3	197	5-2 & 4.A.4	OEM agrees to support successful bidder throughout the entire duration of this project, starting with bid preparation process up until project implementation and maintenance of the same. The project duration comprises of 90 days of implementation, 12 months of maintenance supervision period, 2 years for warranty and 5 years for AMC starting from date of issuance of LoA. However, if the implementation phase gets extended (for whatsoever reason), OEM shall extend their support on best effort basis for the same period. Delivery/Implementation timelines: Milestones for Design, Supply, Installation and Commissioning from the date of award of the Contract (LOA) are tabulated as under.	Both statements are contradictory to each other. Please clarify the same and suggest which timeline & milestone we have to follow for Design, Supply, Installation and Commissioning. We request you increase the implementation schedule to 15 months to complete the entire activity which shall encourage participation of bidders without any overloading of bid. We also request you to make the necessary changes in the Form 24.	Please refer Corrigendum-V.
942	Chapter 6	201	Form No.24	The project duration comprises of 90 days of implementation, 12 months of maintenance supervision period, 2 years for warranty (including period of extension as provided under clause 4.A.2) and 5 years for AMC.	We understand that project timelines as per RFP are 15 Months of implementation, 12 months of maintenance supervision period, 2 years for warranty and 5 years for AMC starting from date of issuance of LoA. We request you to make the necessary changes in the Form 24.	Please refer Corrigendum-V.
943	CHAPTER-3	80	3.A.1.7.1	Railways shall provide AC power supply at station/cabin/panel room/midsection buildings for carrying out the awarded work. The successful bidder will have to pay the nominal charges for the power supply as per the existing Railways Norms.	We understand that Railways will provide construction power supply for execution on chargeable basis. However, Recurring charges of electricity during 8 years (1 Year Supervised Maintenance + 2 Years warranty + 5 Years AMC) support shall be borne by Railways. Such recurring charges shall be over and above the bid price. Kindly confirm.	For doing work (initially), complete electricity charges (if electricity required to do the work), shall be payable by the bidder to Railways. However electric connection charges as well as consumption charges for running of the network is not to be payable by the bidder.
944	CHAPTER-3	80	3.A.1.7.2	Railways shall provide for the space and power supply for the systems in-stalled in the RPF Thana/Chowkis, Control Rooms and other locations at stations.	We understand that Railways will provide site office and warehouse space at Railway Stations for execution on free of cost basis. Kindly confirm.	Bidder is required to arrange their own store for the same.

945	CHAPTER 4	83,84	4.A.5.1.1	<p>4.A.5. Payment Terms</p> <p>4.A.5.1 Payment Terms for Supply portion of items supplied under Schedule – 'A' of SOR-Head-I of packages as per BOM and Price Schedule details (Chapter- 2, SOR, Note-VII and Annexure-A & B) submitted along with price bid.</p> <p>4.A.5.1.1 For hardware items, payments will be made on the basis of stations covered under a RPF/GRP Thana/Post for the material supplied in stages for various items supplied. 75% payment of the items would be made on receipt of material by the consignee duly inspected and on submission.....</p> <p>4.A.5.1.2 In case payment is to be made in foreign currency, 75% of the CIF value of imported equipment/materials would be paid through irrevocable Letter of Credit (LC) on submission</p> <p>4.A.5.1.3 15% payment of the value of items of Schedule – A shall be made by RailTel on installation & commissioning of stations/sites including at the concerned RPF/GRP Thana/Post of the cluster for CCTV at stations, 5% payment on issue of Provisional Acceptance Certificate (PAC) and the last 5% payment shall be made by Rail-Tel/REL on issue of Final Acceptance Certificate (FAC) which will be issued by respective Executive Director of the concerned region. In case of foreign currency, payment will be paid through TT/Wire Transfer (SWIFT) from Corporate Office. (15% + 5%) payment of value % of items of Schedule – A which could not be installed for want</p>	<p>We request for the following Payment terms for items supplied as below:</p> <p>10% of payment as mobilization advance against equivalent Bank Guarantee. (This BG will be valid for 18 Months).</p> <p>75% payment of the items would be made on receipt of material</p> <p>5% payment of on installation & commissioning of station/site</p> <p>5% payment on issue of Provisional Acceptance Certificate (PAC)</p> <p>5% payment on issue of Final Acceptance Certificate (FAC) or against submission of Bank Guarantee of equivalent value valid till 30 days beyond FAC</p>	Clause as per tender prevails.
946	CHAPTER-2 & 4	141	4.A.15.1	<p>Foreign exchange and/or import license if required, will be released/ provided to the contractor in connection with this contract. Part of Schedule (for imported items) can be quoted in any of the major foreign currencies viz USD, British Pound, EURO or Japanese YEN etc. In such a case, bidder should clearly specify the components of Foreign exchange and Indian currency for each item.</p>	<p>1. As per clause 4.A.15.1, we can quote prices in USD, British Pound, EURO or Japanese YEN but in Price Schedule Format (CHAPTER-2) it is not properly identified in which currency we have to quote. We request you to kindly consider quoting in INR only for the sake of clarity.</p> <p>2. Also please confirm that the payments to the bidders shall be released on the quoted currency i.e (USD, British Pound, EURO , Japanese YEN or INR)</p>	Clause as per tender prevails.
947	CHAPTER-4	160	4.B.9	<p>Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted in RailTel before Tender opening date & time. Bids without these off line submissions are liable to be rejected.</p>	<p>Since RailTel invites E-tenders, we request for Eligibility criteria related documents as applicable shall only be scanned and submitted ONLINE. Hard copy will not be submitted. Kindly confirm. No hard copy is required to be submitted apart from the ones mentioned in 4.B.8 Offline Submission.</p>	Clause is self explanatory.
948	CHAPTER 4	110	4.A.32	<p>If the contractor fails to deliver the equipment or honor the contractual commitment within the period fixed for such delivery in the contract, the Purchaser may terminate the LOA/ contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of bidder shall be forfeited/ Performance Bank Guarantee shall be encashed. The failed bidder shall not be permitted to take part in the tender for balance work.</p> <p>The Maximum Liability of bidder to any Loss/Damages to RailTel including Liquidity Damages and Performance Guarantee shall be limited to 100% of Value of contract.</p>	<p>We propose modification as follows:</p> <p>If the contractor fails to deliver the equipment or commits material breach of contractual commitment solely due to the gross or willful negligence within the period fixed for such delivery in the contract, the Purchaser may terminate the LOA/ contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of bidder shall be forfeited/ Performance Bank Guarantee shall be encashed giving 5 working days prior written intimation. The failed bidder shall not be permitted to take part in the tender for balance work.</p> <p>The Maximum Liability of bidder to any Loss/Damages to RailTel including Liquidity Damages and Performance Guarantee shall be limited to 100% of Value of contract contract value received by the bidder.</p>	Clause as per tender prevails.
949	CHAPTER 8	238	Note 3	<p>All the IP cameras as quoted by the bidder against SORChapter-2 must be sourced from the same OEM.</p>	<p>Request you to kindly amend the clause as "All the IP cameras as quoted by the bidder against SORChapter-2 shall be sourced from multiple OEM's" considering the challenging implementation schedule and competitiveness of the bid .</p>	Clause as per tender prevails.

950	CHAPTER 6	166	4	PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND 4." it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee."	The Performance BG in effect may prove to be open-ended. Therefore, we kindly request to restrict the discharge of the PBG to within 4 months beyond the date of expiry of warranty period as under Cl. 4.A.6. Please Confirm.	Clause as per tender prevails.
951	CHAPTER 3	77	3.A.1.4.8	Bidder may also be required to extend fiber/network connectivity from the nearest station to the RPF/GRP Thana/Post	Please confirm whether the location RPF/ GRP Thane/ Chowki shall be within the station area which shall be used to store the video feed. Also please provide typical distance of these location from station platform.	Bidder to quote as per SOR. Item to be payable as per actual lengths of items.
952	CHAPTER 3	78	3.A.1.4.12 3.A.1.4.13 3.A.1.4.14	Maintenance supervision period of 12 months from the date of award of PAC of the RPF/GRP Thana/ Warranty period of 24 months from the date of expiry of maintenance supervision period of installed system at no cost to Railways/ RailTel. AMC (including repair / replacement of all consumables) for 5 years after the completion of 24 months of warranty period.	We understand that Maintenance period of RPF/GRP Thana shall start as soon as the PAC happens for a particular RPF/GRP Thana. Hence Warranty & AMC of that particular RPF/GRP Thana shall start respectively Kindly confirm.	Clause is self explanatory.
953	CHAPTER 3	153	1	1. Bidders seeking Purchase preference (linked with Local content) (PPP-MII) shall be required to meet/exceed the target of Local Content (LC) of _70%_ %.	Bidders seeking Purchase preference (linked with Local content) shall be required to meet/exceed the target of Local Content (LC) of 70% 50%. We believe this will provide right balance between Preference for Make in India and providing products of renowned OEMs located across the world.	Clause as per tender prevails.
954	CHAPTER - 8	241	8.3.1.2	Approximate number of cameras considered across 6124 Railway Stations are 89844 units. Refer Chapter-7 Annexure-I for station category, Region wise camera breakup.	In this clause total cameras are 89844 however as per BOQ and total station and number of cameras per station calculations (page 169) it is coming different. i. As per this clause it is 89844 ii. As per BOQ it is 81685 iii. As per calculation with number of cameras per station and total stations it is 90114 Kindly clarify.	Bidder to quote as per SOR.
955	CHAPTER - 2	63-64,69	3	Supply of IT infrastructure, applications and associated items at RailTel Secunderabad and Gurugram datacentre(s). (a) VSS Server Hardware for Video Management and Recording system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. - Lot 2 (g) Software for Video Management, Video recording and Facial Recognition system for the server hardware quoted in Item no. A.3.(a), A.3.(b) and A.3.(c) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII. Lot 2	Here in Coaches BOQ, at Data centre Video management and recording servers with software asked. Whether video recording to be happen continuous or only alerts (as per architecture page 99) to mobile NVR and Datacenter and RPF . Please confirm	Clause as per tender prevails.
956	CHAPTER - 8	240	8.3.1.1.2	Bidder to propose server(s) as Video Management servers with 1:1 redundancy (HA mode) in RailTel Datacenter for centralized management of such multiple clusters	Please confirm whether 1:1 redundancy servers are required required for Facial recognition system and	Clause as per tender prevails.
957	CHAPTER - 3	86	3.B.1	To implement IP based CCTV system in train coaches, frequent video data and alarms are required to be sent from train coaches to command and control center (CCC) and Datacenter locations	How many days of storage to be considered for the train coaches camera. Do we need to consider 30 days of storage for all the train coaches camera at the Data center. Kindly clarify.	Clause as per tender prevails.
958	CHAPTER - 3	86	3.B.1		Kindly clarify train coaches video to be stored both at Gurugram and Secunderabad?	Clause as per tender prevails.

959	CHAPTER - 3	86	3.B.1	and control center (CCC) and Datacenter locations. Each train coach recorded video, alerts/alarms shall be offloaded from on board video recorder unit through available network i.e. Wi-Fi and 4G (LTE). RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System.	Kindly clarify 4G communication to be considered as part of the scope. If yes, 4G SIM cards and operational charges for the monthly rental will be in whose scope? Kindly clarify	4G SIM will be provided by purchaser.
960	CHAPTER - 3	99	3.B.7	Below is the tentative VSS architecture for system to be deployed in Train Coaches:	As per the architecture shown, panic buttons are shown in train coaches. But the same is not replicated in the BoQ. Kindly clarify panic buttons are to be considered inside the train coaches and also mention the number of panic buttons and associated cables quantity to be considered.	Please refer Corrigendum-V.
961	CHAPTER - 3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Kindly clarify there is no mention of Core routers, core switches, Firewall, Wireless controllers, etc. that are to be considered in the data centers of Gurugram and Secunderabad. Also the specifications for the same is not provided.	Bidder to quote as per SOR.
962	CHAPTER - 8	242	8.3.1.4	RDSO/SPN/TC/65/2019, Revision 9.0	kindly clarify 1. How many offline licenses to be considered. 2. Number of subjects/ hotlist to be considered for Face recognition database.	Clause as per tender prevails.
963	General	General	General	General	Please clarify wireless access points will be deployed at all RPF / Thana stations.	Wireless Access Point will be installed at Stations. Distribution list shall be shared with successful bidder.
964	CHAPTER - 2	70	VII	The Bill of Material will be prepared for Schedule of Requirement against each item of SOR. This Bill of Material will be called "Bill of Material for Schedule of Requirement". And will be prepared according to Note (I) to (IV) above. The Unpriced copy of the same BOM should be submitted with the technical/credential Bid for evaluation. The Bid (credential without the BOM will be summarily rejected). The Format of "Bill of Material for Schedule of Requirement" is as below:	We request you to kindly elaborate the format of BOM to be submitted.	Clause is self explanatory.
965	CHAPTER - 3	156	4.A.48.	Make in India: Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%	We request you to amend the clause as below, Domestic value addition in terms of cost of the product/software offered shall be Year 2 - > 05% Year 3 - > 10% Year 4 - > 15% Year 5 - > 25%	Please refer Corrigendum-V.
966	CHAPTER-4	144	4.A.22.2	Balance amount of EMD, if any, shall be submitted through DD along with bid submission.	We request you to amend the clause to allow payment of EMD via Bank Guarantee (BG)	Clause as per tender prevails.
967	CHAPTER-5	164 144	4.A.19	Purchaser's Right to Vary Quantities up to a maximum extent of +/- 30% of contract quantity. Purchaser's Right to Vary Quantities The purchaser shall be at liberty to enhance or reduce the quantity mentioned in the LOA as indicated in Bid Data Sheet (BDS) Chapter 5 without assigning any reasons. The bidder shall comply with such modifications unconditionally provided these are made before completion of the deliveries under the purchase order/LOA. Any such change in quantity shall have no impact on the rates mentioned in the purchase order/LOA for any such item.	We understand that the variation order of up to a maximum extent of +/- 30% of contract quantity shall be applicable till the implementation phase of the project only. Kindly confirm.	Clause is self explanatory.

968	CHAPTER -2	20, 34, 46, 58, 67, 69	SCHEDULE - 'B' - 1	<p>Total Cost of Schedule - 'B'</p> <p>In item no. B 1 of Schedule –'B', of SOR Head-I of packages, if however the bidder feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment/supply item pricing. For AMC he will be paid @ 3.5% per annum only. If the vendor quotes a higher base rate for AMC he will be paid at his quoted rate per annum and five year differential cost shall be added to equipment cost for evaluation.</p>	<p>We understand that only the only the incremental cost of AMC should be mentioned in the total value of Schedule 'B' in each of the five (5) packages (Norther, Eastern, Western, Southern, and Coaches). The total Bid value of each package should only contain the Incremental Cost of AMC value.</p> <p>For ex. If bidder is quoting AMC @ 4% per annum then Total Bid Value shall contain only 0.5% per annum of AMC, however bidder shall be paid @ 4% per annum (i.e. 3.5% + 0.5%). Kindly confirm.</p>	Clause is self explanatory.
969	CHAPTER -2	20, 34, 47, 59, 68, 69	SOR HEAD II: 1. (a) and (b)	<p>Manpower Support during warranty period (a) L1 support engineer in Field (@ defined per annum rate of Rs.3,00000/-) (b) L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00000/-)</p> <p>However, if the bidder quotes a higher base rate than the rates as defined then he will be paid at his quoted rate and the differential shall be taken for evaluation.</p>	<p>Note III on page 69 mentions about only Differential Cost to be considered for evaluation of bids. Kindly clarify whether the 'Total Cost of Schedule' should include the differential value or the total value in case the bidder quotes a higher price than the rates defined.</p> <p>For ex. If bidder need to quote L1 support engineer in Field @ 3.5 lacs per annum, the we should mention 3.5 lacs per annum in the price schedule or only 0.5 lacs per annum only. Kindly clarify.</p>	Clause is self explanatory.
970	CHAPTER -8	270	8.26	<p>At central command center, it is desired to have an integrated centralized Video Management System solution that shall allow an operator to view live/recorded video from any camera installed on stations.</p>	<p>Kindly clarify whether the purchaser would deploy its own manpower as operators during installation, warranty, and AMC phase. In case, the purchaser wants the bidder to deploy manpower as operator, then kindly provide the below details, 1. How many operators to be considered during bidding. 2. What should be the minimum qualification of the operators. 3. For how many hours operatos should be working in CCC. 4. For how long the operators should be proposed by bidder.</p> <p>Kindly provide the above details so that bidders can recruit the operators as per requirement.</p>	Clause is self explanatory.
971	General	General	General	Installation for Coaches	<p>Kindly provide more details which respect to the installation of systems in Coaches as this will help to understand the detailed breakdown plan for implementing and testing the hardware for coaches with respect to the shed to be utilized against each train.</p>	Please refer tender document, RDSO specification issued for the subject work and drawings attached with the tender for clarity.
972	CHAPTER -4	113	4.A.2.4	<p>4.A.2.4 Warranty Support For CCTV work at Railway Stations, bidder shall keep L1 Support engineer in Field (one engineer/per RPF Chowki/Thana) and two L2 Support engineers (one each for Network and VMS, server & storage system) 24x7 in RailTel Data Center.</p>	<p>We understand that the mentioned L1 & L2 Support engineers shall be deployed only during warranty period. During AMC this manpower is not required. Kindly confirm.</p>	Clause as per tender prevails.
973	CHAPTER -2	71	XVII	<p>RailTel will provide Racks at Gurugram and Hyderabad datacenter for hosting CCTV Cloud infrastructure as defined in the tender</p>	<p>Please confirm whether Onpremise storage or cloud storage is required</p>	Clause as per tender prevails.
974	RDSO/SPN/TC/65/2019 revision 5.0	Pg 28 of 69	xxvii.	<p>Two way/Bi-directional Audio Input / Output Required for sound detection</p>	<p>Please confirm sound detection feature is required for 4KUHD Fixed bullet camera, as other cameras this line has been striked out.</p>	Clause as per tender prevails.

975	CHAPTER -8	240	8.3.1.1.1	For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording. Therefore, bidder is required to propose a cluster based solution at RPF/GRP Thana/Post locations on the basis of following design parameters.	As per the SOR, VSS hardware is segregated as (N-151,W-103,E-149,S-149 and a total of 552 VSS hardware or clusters). While backworking on the quantification meeting RDSO Ver 5 latest spec clause no:10.1.3 we feel the VSS hardware is very less. We request you to kindly reconfirm do we need to strict to the quantity for VSS hardware.	Clause as per tender prevails.
976	CHAPTER -8	240	8.3.1.1.2	Bidder to propose server(s) as Video Management servers with 1:1 redundancy (HA mode) in RailTel Datacenter for centralized management of such multiple clusters	We understand that we will provide one main management server in gurugram datacenter and other management server in secunderabad datacenter or do we need to provide one management server in gurugram datacenter and redudant server in same gurugram datacenter and similar to the secunderabad DC.Request you to kindly confirm	Clause as per tender prevails.
977	CHAPTER -8	241	8.3.1.2	Bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras, FRS with local matching capability with the watchlist database on up to 8 cameras stream at each RPF/GRP Thana/Post locations without any impact on the performance of the system and overall solution requirement	Please confirm for calculating storage we need to follow the given parameter of 200FHD cameras, analytics 40 cameras,FRS upto 8 cameras, which will lead to higher storage capacity. As we see Category C,D,E are small stations does not require this many cameras for storage calculation. Kindly confirm	Clause as per tender prevails.
978	RDSO/SPN/TC/65/2019 revision 5.0	53 of 69	18.4.8	The Video Analytic Software deployed at Cloud as per Schematic Diagram -23, shall be seamlessly integrated with Cloud based Architecture for Video Surveillance System for Cluster of Stations aggregated to RPG/GRP Thana	Please confirm do we need to deploy video analytic solution in cloud.	Clause as per tender prevails.
979	RDSO/SPN/TC/65/2019 revision 5.0	53 of 69	18.4.8	The Video Analytic Software shall support redundancy with N to X, X to N and N to N redundancy configurations for Video Analytic Servers.	We request you to elaborate what is N to X , X to N and N to N redundancy configurations.	Clause as per tender prevails.
980	RDSO/SPN/TC/65/2019 revision 5.0	51 of 69	18.4	Video analytics	We understand that all the cameras require to run the four analytics rules such as i) intrusion detection, ii) left object detection iii) overcrowding iv) camera tampering in a single camera. Kindly confirm.	Clause as per tender prevails.
981	RDSO/SPN/TC/65/2019 revision 5.0	51 of 69	18.4	Video analytics	Please confirm Video analytics to be configured at the edge level or at the server level.	Clause as per tender prevails.
982	RDSO/SPN/TC/65/2019 revision 5.0	53 of 69	18.5-ii	Mobile app for VSS system	Please let us know how many users for mobile , this would help to us to include the video license for mobiles.	Please refer Corrigendum-V.
983	RDSO/SPN/TC/65/2019 revision 5.0	56 of 69	19.26	Face recognition software deployed at cloud	Please confirm do we need to deploy Face recognition solution in cloud.	Clause as per tender prevails.
984	RDSO/SPN/TC/65/2019 revision 5.0	56 of 69	19.27	The Face recognition Software shall support redundancy with N to X, X to N and N to N redundancy configurations for Face recognition server	We request you to elaborate what is N to X , X to N and N to N redundancy configurations.	Clause as per tender prevails.
985	CHAPTER -8	240	8.3.1.1.1	For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording.	Please let us know how many stations has been grouped in to each cluster.	In general approx. 10-12 stations shall be grouped in to each cluster. However, bidder is required to quote as per SOR, technical and functional requirement of the tender. For Video Surveillance System hardware sizing, may pls. refer clause 8.3 of tender document.

986	CHAPTER -8	241	8.3.1. 2	At each such cluster i.e. RPF/GRP Thana/Post location, bidder to size VSS hardware (storage, server, NVR) requirement and propose solution considering recording of 200 FHD cameras, analytics on 40 cameras, FRS with local matching capability with the watchlist database on up to 8 cameras stream at each RPF/GRP Thana/Post locations	Kindly provide the breakup of 200FHD cameras as number of fixed dome, number of PTZ, number of bullet , to calculate storage as the bit rate and scene changes for each cameras.	Clause as per tender prevails.
987		86	3.B.1	To implement IP based CCTV system in train coaches, frequent video data and alarms are required to be sent from train coaches to command and control center (CCC) and Datacenter locations. Each train coach recorded video, alerts/alarms shall be offloaded from on board video recorder unit through available network i.e. Wi-Fi and 4G (LTE). RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System.	Kindly clarify that train coaches video to be stored both at Gurugram and Secunderabad? Also confirm redundant servers to be considered separately in Gurugram and Secunderabad for the same.	Clause as per tender prevails.
988	CHAPTER -3	86	3.B.1	To implement IP based CCTV system in train coaches, frequent video data and alarms are required to be sent from train coaches to command and control center (CCC) and Datacenter locations. Each train coach recorded video, alerts/alarms shall be offloaded from on board video recorder unit through available network i.e. Wi-Fi and 4G (LTE). RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System.	Kindly clarify 4G communication to be considered as part of the scope. If yes, we understand that 4G SIM cards and operational charges for the monthly rental will be borne by purchaser. Kindly confirm.	4G SIM will be provided by purchaser.
989	CHAPTER -3	99	3.B.7	Below is the tentative VSS architecture for system to be deployed in Train Coaches:	As per the architecture shown, panic buttons are shown in train coaches. But the same is not replicated in the BoQ. Kindly clarify panic buttons are to be considered inside the train coaches and also mention the number of panic buttons and associated cables quantity to be considered .	Please refer Corrigendum-V.
990	CHAPTER -3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Kindly clarify there is no mention of Core routers, core switches, Firewall, Wireless controllers, etc. that are to be considered in the data centers of Gurugram and Secunderabad. Also the specifications for the same is not provided. We understand that same shall be provided by purchaser. Kindly confirm.	Bidder to quote as per SOR.
991	CHAPTER -8	242	8.3.1.4	RDSO/SPN/TC/65/2019, Revision 9.0	kindly clarify 1. How many offline licenses to be considered. 2. Number of subjects/ hotlist to be considered for Face recognition database.	Clause as per tender prevails.
992	RDS/SPN/TC/106/2019/Rev 1.0	Pg 8 of 21	3.13	Necessary provision for cyber security required for the system at different levels shall be implemented based on latest technology as specified by the purchaser	We request you to include the SOR for cyber security provision as the same is not indicated in the present SOR	Bidder to quote as per SOR.
993	RDS/SPN/TC/106/2019/Rev 1.0	Pg 6 of 21	2.1	Each coach shall be installed with tentatively 8 nos. of cameras, 4 nos. of cameras shall be installed in doorway, 1 no. camera facing vestibule and 2 nos. of cameras shall be installed in aisle area	Total Fixed dome cameras given in the SOR is 50456, whereas as per this clause, there is a approximation of 8 nos. of camera in each coach, if we go to that 8 camera option, then 50456 cameras given in the SOR will not be suffice. Request you to reconfirm we can still go ahead with 50456 cameras as per SOR Quantity	Bidder to quote as per SOR.
994	Package V-Coach SOR	62	2b	Client desktop - 390 nos	As total clusters are 552 , we understand that total 552 Client desktop is required but BOQ ask for only 339 Client Desktop. Hence we shall quote for only 339 Client Desktops and additional Desktops shall be supplied if client requires. Kindly confirm.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
995	Package V-Coach SOR	61	2	Supply of IT Infrastructure at RPF Thana/Post	Our understanding Offloaded recorded videos from coaches has to be sit in the RPF Thana/GRP but there is no video storage requirement for Coaches in the SOR. We request to include storage requirement for coaches cameras in the RPF Thane/GRP	Clause as per tender prevails.

996	General	General	General	General	Request to share the detailed address of Gurugram, secunderabad datacenters and Command control centre at northern region for detailed survey	RailTel Gurugram and Secunderabad datacenters are located in RailTel office at these locations. Address details are available on RailTel website. Address of Command and Control Center at Northern Region will be communicated to successful bidder. Bidder is required to quote as per SOR.
997	General	General	General	General	Please clarify wireless access points will be deployed at all RPF / Thana stations.	Wireless Access Point will be installed at Stations. Distribution list shall be shared with successful bidder.
998	4.A.9.1.7	130	2	Ensuring 100% antivirus coverage with patterns not old more than period agreed on in - scope system	Does Bidders needs to provision anti - virus tools for all the in scope system.	Please refer Corrigendum-V.
999	4.A.9.1.7	131	6	Performing vulnerability scanning of all servers / devices (in-scope), which are IP based. Vulnerability assessment report should be share with RailTel every quarter.	We suggest to provision proven vulnerability assessment tools for doing vulnerability scanning for all in scope IP based devices.	Clause as per tender prevails.
1000	Generic	-	-	New Suggestion	We suggest RCIL to consider a network packet capture solution which should be ready from Day 1 to provide capturing and making visible the complete network traffic/logs, detailed packet inspection/ logs analysis for classification, for re construction/alerts of assets/data (transmitted or received), capability to apply filters to detect anomalies with a view to oversee what is happening in the network for faster incident response & risk based scoring, its resolution and its forensics (in case of a breach). The solution should integrate with the existing environment seamlessly	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
1001	3.00	92	3.B.5	CCTV System in Train Coaches		
1002				All these equipment's will be placed inside a concealed, powder coated metal enclosure with suitable ingress Protection for dust and water by providing gasket & sealing of cable entry/exit along with lock and key.	Detail specs/ Dimension Metal Enclosure may be provided	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
1003	8.00	259	8.20	A. FMS (12/24 Fiber)The FMS should be confirming to TEC NO.: GR/FDM-01/02/APR-2007 (Type-I) with latest amendment No. TEC/T/OFC-FDMS/149/2012. However the FMS should have the following: Note : The bidder/OEM has to give compliance for the TEC specifications for above mentioned items, offered in this bid.	The GR no specified for the FMS -Exchange type I , having Rack of dimensions 900 X 300 X 2200. Instead, what required is 1 U height 24 and 12 F FMS as discussed in pre bid. The TEC GR ref may be deleted and it should be as per specifications listed. Supply of 12/24 F FMS to Railtel to be accepted as approved OEM. TSEC certification not to be mandatory. The relevant GR clauses for 1 U 12 /24 FMS are applicable. Please confirm.	Clause as per tender prevails.
1004						
1005						Clause as per tender prevails.
1006	8.00	260	8.20 (v)	B. Specifications of Patch Cords		Please refer Corrigendum-V.
1007				The connectors must be make of reputed OEMs 3M, Huber-Shuner, R&M, TE Connectivity/Raychem.	To Be deleted as discussed in Pre bid meeting. As the Patch cord required as per TEC Specs, only TSEC/CACT approved patch cord would be required.	Please refer Corrigendum-V.
1008	4.A.14.1.3	138	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	Is it applicable for even VMS , FRS , VA , Command Centre OEM as measuring these software OEMs w.r.t CMM Level is not the desired practice ? It should be measured on Experience level , Installations Done , presence in Railways sector and RDSO Specs	Please refer Corrigendum-V.
1009	4.A.17.6	143		Award of Packages - In case five different short-listed L-1 bidders emerge, the Contract Packages will be awarded to the respective L-1 bidders.	Incase of All different L1 , LC will come into the picture with 70% Qualification , how will the Reverse Auction 3 Bidders will be decided .	Clause as per tender prevails.

1010	8.23 Enterprise Management System (EMS)	265	Service Management (Help Desk) and SLA Management	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted.	As per the Industry standards, it is a best practice in most of the Central / State Government's initiative to select the ITSM tool, which is certified on minimum 10+ ITIL 2011 processes, out of total 16 processes, to ensure product's ITIL compatibility for workflows, functionality, terminology and documentation against general platform, core and integration criteria. This is so as minimum 10 ITIL processes are essential to design an effective ITSM framework to cover all the basic aspects of IT & users. Pls consider the same as : " The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 10+ ITIL 2011 processes (undertaking on OEM's letter head to be submitted) of all the ITIL processes: Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted."	Clause as per tender prevails.
1011	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "The solution must have at least 3 deployments in Indian Government/ Public Sector, monitoring & managing 10,000+ network nodes in each of such deployments. Customer names, solution details and OEM undertaking needs to be provided at the time of bidding." This is to ensure that the EMS solution is proven at the scalability required for the said project and is operational in the Indian Public Sector space and thereby avoid risk of being a test bed for solutions not known to scale up to the requisite levels.	Please refer Corrigendum-V.
1012	8.23 Enterprise Management System (EMS)	262	General		Please consider this: "All the NMS/EMS components must be from the single OEM." Since NMS/EMS consists of multiple components, having all these components from the same OEM will ensure that the components are pre-integrated and adequately tested and hence time to value realization is quick and issues of integration does not arise.	Clause as per tender prevails.
1013	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "NMS should support out of the box monitoring of at least 3000+ devices from at least 150+ vendors." Since this is a network intrinsic project, with target infrastructure scaling to 20,000 devices from a unified console, it is extremely crucial to have devices profile coverage from variety of vendors out of the box from single tool which will provide simplicity in managing NOC. This would avoid the complexity of managing multiple tools and technologies and also avoid the requirement of various element managers.	Clause as per tender prevails.
1014	8.23 Enterprise Management System (EMS)	262	General		Please consider this : "The proposed solution must be an industry standard solution from an OEM that is ISO 27034 certified." ISO 27034-1 standard helps organizations integrate security controls in the software through their software development cycle, by defining security frameworks & vulnerability management processes. This certification protects customer assets from potential cyber breaches & security threats while complying with the Application security standards.	Clause as per tender prevails.
1015	4-A-14.1.3	140	6	The software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	Relevant Organizational Level Certificates to be provided	Please refer Corrigendum-V.
1016	Corrigendum-III	6 of 13	13	The bidder shall have to submit additional Bank Guarantee (format attached as Annexure VI) of INR 50 Cr valid for a period of Six Years and Four Months from the date of signing of contract.	Since make in India clause largely depends upon OEM/Manufacturers of their respective products to arrange such bank guarantee from lead bidder's bank which will be a difficult condition citing current banking procedure for issuance of any such BG. Therefore, we request you to kindly remove the mentioned clause.	Clause as per tender prevails.

1017	8.23 Enterprise Management System (EMS)	265	Service Management (Help Desk) and SLA Management	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted.	As per the Industry standards, it is a best practice in most of the Central / State Government's initiative to select the ITSM tool, which is certified on minimum 10+ ITIL 2011 processes, out of total 16 processes, to ensure product's ITIL compatibility for workflows, functionality, terminology and documentation against general platform, core and integration criteria. This is so as minimum 10 ITIL processes are essential to design an effective ITSM framework to cover all the basic aspects of IT & users. Pls consider the same as : " The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant/Serviceview certified on on at least 10+ ITIL 2011 processes (undertaking on OEM's letter head to be submitted) of all the ITIL processes: Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted."	Clause as per tender prevails.
1018	8.23 Enterprise Management System (EMS)	262	General		<p>Please consider this: "The solution must have at least 3 deployments in Indian Government/ Public Sector, monitoring & managing 10,000+ network nodes in each of such deployments. Customer names, solution details and OEM undertaking needs to be provided at the time of bidding."</p> <p>This is to ensure that the EMS solution is proven at the scalability required for the said project and is operational in the Indian Public Sector space and thereby avoid risk of being a test bed for solutions not known to scale up to the requisite levels.</p>	Please refer Corrigendum-V.
1019	8.23 Enterprise Management System (EMS)	262	General		<p>Please consider this: "All the NMS/EMS components must be from the single OEM."</p> <p>Since NMS/EMS consists of multiple components, having all these components from the same OEM will ensure that the components are pre-integrated and adequately tested and hence time to value realization is quick and issues of integration does not arise.</p>	Clause as per tender prevails.
1020	8.23 Enterprise Management System (EMS)	262	General		<p>Please consider this : "NMS should support out of the box monitoring of at least 3000+ devices from at least 150+ vendors."</p> <p>Since this is a network intrinsic project, with target infrastructure scaling to 20,000 devices from a unified console, it is extremely crucial to have devices profile coverage from variety of vendors out of the box from single tool which will provide simplicity in managing NOC. This would avoid the complexity of managing multiple tools and technologies and also avoid the requirement of various element managers.</p>	Clause as per tender prevails.
1021	8.23 Enterprise Management System (EMS)	262	General		<p>Please consider this : "The proposed solution must be an industry standard solution from an OEM that is ISO 27034 certified."</p> <p>ISO 27034-1 standard helps organizations integrate security controls in the software through their software development cycle, by defining security frameworks & vulnerability management processes. This certification protects customer assets from potential cyber breaches & security threats while complying with the Application security standards.</p>	Clause as per tender prevails.
1022	Corrigendum-III	1	1	Earnest Money has to be deposited online through IREPS portal only" against various packages as detailed below:	Please clarify the mode of submission of EMD if a tenderer is bidding for all the five packages. Is it only through Online at IREP portal or combination of Online and Demand Draft.	Clause as per tender prevails.
1023	Corrigendum-III	6	13	<p>Bidder may note that their acceptance of the "Make in India" Clause described below is a mandatory requirement for considering the bidder eligible.....</p> <p>The bidder shall provide the undertaking for acceptance of the above condition duly signed by each foreign manufacturer/ OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider) for each offered product/software.</p>	Please confirm whether the undertaking for acceptance of "Make in India" is to be taken from all the OEM / OSSP or only from those OEMs of products protected by GoI and list is given at Annexure - VII of the RFP.	Clause as per tender prevails.

1024	Corrigendum-III	6	13	<p>Bidder may note that their acceptance of the "Make in India" Clause described below is a mandatory requirement for considering the bidder eligible.....</p> <p>The bidder shall provide the undertaking for acceptance of the above condition duly signed by each foreign manufacturer/ OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider) for each offered product/software.</p>	<p>We value the "Make in India" initiative of govt. of India to promote indigenisation plan and the due preference is given to the indian manufacturing entities through PMA policy, As this tender is a solution based tender ,which involves many imported components crutial for the solution but not very high in value, also manufacturing of these components are not feasible to manufacture in India due to low volume and high manufacturing investment. further more this clause also restrict selection of very reputed OEMs with proven products which are required to provide the best suitable solution. Hence we request that this clause may please be deleted.</p>	Clause as per tender prevails.
1025	Corrigendum-III	6	13	<p>Further, in pursuance of the clause above, towards fulfillment of conditions pertaining to Domestic value addition, the bidder shall have to submit additional Bank Guarantee (format attached as Annexure VI) of INR 50 Cr valid for a period of Six Years and Four Months from the date of signing of contract.</p> <p>Bidder who has been awarded the contract is found to have violated the provision, shall be subject to financial penalty in the form of forfeiture of above referred Bank Guarantee.</p>	<p>Kindly note that there are many foreign OEMs expected in the tender with different wallet share (even much less then the penalty amount). since the penalty is kept uniform regardless of the share of a particular OEM. No OEM will commit phased local manufacturing for small volumes and support 50 Cr BG.</p> <p>This may also restrict participation of serious System Integrators, which will result in less competitive bid hence financial loss to railtel and risk of proper execution of project. therfore we request that this clause may plaese be deleted.</p>	Clause as per tender prevails.
1026	Corrigendum-III	7	4.B.10.1.1	<p>In addition to the instructions given in above, the bids shall be processed through Two Stage Reverse Auction method, to be implemented through IREPS portal. Two packets system shall be followed for the 1st stage of reverse auction, which means that Techno-commercial bid will be opened first; and after deciding the suitability or otherwise of the technical bids, the financial bids of only those firms which are found to be suitable shall be opened.</p>	<p>Normally reverse auction is preferred for product based tenders but this tender is completely solution driven having various components . We request to re-look in to the requirement of reverse auction for identifying lowest commercial bid.</p>	Clause as per tender prevails.
1027	Corrigendum-III	9	18	<p>If the value of Local Content, calculated above, is more than 40% (for FY 2019-20), the total value of the combined product (to qualify against item no. 24 of Table-A of DoT Notification) shall be considered as Local Content.</p>	<p>We understand if any of the sub-item / items offered which form integral part of "Security and Surveillance Communication Systems" and meeting local content requirement of 40% should be considered as domestic manufactured items and all related tender conditions would apply for that product irrespective of Local content of the total value of combined product is below 40%. Please confirm if the understanding is correct.</p>	Clause as per tender prevails.
1028		9	18	<p>If the value of Local Content, calculated above, is more than 40% (for FY 2019-20), the total value of the combined product (to qualify against item no. 24 of Table-A of DoT Notification) shall be considered as Local Content.</p>	<p>please note that there are several indian companies who have developed world class VSS & VA products , however FRS being a specific requirement of certain applications with very small customer base there are very limited vendors for FRS (only 2 foreign vendors meeting requirements). further more VMS/VA & FRS are separate line items in the SOR . the same is true for cameras and other subsystem also.</p> <p>We therefore request that , It will be in the best interest of PMA policy that each subsystem of item no 24 of Table A of PMA list should be assessed individually for PMA qualification and if the individual subsystem meets the required value addition of 40 % . then the same should be protected as per the PMA guide lines.</p>	Clause as per tender prevails.
1029	Chapter 4: Preference to Domestic Manufacturers	53	4.A.45	<p>1. Bidders seeking Purchase preference (linked with Local content) (PPP-MII) shall be required to meet/exceed the target of Local Content (LC) of 70% .</p> <p>1.1 1.1 Such bidders shall furnish following certificates on its letter head along with their techno-commercial bid. The undertaking shall become a part of the contract. "We M/s. _____ (Name of bidder) hereby certify that we meet the mandatory minimum Local Content requirements of the tender i.e. 70% quoted vide offer No. _____ dated _____ against RailTel tender No. _____ by us."</p>	<p>The Policy referred in the tender document does not mention 70 % LC as the mandatory minimum Local Content requirement to qualify for Domestic compliant bid as asked in the tender. This increase in percentage will discourage the bid with sizable domestic products and will give preference to the foriegn OEMs. It is requested that Local content requirment should be inline with product mentioned in Annexure-VII(1), the average for the same works out to be 50%.</p> <p>We therefore request Railtel to change 70% value addition requirement to 50%.</p>	Clause as per tender prevails.

1030	Tender No.472 Part-1 PACKAGE-V (Coach)/2	61	2(a)	Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note- VII.	Need Clarification on the " Number of Desktop Workstation 390No. and GUI VMS Software-390No Mentioned in Package-V. Please clarify how these workstations will be distributed among the 552 clusters.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1031	Tender No.472 Part-1 PACKAGE-V (Coach)/2	61	2(a)	Graphical User Interface based Client Software of VMS System and all accessories required for installation purposes as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note- VII.	What will be the role of VMS for coaches at the 390 clusters (Thana post)	Please refer tender document, RDSO specification issued for the subject work and drawings attached with the tender for clarity.
1032	Tender No.472 Part-1 PACKAGE-V (Coach)/2	61	2(a)		Please specify what data will be communicated across - 1. Train Coach & Workstation at RPF Thana Post 2. Train Coach & CMS at DC/DR. 3. RPF Workstation & CMS at DC/DR	Please refer tender document, RDSO specification issued for the subject work and drawings attached with the tender for clarity.
1033	Tender No.472 Part-II PACKAGE-V (Coach)/2	142	8.3.1.5.2	Recording shall be stored for at least 30 days at 25 FPS and Full HD resolution for Full HD cameras and 25 FPS Ultra HD resolution for 4K UHD Cameras with H.265 or higher video compression at RPF/GRP Thana/Posts. The approximate storage capacities per camera with H.265 video compression and 25 FPS shall be as under:-	Need Clarification on the "Approximate Storage" - Can the storage size be further optimized from below mentioned " Full HD Camera(@1920x1080)-750 GB for 30 Days 4K UHD Camera(@3840x2160)-3TB for 30 Days	Clause as per tender prevails.
1034	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	138	1	OEM(s) should have either direct presence in India or through their authorized registered partner in India for last 3 years or OEM(s) should have been working for last 3 years in their country of origin. Further, they should have Indian Technical Support Centre, Repair and RMA centre in India either directly or through their authorized registered partner for last 3 years or should give an undertaking for setting up a Technical Support Center and an office in India within 3 months after award of contract.	Considering the magnitude of the project we strongly request that OEM's should be directly present in India with its registered office in India for more than 3 years (Not as Joint venture, Partnership firms or any other association). OEM should have self owned repair centre and its own RMA setup in India (Not as Joint venture, Partnership firms or any other association) for the last 3 years. This ensures support capability for the large projects at such extent.	Clause as per tender prevails.
1035	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	138	2	The OEM(s) whose products have been offered in the bid should have a minimum cumulative turnover of INR 375 crores for OEMs of cameras, INR 100 crores for OEMs of switches, INR 30 crores for OEMs of Video Management & Recording software, INR 5 crores for Video Analytic software, INR 50 crores for Facial Recognition System software and INR 125 crores for OEMs of IT hardware (server and storage) each in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender	We request that OEM(s) supplying the CCTV Cameras and Video Management & Recording software should have the minimum average turnover of INR 1000 Crores in last 3 financial Years. Cumulative turnover shall also be changed to Average turnover. Considering the magnitude and stringent timelines of this project this criteria will help and encourage the large reputed OEM(s) to participate.	Clause as per tender prevails.
1036	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	4	The OEM for proposed IP cameras and VMS Software should have supplied for at least one project in a Mass Rapid Transport system e.g. Metro, Railways, Mono Rail, Airport etc. in India or abroad in last 3 financial years (i.e. current year and three previous financial years) from the date of opening of tender. The same should have been working satisfactorily for at least six (6) months	The Project reference shall be of an Indian Company only and no foreign references shall be acknowledged and the operation, Maintenance and even the procurement process is quite unique and different in Indian Market scenarios. Hence request to kindly accept the Indian References only	Clause as per tender prevails.

1037	Chapter 4 4.A.14.1.3 Eligibility Criteria Requirements for OEM's:	139	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	Kindly Change CMMI level-5 these maturity levels are attained by the companies whose primary nature of business is Software development only. We are a reputed OEM for CCTV Cameras, NVR, VMS and VA and are classified as the Physical Security company and this clause refrain us to participate in this tender. The ISO 9001:2008 and ISO 14001:2004 are old and have expired in september 2018 only. Kindly change it to Latest ISO 9001:2015 and 14001:2015 which are valid and more efficient that the earlier ISO versions	Please refer Corrigendum-V.
1038	CHAPTER- 8 TECHNICAL, FUNCTIONAL REQUIREMENTS & SPECIFICATIONS	238	Note 3	All the IP cameras as quoted by the bidder against SOR Chapter-2 for stations packages must be sourced from the same OEM. However, bidder may quote different camera OEM for CCTV work in train coaches.	Request you to kindly change the sourcing instruction for Coaches i.e Like the stations, the cameras for Coaches also must be sourced from the same OEM only.	Clause as per tender prevails.
1039	Corrigendum 3	6	clause 13	The foreign manufacturer/OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider), of the successful bidder, in case of each offered item, is required to set up the manufacturing/development facility in India within 2 years from the date of signing of contract	Request you to kindly remove the clause as this restricts the reputed global OEM from participating in this bid. Since as mentioned in Table-B Clause 1 of The provisions of the Public Procurement (Preference to Make in India) Order 2017 dated June 15, 2017 (and subsequent amendments, if any) by Department of Industrial Policy and Promotion, for software Design and Development the Maximum LC percentage which can be claimed in based on condition that the copyright is in India for software design and development which is not possible for a Global OEM. Hence we request you to kindly delete this clause	Clause as per tender prevails.
1040	Corrigendum 3	6	clause 13	Domestic value addition in terms of cost of the product/software offered shall be: Year 2 - > 15% Year 3 - > 35% Year 4 - > 40% Year 5 - > 50%	Kindly confirm what does these percentages refer to. If In case an OEM established the Development center for VMS software in India how shall they arrive on these percentages for subsequent years. Kindly confirm the subject on which these percentages would be calculated	Clause as per tender prevails.
1041	Chapter 8 Design Parameters Video Surveillance System hardware sizing	241	8.3.1.2	Approximate number of cameras considered across 6124 Railway Stations are 89844 units	As per the SOR mentioned Chapter 2 for all the packages for stations, the total number of cameras are 81685. However, here they approx camera quantity is mentioned as 89844 which is as per Annexure 1 of chapter 7. As per our understanding the total quantity shall be supplied as per SOR. However, Request you to kindly confirm the actual quantity to be supplied	Bidder to quote as per SOR.
1042	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software OEM should not be same as any of the VMS OEM in the project. It should be agnostic to all VMS (existing or new). C&C application should be able to bring Live & Recorded CCTV feeds, VMS level alerts from existing VMS as well as new VMS to be installed. The existing and new VMS vendors will have to share the compatible SDK/API for this integration purpose.	Clause as per tender prevails.
1043	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software should not be connecting to end points i.e. Cameras direct for Live or recorded video feeds. It should communicate to respective VMS and perform deep integrate for live and recorded video retrieval purpose. This integration will also allow capturing the VMS level alerts.	Please refer Corrigendum-V.
1044	Chapter 8 8.26 Command Control Center	270	8.26	Additional OEM Qualification for Command Control Centre Application (suggested)	Command & Control application software OEM should have done 10+ third party reputed VMS integrations in past and can demonstrate the same if required.	Clause as per tender prevails.
1045	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	Command & Control application software licenses should not be based on count of edge devices such as cameras, alert zones etc. It should be able to support unlimited number of edge devices as long as they are integrated. This is to prove that the C&C is scalable for future expansion without being dependent on additional cost / license per edge device.	Clause as per tender prevails.
1046	Chapter 8 8.26 Command Control Center	270	8.26	Additional Functional Requirement of Command Control Centre Application (suggested)	C&C Operator Terminal software should be a 'desktop client application' based on Client - Server architecture. The C&C client application should have inbuilt third party VMS adaptors to play live and recorded video feeds from multiple video management systems.	Clause as per tender prevails.
1047	Corrigendum III	1	1	"Earnest Money has to be deposited online through IREPS portal only" against various packages	Kindly confirm whether we can submit all EMD amount in the form of BG/DD instead of online transfer.	Clause as per tender prevails.
1048	Corrigendum III	6	13	Bidder may note that their acceptance of the "Make in India" Clause described below is a mandatory requirement for considering the bidder eligible. The bidder is free to choose all products from either Indian Manufacturer or from Foreign Manufacturer. The foreign manufacturer/OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider), of the successful bidder, in case of each offered item, is required to set up the manufacturing/development facility in India within 2 years from the date of signing of contract and increase the local content in planned manner from the third year as shown below:	Whether it is mandatory to submit this undertaking if the bidder is not claiming the PMA purchase preference. Pls confirm	Clause is self explanatory.

1049	Corrigendum III	3	7	In case the tenderer wants to quote for multiple packages i.e. Northern, Western, Southern, Eastern and Coaches, the financial and technical criterion will have to be met separately for each package and cumulatively for all packages being quoted combined together.	Whether cumulative value of the projects can be considered to bid all the Package. Pls confirm. Eg: 1.If Bidder is having a Single work order of 100Cr whether he can participate in all five package? 2. If Bidder is having Single project of 500Cr whether he can participate in all five package? 3. If bidder is having different 5 project each having respective value mentioned in the RFP to bid all five package? Pls Confirm	Clause is self explanatory.
1050	Corrigendum III	9	18	Bidder has to submit calculation as per the above formula duly certified by their statutory auditor or cost auditor. This has to be submitted with the technical bid.	Whether bidder has to submit full calculation or only % has to be mentioned in the technical bid. Pls clarify Kindly elaborate with an example to calculate the LC content. Kindly mention the parameter/component break up (material, manpower etc) has to be considered to calculate LC content of each product	Clause is self explanatory.
1051	8.16.1 & 8.16.2 & 8.16.3	248/249 & 250 (1kva & 2kva UPS)	10	Input Voltage range shall be mentioned as this is missing in the RFP	It shall be 80 to 280Vac for 50 to 100% load	Please refer Corrigendum-V.
1052	8.16.1 & 8.16.2 & 8.16.3	248 & 250 & 251 (1kva , 2kva & 10kva UPS)	1	Output Power Factor	for 1 & 2kva , it is mentioned as 0.8PF whereas for 10kva it is asked as 0.9PF	Please refer Corrigendum-V.
1053	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	10(only 1kva)	Bypass Voltage(160 to 270Vac)	FOR 1kva -> This shall be replaced with Input range(80 to 280Vac for 50% load to 100% Load) as wider range of bypass voltage is not recommended	Please refer Corrigendum-V.
1054	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	4	Display - LED/LCD	LCD & LED indicators shall be asked as per the latest industry standards	Please refer Corrigendum-V. (Display-LCD)
1055	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	12(1kva) /11 (2kva)	>=0.9	Pl clarify is this Output PF of UPS	Please refer Corrigendum-V. (Clause to be deleted)
1056	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	14(1kva) /13(2kva)	AC-ACEfficiency - 85%	It shall be 88% or more	Clause as per tender prevails.
1057	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	21 (1kva) /20 (2kva)	Port	Only USB is asked	Clause as per tender prevails.
1058	8.16.1 & 8.16.2	249 & 250 (1kva & 2kva UPS)	25 (1kva) & 24 (2kva)	Mech/Safety /Performance	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
1059	8.16.3	252 (10kva UPS)	38, 39 & 40	ESD/Safety	IEC/EN or BIS are asked(i.e either of these)	Clause is self explanatory.
1060	8.16.3	251 (10kva)	2 & 5 & 7	Point 1 - 3pase/1Phase 330-460 VAC (3-phase) @ 100% load And Point 5 -	It is suggested to select Single Phase Input Power Supply ranging from 100-280Vac (upto 50% load)	Please refer Corrigendum-V.
1061	8.16.3	251 (10kva)	11	Voltage Adjustability ±5V	This feature is countary to point no. 10 where +/-1% is the best regulation asked	Clause as per tender prevails.

1062	8.16.3	251 (10kva)	13	DC Offset ±50 mV	This is suggested to be deleted	Clause as per tender prevails.
1063	8.16.3	251 (10kva)	15	AC Mode Efficiency >90%	This is suggested to be amended to 94% for Single Ph-Single PH UPS	Clause as per tender prevails.
1064	8.16.3	251 (10kva)	25	USB/RS-232,RJ45	This shall be USB, RS 232 & RJ-45(SNMP Card)	Clause as per tender prevails.
1065	8.16.3	251 (10kva)	28	Battery backup 2 Hrs. on full load with each UPS System	This can be reduced to 1 hrs on each UPS as total 2 hrs can be achieved with two UPS with two separate banks(working)	Clause as per tender prevails.
1066	8.16.1 & 8.16.2 & 8.16.3	249 & 250 (1kva & 2kva UPS) 251 (10kva)	28	Battery backup 2 Hrs. on full load with each UPS System	No VAH give	Please refer Corrigendum-V.
1067	8.16.3	252 (10kva)	36	Nominal Recharging current 12A (1± 10%)	This shall be replaced with 10% capacity w.r.t AH of battery offered by OEM	Please refer Corrigendum-V.
1068	8.16.3	252 (10kva)	45	Input AC mains and output power supply surge protection Inbuilt	We understand that inbuilt surge feature of UPS is acceptable & no additional SPD are required to be provided	Clause is self explanatory.
1069	3.A.1.4.14		78	AMC	AMC (including repair / replacement of all consumables) for 5 years after the completion of 24 months of warranty period.	Clause is self explanatory.
1070	4.A.3.	Long Term Maintenance Support (AMC)	116	Long Term Maintenance Support (AMC)	PI clarify whether battery replacement (for UPS systems) shall be part of AMC Contract	Yes. Bidder to provide AMC support for complete system i.e. UPS and Battery both.
1071	3.D.6.	107	Site Acceptance Testing (SAT)	Site Acceptance Testing (SAT)	During SAT, the parameters which are possible at site shall only be the part of testing as not all parameters can be tested at site. The query is more specific to Battery Back-up or THD test which can be done at FAT(at factory only) & can't be repeated at site	Clause is self explanatory.
1072	CHAPTER- 2 SCHEDULE OF REQUIREMENT	9,24,36 & 48	Item 2(b)	500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	Request you to kindly confirm the load to be considered for back-up time of 30 min. Since this is for Single PC so shall we consider a load of 150-200watts for 30 min back-up time	Bidder to offer solution as per technical and functional requirement of the system as defined in the tender document.
1073	Corrigendum 3	3	7	Case-II Single Work Experience of Rs. 60 Crores is submitted:	Please clarify can we use a single project, having value more than cumulative value of multiple packages as experience for bidding multiple packages.. Below is the illustration. Case-II Single Work Experience of Rs. 60 Crores is submitted:	Clause is self explanatory.
1074	Part 1, CHAPTER- 2 SCHEDULE OF REQUIREMENT	20	SOR HEAD II: 1 (a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00,000/-)	We understand that this manpower need to be deployed during warranty period of 2 years, please clarify we need to quote man month rate or total for 2 years for 302 persons?	Clause is self explanatory.
1075	Part 1, CHAPTER- 2 SCHEDULE OF REQUIREMENT	20	SOR HEAD II: 1 (b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00,000/-)	We understand that this manpower need to be deployed during warranty period of 2 years, please clarify we need to quote man month rate or total for 2 years?	Clause is self explanatory.
1076	Part1, Note,	69	III	The bidder is supposed to quote for the manpower requirement of 2-years period of warranty period post Maintenance Supervision period, as during this period the contractor shall be responsible for proper maintenance supervision of the system free of cost for a period of twelve months from the date of provisional acceptance	Please clarify in SOR Head II, Unit rate should be quoted per annum or for 2 years or for 3 years, for example L1 support engineer per annum rate is 3,00,000/-, please clarify unit rate in price bid should be 3,00,000 or 3,00,000*2 (as manpower is deployed for two years)	Clause is self explanatory.
1077	Part 2.4.A.14.1 Eligibility Criteria Requirements for Bidders:	35	5	Completion certificates from the User Organizations is required to be submitted	Request you to consider Projects under Operation & Maintenance phase for which supply, installation of hardware & software is completed.	Clause as per tender prevails.
1078	Part 2.4.A.14.1 Eligibility Criteria Requirements for Bidders:	35	5	At least one similar work# worth of INR 99.89 crores in last three financial years plus current year upto the date of opening of tender.	Request you to consider projects executed in last 5 financial years from financial 2013-14 onwards.	Clause as per tender prevails.
1079	Part 2, 4.A.22.	144		Earnest Money Deposit (EMD)/ Bid Security	Request to consider EMD in the form of Bank Guarantee	Clause as per tender prevails.

1080	Part 2,4.A.45. Preference to Domestic Manufacturers	153	1.2	Above undertaking shall be supported by the following certificate form Statutory Auditor engaged by the bidder, on the letter head of such Statutory Auditor. "We _____ the statutory auditor of M/s. ____ (name of the bidder) hereby certify that M/s. _____ (name of bidder) meet the mandatory Local Content requirements of the Project Work under this tender i.e. __70%__ (to be filled by the work center) quoted vide offer No. _____ dated _____ against RAILTEL tender No. _____ by M/s. _____ (Name of the bidder).	Request to accept certificate from Chartered accountant.	Clause as per tender prevails.
1081	Part 2, 4.B.8 Offline Submissions:	160	4.B.9	The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, Institutional Area, Plot 143, Sector 44, Gurgaon, before due date & time of submission of bids specified in this tender document, in a Sealed Envelope.	As this is a very large bid, Request you to allow Submission of hard copy next working day of online bid submission date.	Clause as per tender prevails.
1082	4.B.9 Submission of Eligibility Criteria related documents	160	4.B.9	Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted in RailTel before Tender opening date & time. Bids without these off line submissions are liable to be rejected.	Do we have to submit Eligibility criteria documents & Technical bid documents in same envelope or separate envelope, Please clarify. Do we have to submit complete technical bid as uploaded in online portal? Please clarify hardcopy submission of bid.	Clause is self explanatory.
1083	Form No. 3	169	Form No. 3	Form No. 3 PROFORMA FOR THE LONG TERM MAINTENANCE SUPPORT (To be signed by the O.E.M.)	Please clarify this proforma is required for which components	Please refer Corrigendum-V.
1084	Form No.8	176	Form No.8	PROFORMA FOR NO MALICIOUS CODE UNDERTAKING LETTER BY OEM	At the bottom of this letter format it is mentioned as "Seal and signature of the bidder". Please clarify this form is required from bidder or OEM	Please refer Corrigendum-V.
1085	Form No.10	179	Form No.10	Form No.10	Please clarify this proforma is required for which components	Please refer Corrigendum-V.
1086	Form No.23	200	Form No.23	Undertaking for the compliance to AMC conditions	Please clarify this letter is required from bidder or OEM.	Please refer Corrigendum-V.
1087	CHAPTER-8	239 & 242	8.2.1	Server for CCTV at Stations Facial Recognition System software ii. No. of Cores & No. of Processors 19.19 The system shall be able to use CPU and GPU based processing for multiple Camera streams in a single Server/Workstation.	The Facial recognition application requires precise and efficient processor, to perform the algorithm and its operation, which is possible by using GPU as GPU has the ability to compute faster as compared to the CPU. Also GPU has hundred of cores to do the real time and accurate facial analysis of number of images in shortest span of time, which is very much required by the Face Recognition application, hence, in order to have accurate face recognition we recommend to give us an opportunity to use GPU or CPU for the face recognition application.	Clause as per tender prevails.
1088	CHAPTER-8	271	8.26.1	Video wall for Command and Control Center (CCC), Specifications of Display Wall	Help to know the resolution required to be viewed on the Video Wall and the number of live view channels to be viewed simultaneously on the Video Wall.	Clause as per tender prevails.
1089	CHAPTER-8	239	8.2.1	Server for CCTV at Stations xi. DVD R/W Drive (internal) & USB Ports : Required	The purpose of using DVD R/W Drive & USB Ports are for taking backup. nowadays, in the current technology USB is the fastest means of taking back up as compared to DVD R/W Drive, thus, requesting to provide an option to use either DVD R/W Drive or USB Ports.	Clause as per tender prevails.
1090	CHAPTER-8	239	8.2.3	Server for CCTV in Train Coaches ii. No. of Cores & No. of Processors : Minimum 16 Cores in Single Processor or 2 nos. of 8 Core Processor (Dual Socket)	The Facial recognition application requires precise and efficient processor, to perform the algorithm and its operation, which is possible by using GPU as GPU has the ability to compute faster as compared to the CPU. Also GPU has hundred of cores to do the real time and accurate facial analysis of number of images in shortest span of time, which is very much required by the Face Recognition application, hence, in order to have accurate face recognition we recommend to give us an opportunity to use GPU or CPU for the face recognition application.	Clause as per tender prevails.
1091	Chapter 8	248	8.13.4	SFP+ (350mtrs) Should support 350m optical distance.	Every Major OEM use technology of 850nm wavelength in 10GB module for transmission and 850nm will work efficiently if we keep optical distance 300m. Hence, request you to kindly ammend clause as Should support min. 300m or more optical distance. Keeping 350m will restrict specific OEM to participate, also it will increase the undue cost.	Clause as per tender prevails.

1092	Chapter 8	265	8.23 Service Managem ent (Help Desk)	The proposed Helpdesk tool should be Axelos Gold level/Pink Elephant certified on at least 2 ITIL 2011 processes and complying at least 11 (undertaking on OEM's letter head to be submitted) of all the ITIL processes that are the most mature way to demonstrate that at least three IT organizations : Incident management, Problem Management, Change Management, Knowledge Management, Service Level Management, Service Asset and Configuration management, Service Catalogue and Request Fulfilment, etc. The certification copy to be submitted.	It is suggested that Certification be made optional with compliance mandatory to 11 processes. If it is not possible to remove the certification clause, it is requested to add an alternative compliance that product must be used by atleast 2 ISO 20000 organisations This will help in having more solutions to supply the software and will bring down the cost	Clause as per tender prevails.
1093	Chapter 8	275	8.26.2	Remote viewing on Web and Mobile App for CCTV system at Stations	Kindly help to Specify below Points 1) Total No of Users. 2) Total no concurrent logins.	Please refer Corrigendum-V.
1094	Chapter 8	253	3.B.5, 8.3.2.1, 8.19	Wifi AP :- 10/100/1000 Base T auto-sensing and Switch :- a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	As per architecture and solution, all 8 cameras, VRU or MNVR and Wi-Fi Access Point will be connected to the managed PoE Ethernet switch. Please clarify about Wi-Fi Access Point connection to the switch, as the Ethernet/RJ45 interface for Wi-Fi Access Point is required for connection, but as per RDSO specifications switch contains all M12/M23 connectors.	Clause as per tender prevails.
1095	Chapter 3	101	3.B.1	Architecture Overview	We have two Railtel Datacentre, one at Secunderabad and other at Gurugram , please help to clarify that	Clause as per tender prevails.
1096				RailTel Datacenters (Gurugram and Secunderabad) will have Central VMS, EMS, FRS and External Storage System	how many zones (North, South, East or West) will be supported by each Datacenter. We recommend to have two zones in each datacenter which will help to balance the bandwidth load and should support Video Management Redundancy in each datacenter.	Clause as per tender prevails.
1097	Chapter 8	253	8.19.2	Wi-Fi Access Point and Wireless Controller. Specification of Cloud/Appliance based Wireless Controller	As per architecture and solution provided in tender the Wireless Controller is required at each Datacenter, but same is not reflected in the Tender BOQ. Thus, please help to clarify the exact quantity of the Wireless Controller required in the BOQ.	Please refer Corrigendum-V.
1098	Corrigendum 3	1	SL No 1	"Earnest Money has to be deposited online through IREPS portal only" against various packages as detailed below	Currently IREPS portal only allowing 62 Lakhs EMD, please clarify how re	Clause as per tender prevails.
1099	Corrigendum 3	6	13	Further, in pursuance of the clause above, towards fulfillment of conditions pertaining to Domestic value addition, the bidder shall have to submit additional Bank Guarantee (format attached as Annexure VI) of INR 50 Cr valid for a period of Six Years and Four Months from the date of signing of contract.	Request this BG requirement to be removed , this will increase the cost of bid.	Please refer Corrigendum-V.
1100	Corrigendum 3	9	19	Value of Local Content = (Total Bid Value) – (Total value of all Non-LC items) in %ge	Please clarify total bid value includes SOR HEAD II:	Clause is self explanatory.
1101	65	33	11.2 Workstati on PC	ix. Graphics Card: One no. of dual Port 4 GB NVIDIA Quadro Graphic Card or dual Port 4 GB AMD Radeon Pro WX Graphic Card or similar with Full HD and 4K UHD resolution display support.	ix. Graphics Card: CHANGE TO: One no. of dual Port 4 GB NVIDIA Quadro Graphic Card or similar with Full HD and 4K UHD resolution display support. REASON: " Due to ongoing innovation in Graphics Cards space we would like to keep the basic brand "AMD Radeon " or similar generic , so that we are able to offer the latest card meeting the full specification at the time of the tender and not limit to WX Pro . hence remove the "WX Pro".	Clause as per tender prevails.
1102	65	33	11.2 Workstati on PC	xv. Power Supply: N/A	Suggest addition of the following line item - xv. Power Supply: Minimum 400W 80Plus Rated Active Sensing Power Supply REASON: This will qualify high end workstation class Desktop platforms while keeping low-end machines away.	Clause as per tender prevails.

1103	Corrigendum 3	1	SL No 1	<p>Offer letter, para-2 of Chapter-1 in the tender document may be read as under:</p> <p>"Earnest Money has to be deposited online through IREPS portal only" against various packages as detailed below</p>	<p>As per Corrigendum 3 EMD has to be paid Online only . IREPS portal is allowing only Rs 62 Lakhs payment by online . Please confirm can we pay remaining amount through DD along with bid submission .</p>	Clause as per tender prevails.
1104	Corrigendum 3	6	13	<p>Tender Clause no. 4.A.48 (Make in India) of Chapter 4 in the tender document may be read as under:</p> <p>Further, in pursuance of the clause above, towards fulfillment of conditions pertaining to Domestic value addition, the bidder shall have to submit additional Bank Guarantee (format attached as Annexure VI) of INR 50 Cr valid for a period of Six Years and Four Months from the date of signing of contract.</p> <p>Bidder who has been awarded the contract is found to have violated the provision, shall be subject to financial penalty in the form of forfeiture of above referred Bank Guarantee</p>	<p>As required in RFP bidders are providing the undertaking for acceptance of the above condition duly signed by each foreign manufacturer/OEM (Original Equipment Manufacturer)/OSSP (Original Software Service Provider) for each offered product/software on duly notarised Stamp Paper.</p> <p>Providing additional BG for Rs 50 cr for a period of 6 years will burden the bidder and also increase the project cost</p>	Please refer Corrigendum-V.
1105	Corrigendum 3	9	19	<p>Para 6 of Annexure-VII of Chapter-7 of the tender document</p> <p>If any product covered under protected list has not been offered as domestically manufactured product with requisite local content, total value of the offered product will not be considered as Local Content in the overall bid. Total value of all such protected domestically manufactured products, not offered with requisite Local Content, (say NonLC items) along with other foreign items shall be deducted from the overall value of the bid to calculate the LC Value.</p> <p>The same is reproduced as under:</p> <p>Value of Local Content = $\frac{(\text{Total Bid Value}) - (\text{Total value of all Non-LC items})}{\text{Total Bid Value}}$ in %ge</p>	<p>while calculating Value of Local content in % please help us to understand whether total bid value includes SOR II head service and maintenance cost also.</p>	Clause is self explanatory.
1106	Chapter 7	204	Region wise Table	<p>As per Distribution table given in page 204 total A category Stations in southern region are 71 Nos</p>	<p>With reference to the List of stations annexure document , there is difference in Number of Category A stations in southern region.</p> <p>As per table given in page 204- Cataagory A station- 71 Nos</p> <p>As per annexure document Category A Station - 81 Nos</p> <p>Help us to understand the qty of Catagory A stations in Southern.</p>	Bidder to quote as per SOR.
1107	Chapter 7	204	Region wise Table	<p>As per Distribution table given in page 204 total Bcategory Stations in southern region are 75 Nos</p>	<p>With reference to the List of stations annexure document , there is difference in Number of Category B stations in southern region.</p> <p>As per table given in page 204- Cataagory B station- 75 Nos</p> <p>As per annexure document Category B Station - 90 Nos</p> <p>Help us to understand the qty of Catagory B stations in Southern.</p>	Bidder to quote as per SOR.

1108	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total C category Stations in southern region are 94 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in southern region. As per table given in page 204- Cataagory C station- 94 Nos As per annexure document Category C Station - 103 Nos Help us to understand the qty of Catagory C stations in Southern.	Bidder to quote as per SOR.
1109	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total D category Stations in southern region are 212 Nos	With reference to the List of stations annexure document , there is difference in Number of Category D stations in southern region. As per table given in page 204- Cataagory D station- 212 Nos As per annexure document Category D Station - 291 Nos Help us to understand the qty of Catagory D stations in Southern.	Bidder to quote as per SOR.
1110	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total E category Stations in southern region are 897 Nos	With reference to the List of stations annexure document , there is difference in Number of Category E stations in southern region. As per table given in page 204- Cataagory E station- 897 Nos As per annexure document Category E Station - 1198 Nos Help us to understand the qty of Catagory E stations in Southern.	Bidder to quote as per SOR.
1111	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total A category Stations in Eastern region are 62 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in Eastern region. As per table given in page 204- Cataagory A station- 62 Nos As per annexure document Category A Station - 53 Nos Help us to understand the qty of Catagory A stations Eastern reg.	Bidder to quote as per SOR.
1112	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total B Category Stations in Eastern region are 84 Nos	With reference to the List of stations annexure document , there is difference in Number of Category B stations in Eastern region. As per table given in page 204- Cataagory B station- 84 Nos As per annexure document Category B Station - 69 Nos Help us to understand the qty of Catagory B stations in Eastern	Bidder to quote as per SOR.
1113	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 total C category Stations in Eastern region are 246 Nos	With reference to the List of stations annexure document , there is difference in Number of Category A stations in Eastern region. As per table given in page 204- Cataagory C station- 246 Nos As per annexure document Category C Station - 217 Nos Help us to understand the qty of Catagory C stations in Eastern.	Bidder to quote as per SOR.

1114	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total D category Stations in Eastern region are 291 Nos	With reference to the List of stations annexure document , there is difference in Number of Category D stations in Eastern region. As per table given in page 204- Cataagory D station- 291 Nos As per annexure document Category D Station - 210 Nos Help us to understand the qty of Catagory D Stations in Eastern.	Bidder to quote as per SOR.
1115	Chapter 7	204	Region wise Table	As per Distribution table given in page 204 e total E category Stations in Eastern are 1169 Nos	With reference to the List of stations annexure document , there is difference in Number of Category E stations in Eastern region. As per table given in page 204- Cataagory E station- 1169 Nos As per annexure document Category E Station - 868 Nos Help us to understand the qty of Catagory E stations in Eastern	Bidder to quote as per SOR.
1116	Chapter 8	241	8.3.1. 2	with reference to clause 8.3.1.2 Video Surveillance System hardware sizing "Approximate number of cameras considered across 6124 Railway Stations are 89844 units "	With reference to clause 8.3.1.2 Total camera quantity given 89844 units As per chapter 2 SOR Head I SL No 1(a),1(b),1(c),1(d) Norther region total camera = 20834 units Souther region total camera = 18929 units Eastern region total camera = 26389 units Western region total camera= 15533 units Total Camera quantity for all regions is 81685 Units Please confirm the Quantity of cameras	Bidder to quote as per SOR.
1117	Chapter 8	240	8.3.1.1.1	Implementation scheme for Video Surveillance system will be RPF/GRP Thana/Post Clustered based architecture as mentioned in RDSO specification no. RDSO/SPN/TC/65/2019 Rev 5.0 or latest with all amendments. For implementation of the proposed system, it is assumed that there would be 552 Clusters constituting RPF/GRP Thana/Post receiving video feeds from group of stations based on jurisdiction of that respective RPF/GRP Thana/Post through MPLS/ IP network for Video Management (Viewing and Monitoring) and Video Recording. Therefore, bidder is required to propose a cluster based solution at RPF/GRP Thana/Post locations on the basis of following design parameters.	With reference to RFP clause 8.3.1.1.1 of chapter 8 we request you to share the information on 552 clusters (Division, category of station , Station name) and also indicate how many stations of each category will be connected to each of these 552 cluster locations. This information is required to estimate the server & storage sizing at each Cluster location accordingly.	List will be provided to successful bidder. However, bidder may refer clause 8.3 of Chapter-8 for designing and sizing of their solution.

1118	Chapter 2	9	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	SOR2.1(b) PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.	As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for North there are 151 RPF/GRP/Thana Posts and PC workstation are only 53 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1119	Chapter 2	50	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	SOR2.1(b) b)PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.	As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for South there are 149 RPF/GRP/Thana Posts and PC workstation are only 86 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1120	Chapter 2	37	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	SOR2.1(b) PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.	As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for EAST there are 149 RPF/GRP/Thana Posts and PC workstation are only 77 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1121	Chapter 2	25	2.1 a) and b),(d) SCHEDULE OF REQUIREMENT	SOR2.1(b) b)PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories.	As per clause 3.B.6.2 of tender there will be at least One work station at RPF/GRP/ Thana Post. But as per BoQ there is mismatch in no. of PC workstation, Display Monitor at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and PC workstation are only 58 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1122	Chapter 2	25	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in no. of UPS at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and UPS are only 71 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1123	Chapter 2	50	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in no. of UPS at RPF/GRP/Thana Posts, i.e. for Sothern there are 149 RPF/GRP/Thana Posts and UPS are only 100 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1124	Chapter 2	37	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in UPS at RPF/GRP/Thana Posts, i.e. for EASTERN there are 149 RPF/GRP/Thana Posts and UPS are only 107 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1125	Chapter 2	10	SOR	SOR 2(g) UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation.	As per clause 8.3.1.1.6 of the tender there will be at least One 10KVA UPS per RPF/Thana Post But as per BoQ there is mismatch in UPS at RPF/GRP/Thana Posts, i.e. for Northern there are 151 RPF/GRP/Thana Posts and UPS are only 70 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1126	Chapter 2	25	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. of Rack at RPF/GRP/Thana Posts, i.e. for Western there are 103 RPF/GRP/Thana Posts and Racks are only 71 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.

1127	Chapter 2	50	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. of RACKS at RPF/GRP/Thana Posts, i.e. for Southern there are 149 RPF/GRP/Thana Posts and RACKS are only 100 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1128	Chapter 2	37	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One Rack per RPF/Thana Post But as per BoQ there is mismatch in no. Racks at each RPF/GRP/Thana Posts, i.e. for EASTERN there are 149 RPF/GRP/Thana Posts and RACKS are only 107 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1129	Chapter 2	10	SOR	SOR 2(h) 19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	As per clause 8.22 of the tender there will be at least One 19" Rack per RPF/Thana Post But as per BoQ there is mismatch in Racks at RPF/GRP/Thana Posts, i.e. for Northern there are 151 RPF/GRP/Thana Posts and 19" RACKS are only 70 . Kindly clarify point for better understanding.	Bidder to quote as per SOR. Distribution list shall be shared with the successful bidder.
1130	Chapter 2	14	SOR	SOR 6 (b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for North is 1961, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1131	Chapter 2	28	SOR	SOR 6(b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for western is 1314, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1132	Chapter 2	41	SOR	SOR 6(b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for Eastern is 2288 Based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1133	Chapter 2	53	SOR	SOR 6 (b) Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	As per SOR 6(b) Type II switches for Southern is 1617, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -II switches exceeding , help us to understand the required qty	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1134	Chapter 2	49	SOR	SOR 2 (f) Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 2(f) Type III switches for Southern is 247, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1135	Chapter 2	38	SOR	SOR 2 (f) Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for Eastern is 256 Based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1136	Chapter 2	24	SOR	SOR 2 (f) Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for western is 174, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.
1137	Chapter 2	11	SOR	SOR 2 (f) Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation-	As per SOR 6(b) Type III switches for North is 219, based on the network architecture given 3B.3.1 for A1 3B.3.2 for A 3B.3.3 for B 3B.3.4 for C , 3B.3.5 for D&E stations The total quantity of TYPE -III switches exceeding , help us to understand the required qty.	Bidder to quote as per SOR, technical and functional requirement of the system as defined in the tender document.

1138	4.A.14.1 Eligibility Criteria Requirements for Bidders:	135	5	<p>Technical capability:The bidder should have completed</p> <p>I. Package-I :</p> <p>a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender</p> <p>II. Package-II :</p> <p>a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender..</p> <p>III. Package-III:</p> <p>a.) At least one similar work# worth of INR 70.37 crores in last three financial years plus current year upto the date of opening of tender</p> <p>V. Package-IV :a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender..</p> <p>V. Package V :a.) At least one similar work# worth of INR 85.24 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>Note:- In case of Consortium/JV, only Lead bidder experienceshall be considered against the above mentioned criteria of similar work experience.</p>	<p>While going through the above quoted RFP, it is observed that the work in question is completely new in its nature and there would be very few MSI who can fulfil the Eligibility and Pre-Qualification Criteria given in RFP as a lead bidder. In order to have healthy competition in respective packages, we request you to consider Collective Experience in Technical Capability clause and amend the Eligibility and Pre-Qualification Criteria as follows :The bidder should have completed</p> <p>I. Package-I :</p> <p>a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>Package-II :</p> <p>a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>III. Package-III:</p> <p>a.) At least one similar work# worth of INR 70.37 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>V. Package-IV :</p> <p>a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>Note:- In case of Consortium /JV, either individually or collectively (in case of consortium any of the consortium member) shall be considered against the above mentioned criteria of similar work experience.</p>	Clause as per tender prevails.
1139	CHAPTER 4 4.A.14. Qualification Criteria	135	<p>4.A.14.1 Eligibility Criteria Requirements for Bidders:</p> <p>5. Technical capability</p>	<p>The bidder should have completed</p> <p>I. Package-I :</p> <p>a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>II. Package-II :</p> <p>a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>III. Package-III:</p> <p>a.) At least one similar work# worth of INR 70.37 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>V. Package-IV :</p> <p>a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender.</p>	<p>Please accept below along with "The bidder should have completed",</p> <p>Project should have been completed or should have been in revenue operations or for multilocation project, more than 80% of the total locations shall be in revenue operations and should have been 100% completed and handed over.</p>	Clause as per tender prevails.

1140	CHAPTER 4 4.A.14. Qualification Criteria	135	4.A.14.1 Eligibility Criteria Requirements for Bidders: 5. Technical capability	<p>The bidder should have completed</p> <p>I. Package-I : a.) At least one similar work# worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>II. Package-II : a.) At least one similar work# worth of INR 42.39 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>III. Package-III: a.) At least one similar work# worth of INR 70.37 crores in last three financial years plus current year upto the date of opening of tender.</p> <p>V. Package-IV : a.) At least one similar work# worth of INR 55.56 crores in last three financial years plus current year upto the date of opening of tender.</p>	for project involving multilocation, Please accept partial take over certificated value works as completed works, if the systems are in revenue operation.	Clause as per tender prevails.
1141	CHAPTER 4 4.A.14. Qualification Criteria	137	4.A.14.1 Eligibility Criteria Requirements for Bidders:	# Similar Work: Works entailing completion of a Supply, Installation, Testing and Commissioning of a project in the field of Security/IT/ICT/Telecom for central government or any state government or semi/quasi-government entities or Public Sector Units or private enterprises having turnover of at least 500 crores.	Please accept below for similar work: # Similar Work: Works entailing completion in full or in part shall be in revenue operation (at least 90% of the awarded work shall be in technical operation).	Clause as per tender prevails.
1142	CHAPTER 4 4.A.14. Qualification Criteria	140	4.A.14.1.3 Eligibility Criteria Requirements for OEM's: Note V,	v) In the event of Foreign Original Equipment Manufacturer (OEM) or System Integrator (SI), it's 100% owned Indian subsidiary fully authorized for bidding on behalf of OEM/SI is allowed to participate with the experience and financial credential of parent company with specific authorization for doing so from the OEM/SI. The specific authorization addressed to RailTel should be submitted by the bidder. However, the Holding company and/or the Principal manufacturer will have to counter guarantee the financials and/or bank guarantees as issued for the purpose of this tender.	<p>Please accept below modifications</p> <p>In the event of Foreign Firm/Company (parent or associate company) or Original Equipment Manufacturer (OEM) or System Integrator (SI), it's 100% owned Indian subsidiary or an associate (as defined in note below) fully authorized for bidding on its own or on behalf of parent or associate company/OEM/SI is allowed to participate with the experience and financial credential of parent or associate company with specific authorization for doing so from the parent or associate company/OEM/SI. The specific authorization addressed to RailTel should be submitted by the bidder. However, the Holding company and/or the Principal manufacturer will have to counter guarantee the financials and/or bank guarantees as issued for the purpose of this tender.</p> <p>Note: For purpose of this tender, "Associate", means, in relation to the Indian firm, a person who controls, is controlled by, or is under the common control with such Indian firm (the "Associate"). 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 50% (fifty percent) of the voting shares of such person and with respect to a person which is a company or corporation, the power to direct the management and policies of such person by operation of law".</p>	Clause as per tender prevails.
1143	CHAPTER 4 4.A.14. Qualification Criteria	140	4.A.14.1.3 Eligibility Criteria Requirements for OEM's: Note V,	v) In the event of Foreign Original Equipment Manufacturer (OEM) or System Integrator (SI), it's 100% owned Indian subsidiary fully authorized for bidding on behalf of OEM/SI is allowed to participate with the experience and financial credential of parent company with specific authorization for doing so from the OEM/SI. The specific authorization addressed to RailTel should be submitted by the bidder. However, the Holding company and/or the Principal manufacturer will have to counter guarantee the financials and/or bank guarantees as issued for the purpose of this tender.	<p>Please accept below additions to existing clause</p> <p>Indian subsidiary or an associate company of a Parent Company is fully authorized for bidding on its own or on behalf of parent or associate company using technical experience of their parent or associate company with specific authorization or parent company guarantee letter for doing so from the parent or associate company/OEM/SI. The specific authorization addressed to RailTel should be submitted by the bidder. However, the Holding company and/or the Principal manufacturer will have to counter guarantee the financials and/or bank guarantees as issued for the purpose of this tender.</p>	Clause as per tender prevails.

1144	CHAPTER 4 4.A.2. Warranty	113	4.A.2.2	If it becomes necessary for the contractor to replace or renew any defective portion/portions of the supplies under this clause, the provisions of the clause shall apply to the portion/portions of the equipment so replaced or renewed or until the end of the above mentioned period or twelve months, whichever may be later. If any defect is not remedied within a reasonable time of 30 days, the Purchaser may proceed to do the work at the contractor's cost, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects.		Clause as per tender prevails.
1145	CHAPTER 4 4.A.7. Taxes & Duties	125	4.A.7.1	Tenderer shall quote all inclusive rates, but there shall be break up of basic price and all type of applicable taxes such as SGST/CGST/IGST/UT GST along with respective HSN/SAC Code under GST Law (Including tax under reverse charges payable by the recipient).	Need GST rate to be considered for this Tender	Clause as per tender prevails.
1146	CHAPTER 4 4.A.14 Qualification Criteria	134	4.A.14.1 S No. 3	The bidder should have received a minimum cumulative contract amount from the operations in the last three financial years plus current year upto the date of opening of tender.	Defination of cumulative contract amount received. Is it Turnover value or payment actually received from Customer?	Clause as per tender prevails.
1147	CHAPTER 4 4.A.15 Foreign Exchange & Custom Clearance	141	4.A.15.1	Foreign exchange and/or import license if required, will be released/ provided to the contractor in connection with this contract. Part of Schedule (for imported items) can be quoted in any of the major foreign currencies viz USD, British Pound, EURO or Japanese YEN etc. In such a case, bidder should clearly specify the components of Foreign exchange and Indian currency for each item.	Is Import License applicable / provided to Indian Bidder as well? If yes, do they need to bid in foreign currency for imported items?	Clause as per tender prevails.
1148	Section no. 2	252	8.18	RDSO specification rev. 1.0 for Coaches	Clause no. 4.5/page no. 14/point no. ix of Storage (HDD/SSD of minimum 8 TB Capacity): If we go with 4 TB SSD than cost would be extremely high & also there is no vibration proof HDD variant available in 4 TB 2.5" capacity in the market. Recommendation for above query is 2TB SSD as this the recommended product for mobile surveillance application. Moreover the storage requirement as per tender RFP is approx. 3 TB thus we recommend 2 TB SSD X 2 for storage need & storage solution.	Clause as per tender prevails.
1149	Section 8.3.2.1	242	8.3.2	Data Offloading	There is no clarity on functional requirement in tender RFP for data offloading. If we assume to transmit all available recording in MNVR to station than it would consume the all available bandwidth for Wi-Fi channel/4G Channel. Thus it is recommended to fetch/transmit recording on demand basis or on ticket basis from MNVR. we do not recommend to transmit all video footages regularly to station/data center.	Please refer Corrigendum-V.
1150		66			Whether each system 1+1 Required or only 2x10 KVA Required in parallel mode?	Clause is self explanatory.
1151	8.16 UPS 8.16.1 1KVA	249	8.16.1/23	1 Hrs. on full load (Single bank)	VAh should be defined for 1 hour of backup for 1KVA UPS. Total VAh required for 1hour backup would be minimum 2304VAh, which should be incorporated into the specification	Please refer Corrigendum-V.
1152	8.16 UPS 8.16.2 UPS 2KVA	250	8.16.2/22	1 Hrs. on full load (Single bank)	VAh should be defined for 1 hour of backup for 2KVA UPS. Total VAh required for 1hour backup would be minimum 4032VAh, which should be incorporated into the specification	Please refer Corrigendum-V.
1153	8.16 UPS 8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis	251	8.16.3/28	2 Hrs. on full load (Single bank)	VAh should be defined for 2 hour of backup for 10KVA UPS. Total VAh required for 2hour backup would be minimum 36000VAh, which should be incorporated into the specification	Please refer Corrigendum-V.

1154	500VA UPS	9, 11, 24, 25, 36, 37, 48, 50, 60, 62	1.1/b 2.1/b 2b 2.1/b 2b 2.1/b 2b 2.1b		500VA UPS Specification is not incorporated within the Tender RFP, 500VA UPS Specification defined with VAh required for 30mins of backup should be incorporated in the tender RFP . VAh should be defined for 30min of backup for 500VA UPS. Total VAh required for 30Min backup would be minimum VAh, which should be incorporated into the specification	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
1155	8.16 UPS 8.16.1 1KVA 8.16.2 UPS 2KVA 8.16.3 2X 10KVA connected in parallel redundant mode in separate chassis	249, 250, 251	8.16.1/25 A,B,C 8.16.2/24 A,B,C 8.16.3/38		BIS Certificate, We have floor mounted UPS BIS Certificate, Rack mounted UPS has been asked for in Tender RFP.	Clause is self explanatory.
1156	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	8.3.2.1 System description and General Requirement As per RDSO Specification of IP based Closed Circuit Television (CCTV) SurveillanceSystem in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN /TC/106/2019, Revision 1.0 or latest with all amendments)	Clarification related to the RDSO clauses raised below Multiple clarification as below	Clause as per tender prevails.
1157	Chapter -8	RFP Page no. 242 RDSO/SPN/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SPN/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.

1158	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well.</p> <p>Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point.</p> <p>Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface</p> <p>Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface</p> <p>Please include : WLC should detect if a user try to impersonate a management frame.</p> <p>Please include : WLC should detect if a user try to impersonate a management frame.</p> <p>Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device.</p> <p>Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device.</p> <p>Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication.</p> <p>Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication.</p> <p>Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.</p>	Clause as per tender prevails.
1159	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box.</p> <p>Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing</p>	Clause as per tender prevails.
1160	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (ix) RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	<p>Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability ,request to keep AP's specs separate from integrated NVR.</p> <p>Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation</p> <p>Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount</p>	Clause as per tender prevails.

1161	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xi) RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	<p>"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with EN50155 for rolling stock application.</p> <p>Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose specialist is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc. on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection.</p> <p>Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna.</p> <p>It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background."</p>	Clause as per tender prevails.
1162	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED.</p> <p>Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.</p>	Clause as per tender prevails.
1163	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network.</p> <p>Strong endpoint security Support for the following:</p> <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
1164	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (xvi) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	<p>Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p> <p>Calculation as below :</p> <p>- 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W</p> <p>Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.</p>	Clause as per tender prevails.

1165	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 11	8.3.2.1 in RFP RDSO Specs: 4.2 Video Recorder Unit (Note) RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.
1166	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.
1167	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
1168	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 12	8.3.2.1 in RFP RDSO Specs: 4.3 Managed PoE Ethernet Switch: (vi) RDSO/SP N/TC/106/2019	a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : <ul style="list-style-type: none"> - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of Wifi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.

1169	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (i) RDSO/SP N/TC/106/2019	Ethernet Port: 10/100/1000 Base T auto-sensing	To achieve AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic, AP to support Two numbers of GigE ports. Request to change it to "Must support 2X10/100/1000BASE-T autosensing (M12 8P female connector with X-coding per IEC 61076-2), PoE/PoE+ In) for shock proof deployment with PoE Out at one port."	Clause as per tender prevails.
1170	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	The Bandwidth Requirement is not specified in the AP specifications Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic	Clause as per tender prevails.
1171	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.4 Wi-fi Access Point: (ii) RDSO/SP N/TC/106/2019	WiFi Network: IEEE 802.11 b/g/n or 802.11 ac	Kindly Suggest Antenna Type and Antenna Mounting. As the Train Body are made of metallic, we would recommend to mount the Antenna outside the train. Kindly confirm Kindly Suggest Antenna Type and Antenna Mounting.	Clause as per tender prevails.
1172	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 13	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (Note) RDSO/SP N/TC/106/2019	Note: In case the NVR has embedded system architecture with system on Chipv(SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

1173	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. This solution is not standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in Rx and Rx power in WiFi Radio and placement of Antenna. Kindly include AP to support 1.3 Gbps on 5Ghz, as this will give more bandwidth in the uplink traffic Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna	Clause as per tender prevails.
1174	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Security is major requirement in carrier grade and enterprise WLAN requirement, hence WLAN security basic requirement should be part of requirement. Also to achieve WLAN security functionality AP is major component to scan the environment and send data to controller. Refer clause CT2M2 "AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services." Clauses are already part of track side AP, hence request to keep WLAN AP separate out of the NVR box as it will not be compatible with any of the carrier grade WLC for WLAN security. There should be separate specs for coach side AP's as well. Please include : WLC should able to detect, if someone connect a Rogue Access Point in network and able to take appropriate action to contain rogue Access point. Please include : WLC should detect and protect an Ad-hoc connection when a connected user forming a network with other system without an AP or try enabling bridging between two interface Please include : WLC should detect if a user try to impersonate a management frame. Please include :WLC should detect and take appropriate containment action if a smartphone user using tethering to connect other device. Please include :WLC should detect and protect if a user try to spoof mac address of valid client or AP for unauthorized access/authentication. Please include :WLC should detect if a user trying to do internet sharing through a valid system to an unauthorized device.	Clause as per tender prevails.
1175	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Enterprise class Ap's are purpose built with extra CPU, Memory and chipset resources. Non networking vendors not having expertise or skills to develop purpose built AP's for these kind of critical requirement. Hence it is requested to please add these specs to ensure we get the carrier grade Access point to achieve the best of the performance for our mission critical and bandwidth hungry application and request to keep AP's specs separate from NVR box. Please include : Reliability: Access Point shall contains 512 MB or higher memory for capacity. Access Point shall provide 128MB per-radio memory for deep buffer and faster data processing	Clause as per tender prevails.

1176	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xiv) of RDSO/SP N/TC/106/2019	Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna or External Wi-fi Access Point as per Clause no.4.4	Radio resource management is key functionality for WLAN network to work efficiently. Enterprise class WLAN system have capability to scan environment and adapt according to interference. Hence to get better throughput and reliability .request to keep AP's specs separate from integrated NVR. Access Point shall support Non-WiFi Interfere detection, Interferer classification and mitigation Deep-Packet Inspection-based, Recognized application usage statistics shall reflect actual usage amount	Clause as per tender prevails.
1177	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 14	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xv) of RDSO/SP N/TC/106/2019	10/100/1000 Base T Ethernet Interface: As required for External Wi-fi Access Point and External Managed PoE Ethernet Switch with M12/M23 connector	"Kindly remove the Integrated WiFi, Switch and NVR solution, This will limit the competition. None of this solution have the standardised as per EN50155 standard for rolling stock application and this is critical for this project. Moreover integrated AP may not be able to provide right throughput due to limitation in tx and rx power and placement. The integrated POE Switch may not be compliant with EN50155 for rolling stock application. Considering the requirement that video surveillance data will be transferring over wlan link, it is very critical to have a reliable and robust WLAN solution. OEM's whose specialist is not WLAN network are just procuring third party cheap WLAN silicon to fit in the box and not having any in house R&D on wireless. Enterprise class wireless is very dynamic and has to be robust in terms of RF management, channel management, interference management etc. on which Networking equipment OEM's having dedicated R&D to cater future needs providing reliable wlan connection. Deletion : Wi-fi Access Point: Inbuilt Wi-fi Access Point as per IEEE 802.11 b/g/n or 802.11 ac with 23 dBm or higher Antenna. It is requested to consider reliable WLAN solution instead of solution which is intergrated with the video Box from OEM's having no networking background.	Clause as per tender prevails.
1178	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) of RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	As per the Railway standard INGRESS PROTECTION IN SWITCH IS NOT ASKED. Kindly include IP66/IP67 level Ingress Protection . since switches will be more exposed to environment with higher temperature, dust, humidity etc.	Clause as per tender prevails.

1179	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	The Switches would be placed in the train coaches and Security features are not asked in the Switch. Kindly include following security and other features which are mandatory for the Switches to run in the network. Strong endpoint security Support for the following: <ul style="list-style-type: none"> • 802.1x • Port security • Dynamic port-based authentication using DHCP • Encrypted administrative traffic • Centralized authentication 	Clause as per tender prevails.
1180	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): (xxii) RDSO/SP N/TC/106/2019	Regulatory Approvals / Certifications: a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration. b) UL/EN/IEC/BIS for Equipment Safety and EN/IEC/CE/FCC/BIS for EMI & EMC Note: 1) For EN/IEC/UL/IS/CE/FCC, test certificate to be provided from internationally reputed and accredited test Labs/agencies or NABL/NABCB accredited Labs. 2) EN/IEC Standards for Temperature, Humidity, Vibration and EMI/EMC which are part of EN 50155 or IEC 60571 are also applicable as EN 50155 / IEC 60571 Certification.	Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required. Calculation as below : - 6 nos. of camera with ~15 W POE consumption = 90W - 1 nos. of WiFi equipment with ~30 W POE consumption = 30 W Total = 120 W Requesting to add POE power so that all the OEM should provision switch accordingly. As per our understanding minimum 120 W of POE power is required.	Clause as per tender prevails.
1181	Chapter -8	RFP Page no. 242 RDSO/SP N/TC/106/2019 page no. 15	8.3.2.1 in RFP RDSO Specs: 4.5 Mobile Network Video Recorder (Mobile NVR): Note: RDSO/SP N/TC/106/2019	* Note: In case the VRU has embedded system architecture with system on Chip (SOC) and microprocessor together, deviation can be accepted if full functionality is achieved.	The standard mentioned in Clause no. xxii are the critical standard for Rolling Stock application. Deviation in the specs will have operational impact in the overall project. Moreover this would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note Kindly delete this disclaimer, would be an advantage for Embedded NVR system architecture Vendor. Kindly remove this note	Clause as per tender prevails.

1182	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (III) Field Switches (8 ports) RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Clause as per tender prevails.
1183	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 11	Switch Should Support Security Features like Broadcast/Multicast/Unicast Storm Control, Traffic segmentation, TLS, DoS attack prevention, 802.1X Portbased Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control.	<p><u>We understand Traffic Segmentation is in terms of different VLAN for types of traffic and Auto QoS. Kindly Clarify.</u></p> <p><u>Kindly clarify DOS attack prevention or equivalent like Rate limiting , ACL and Storm control is acceptable.</u></p> <p><u>TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement</u></p> <p><u>DHCP Server Screening: Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping"</u></p> <p><u>Please change the clause to "Switch Should Support Security Features like "Broadcast/Multicast/Unicast Storm Control, Traffic segmentation/Auto QoS, DoS attack prevention/Rate Limiting, Storm Control, 802.1X Port based Access Control , Port Security, ARP Spoofing Prevention, DHCP Server Screening/ DHCP snooping, IP-MAC-Port Binding, ARP Inspection, DHCP Snooping, 802.1X Authentication local/RADIUS database (IPv4 & IPv6), port-based access control"</u></p> <p><u>We understand Traffic Segmentation is in terms of different VLAN for types of traffic and Auto QoS. Kindly CLarify.</u></p> <p><u>Kindly clarify DOS attack prevention or equivalent like Rate limiting , ACL and Storm control is acceptable.</u></p> <p><u>TLS: TLS is an Transport Layer Security protocol cryptographic protocol, normally applicable to Firewall, and hence is not relevant to Layer 2 POE Switch. Kindly remove this requirement</u></p> <p><u>DHCP Server Screening: Generally DHCP Security features are provided by DHCP snooping, which is a DHCP security feature that provides network security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding database, also referred to as a DHCP snooping binding table. Kindly allow to provide DHCP Server screening or equivalent like "DHCP Snooping"</u></p>	Clause as per tender prevails.
1184	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports):, clause no. 12	Switch Should Support features IPv4 & IPv6 Inspection, SSH v2 feature, Flow Control governed by IEEE 802.3x.	<p>IPv4 and IPv6 inspection is not clear. Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection</p> <p>Kindly clarify whether IPv4 & IPv6 Inspection is Dynamic ARP Inspection</p>	Clause as per tender prevails.

1185	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 38	8.8 Type-I Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14 (III) Field Switches (8 ports);, clause no. 12	Operating temperature/ Humidity: 0°C to 50°C, 10%-90% non-condensation.	Kindly Include Industrial Grade Switches for getting better performance and long run of this project, as per the environmental situation in Train Station Kindly Include Industrial Grade Switches for getting better performance and long run of this project,	Clause as per tender prevails.
1186	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred Kindly suggest Clause 14.0 (I) Aggregation Switch as per RDSO/SPN/TC/65/2019 Revision 5.0 to be referred	Please refer Corrigendum-II for clarity.
1187	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.1	Should have minimum 24 x GE SFP based ports	As per the network architecture, 12x1GE SFP would be sufficient instead of 24x1GE SFP Ports. Kindly change the port requirement from 24 to 12x 1GE SFP. Kindly change the port requirement from 24 to 12x 1GE SFP.	Clause as per tender prevails.

1188	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.2	Should have minimum 4 nos. SFP+ based 10 GE ports.	As per the network architecture, 2x10GE SFP would be sufficient instead of 4x10GE SFP+ Ports. Kindly change the port requirement from 4 to 2x 10GE SFP+.	Clause as per tender prevails.
1189	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.3	Should have at least 64 Gbps full duplex line rate traffic.	Kindly change the capacity of the Switch as per the port requirement to 52Gbps, instead of 64 Gbps Kindly change the capacity of the Switch as per the above port requirement to 52Gbps, instead of 64 Gbps	Clause as per tender prevails.
1190	Chapter -8	RFP Page no. 243 RDSO/SP N/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregati on Switch, clause no.11	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.	THERE IS A LESS FEASIBILITY OF GETTING TWO POWER SUPPLY FEED AT STATION PLATFORM. Kindly change the clause as per below "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz". Kindly change to: "Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS) built in: AC power supply 100 to 240 V AC with 50 to 60 Hz".	Clause as per tender prevails.

1191	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.	ERPS is a must support Technology required for this kind of switches to achieve ring protection in less than 50 ms. ERPS is not be compared with RSTP which have protection switching time in seconds. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must Kindly change to: Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies. and IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology. Kindly include Metro Ethernet features (ELINE, ELAN, ETREE, ACCESS ELINE, TRANSIT ELINE) and MEF 3.0 Certifications should be must	Clause as per tender prevails.
1192	Chapter -8	RFP Page no. 243 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 36	8.9 Type-II Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (I) Aggregation Switch, clause no.14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.	Kindly include EN61000-3-2 and EN61000-3-3 spec. These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection". These cover the following: "Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection" Kindly change the clause as below: "Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard or EN61000-3-2 and EN61000-3-3 standard and as per requirement at Indian Railway Station	Clause as per tender prevails.
1193	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019 Kindly suggest whether Clause no. 14 (II) to be referred of the said RDSO specs RDSO/SPN/TC/65/2019	Please refer Corrigendum-II for clarity.

1194	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports):	As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments.	Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity. Kindly Include Stackable capability with 80 Gbps Stacking bandwidth from Day-1, as this would be used in RPF Locations as Server connectivity.	Clause as per tender prevails.
1195	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 1	The Switch Should have 24 x 10/100/1000BASE-T PoE ports • 4 x 1G(minimum) SFP+ ports.	Kindly suggest Switch configuration as RDSO specs is described 1G SFP+, whether 10G SFP+ or 1G SFP port to be considered? Kindly confirm 4x 10G SFP+ to be considered	Please refer Corrigendum-V.
1196	Chapter -8	RFP Page no. 244 RDSO/SPN/TC/65/2019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/TC/65/2019 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better, forwarding rate 41.7 MPPS or better	If we consider Switch configuration of 4x10GE+24x1GE = 64 *2 = 128 Switching Bandwidth. Kindly suggest whether switching bandwidth to be considered 128 Gbps and mpps value to be considered 64x1.488 = 95.2 Mpps	Clause as per tender prevails.

1197	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/ TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 2	PoE Power Budget should be 370 W or better Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better	As this switch to be located at RPF Location for Server and PC connectivity, Please suggest whether POE/POE+ is required or not? Please remove Power budget for POE/POE+ requirement	Please refer Corrigendum-V.
1198	Chapter -8	RFP Page no. 244 RDSO/SP N/TC/65/2 019 Revision 5.0 page no. 37	8.10 Switches Type-III Switch: in RFP RDSO Specs:RD SO/SPN/ TC/65/20 19 Revision 5.0 14.0 (II) Layer 2 Switches (24 ports): clause no. 20	Minimum Operating Temperature 0 to 50°C.	As This switch would be located at RPF DC Location, where server /NVR operating temperature asked below 30 DegreeC. We would request to revise requirement from 50 DegreeC to 45 DegreeC Kindly change the requirement as per Environmental condition Minimum Operating Temperature 0 to 45°C.	Clause as per tender prevails.
1199	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 8	Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate.	Kindly include " Switch shall have minimum 70 million packets (64 Byte packets) per second forwarding rate." On 70 Gbps Box, the 64 Byte Packet length mpps capacity should be 70x1.488 mpps = 100 mpps Kindly change to : Switch shall have minimum 100 million packets (64 Byte packets) per second forwarding rate.	Please refer Corrigendum-V.
1200	Chapter -8	RFP Page no. 244	8.11 Switches Type-IV clause no. 10	Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 45 degree (minimum).	Kindly include The temperature should be increased to 50 Degree C, as per other switches environmental condition is considered. Kindly change to : Bidder to propose switch having Operating and Storage Temperature as per environmental requirement. However, the switches should be capable of working at temperature 0 to 50 degree (minimum).	Clause as per tender prevails.
1201	Chapter -8	RFP Page no. 245 and 246	8.11 Switches Type-IV clause no. 15 (iv), 16 (i)	iv. Support for IEEE 802.1 D spanning tree protocol.	Kindly suggest 802.1D/ 802.1 s MSTP is acceptable Support for IEEE 802.1 D spanning tree protocol / 802.1 s MSTP	Please refer Corrigendum-V.
1202	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xiv. Support 4 group of embedded RMON (history, static's and alarms).	RMON is a very old standard, We would request to add better and advanced level monitoring like Performance monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data Kindly include as below: Support 4 group of embedded RMON (history, static's and alarms) or advanced level monitoring like Performance monitoring, Statistics, Alarm logging and event management, Telemetry and SNMP Polling of data	Please refer Corrigendum-V.

1203	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 15 (xiv)	xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2 (Confirmed roadmap within a year time is also acceptable for ITU-T G.8032 v2 with no additional cost to RailTel).	As it was changed during last year CCTV RFP, OEM should already developed the feature , kindly remove the roadmap acceptability. This feature should be from Day-1 Kindly change the clause to: xxii. Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms (up to 10 Switches in ring) or ITU-T G.8032 v2	Clause as per tender prevails.
1204	Chapter -8	RFP Page no. 245	8.11 Switches Type-IV clause no. 17	Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Deleted. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. Deleted.	Kindly include follow certifications as well Switches should be NEBS certified. IPv6 feature should be ready from day 1. Kindly change the clause to: Switch shall have the following Certifications: i. The model of the Switches series shall have MEF-(9 & 14)/CE2.0 or IEEE standards or higher certification from authorized agencies. ii. Switches should be NEBS certified. iii. CE / FCC. iv. Shall conform to UL 60950 or IEC 60950 or EN 60950 Standards for safety requirements of IT Equipment. v. Shall Confirm relevant standards of EN/CE/FCC for EMC for (Electro Magnetic Compatibility). vi. IPv6 feature should be ready from day 1.	Clause as per tender prevails.
1205	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2WS5	CT2WS5 : wireless Standard: Antenna Gain of Access Points must be +2dBm or better. Must support following minimum transmit power for both 2.4Ghz and 5Ghz radios. (i) 2.4-Ghz band : +21dBm (ii) 5.0-Ghz band: +24dBm	24 dBm and 21 dBm are for indoor coverage, not suitable for outdoor coverage, where the connectivity with Train AP is required. Kindly include Antenna Gain of Access Points must be 5dBm or better. Must support following minimum EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB. This will give advantage on Higher coverage with Higher power to connect the Train AP. Kindly change the clause to: CT2WS5 : wireless Standard: EIRP for both 2.4Ghz and 5Ghz radios should be not less than 33dB.	Clause as per tender prevails.
1206	Chapter -8	RFP Page no. 253	8.19 Wi-Fi Access Point and Wireless Controller CT2M3	CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet	Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet with RF-45 console port for local troubleshooting . This will helps in local troubleshooting, when the AP is not reachable at WLC. Kindly change the clause to: CT2M3: Mesh: Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet. Additionally Access point shall have Management console port (RJ-45)	Clause as per tender prevails.
1207	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS1	WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	WEP is obsolete standard, request to remove the clause. Kindly change the clause to: WCS1 : Security: Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)	Please refer Corrigendum-V. (WEP to be deleted as WPA2 is latest standard for security)
1208	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCS5	Security: Controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points	Different OEM have different method for RF security. We secure RF perimeter through from ROGUE AP's , ROGUE client, etc. Kindly change the clause "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points". Kindly change the clause to: "Controller should be able to detect attacks like Broadcast deauthentication or Excessive Authentication, NULL probe or Management frame protection, valid SSID miss-use, ROGUE AP's, ROGUE client etc from day one for all access points"	Clause as per tender prevails.

1209	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO1	Operational: Must support AP over-the-air packet capture for export to a tool such as Wire shark.	As the Wireshark Packet Capture implementation differs from OEM to OEM. We would recomend following changes in the clause: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark." Kindly change the clause to: "Solution Must support AP over-the-air packet capture for export to a tool such as Wire shark."	Please refer corrigendum. (Operational: Must support AP over-the-air packet capture for export to a tool such as Wire shark.)
1210	Chapter -8	RFP Page no. 257	8.19 Wi-Fi Access Point and Wireless Controller WCO15	Operational: shall support API's for NB and SNMP Integration with CNMS	As the NBI generally send by EMS not WLC. We would recomend following changes in the clause: "shall support API's for NB / SNMP Integration with CNMS" Kindly change the clause to: "shall support API's for NB / SNMP Integration with CNMS"	Clause as per tender prevails.
1211	Chapter-4	138	4.A.14.1.3 .(6)	<u>Eligibility Criteria Requirements for OEM's:</u> The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	Kindly advise if the CMMI level certification is compulsory for FR OEMs as the Facial Recognition Software is a newly & recent development solutions.	Please refer Corrigendum-V.
1212	8.16.1	249	23	Battery Backup-1hrs for 1KVA. On full load	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 1500	Please refer corrigendum. (Battery VAH need to defined)
1213	8.16.1	249	24.F	Size-Not more than 2U rack mountable	May be changed to RACK/TOWER.	Clause as per tender prevails.
1214	8.16.2	250	22	Battery Backup-1hrs for 2KVA. On full load	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 3000	Please refer corrigendum. (Battery VAH need to defined)
1215	8.16.2	250	23.G.	Size-Not more than 2U rack mountable	May be changed to RACK/TOWER.	Clause as per tender prevails.
1216	8.16.3	251	28	Battery Backup-2hrs for 10KVA. On full load with each UPS System	We request you to kindly fixed Minimum VAH for battery backup. Suggested VAH - 28800	Please refer corrigendum. (Battery VAH need to defined)
1217	RDSO/SPN/TC/106/2019	7	2.7 (i)	There shall be provision of Panic Button/Buttons in each Coach. Pressing Panic Button shall provide local buzzer as well as alarm to the Data Centre/Centralized location through available network for CCTV application.	There is no Panic Button & 2 Core Cable considered in BOQ for coaches. Kindly clarify the scope of provisioning.	Please refer Corrigendum-V.
1218	RDSO/SPN/TC/106/2019	7	3.3	The quoted models should appear on the ONVIF website and a confirmation certificate for the offered models should be available at the time of supply.	Request for the acceptance of OEMd product based on software listed on ONVIF Website	Clause as per tender prevails.
1219	RDSO/SPN/TC/106/2019	7	3.5	If Required Data is not offloaded instantaneously through available Wi-fi network and/or 4G/3G network completely at first Station due to short stoppage time or network outage, it is required that timestamps are maintained in order to avoid duplication in transmission of data at next station(s).	There is no clarity on functional requirement in tender RFP for data offloading. If we assume to transmit all available recording in MNVR/VRU to station than it would consume the all available bandwidth for Wi-Fi channel/4G Channel. Thus it is recommended to fetch/transmit recording on demand basis .	Please refer Corrigendum-V.
1220	RDSO/SPN/TC/106/2019	7	3.5	If Required Data is not offloaded instantaneously through available Wi-fi network and/or 4G/3G network completely at first Station due to short stoppage time or network outage, it is required that timestamps are maintained in order to avoid duplication in transmission of data at next station(s).	Storage methodology & retention period for offloaded data is not defined. Only 1000TB considered at Datacenter	Clause as per tender prevails.

1221	RDSO/SPN/TC/106/2019	7	3.8	Central Management System (CMS) including VMS shall be deployed in Datacenter /Centralized Location/ Cloud or any other location as specified by the purchaser. CMS shall maintain a mapping of all train coaches and their respective Video Recorder Unit/ Mobile NVR associated with coach. Once an alert is generated, Central Server shall help in escalating a particular event to RFP's/Thana Posts using GPS location of the train.	Is CMS a separate software needed for dashboard purpose? There is no separate server considered in BOQ.	Clause as per tender prevails.
1222	RDSO/SPN/TC/106/2019	8	3.9	Central Management System shall have a dashboard to display status of all requests pertaining to video footage by various RPF Thana/Post. CMS shall also provide a dashboard to respective RPF Thana/Post displaying status (in-progress/completed) of the requests created by that RPF Thana/Post.	Dashboard is required at RPF Thana/Post. Are VMS GUI & CMS Dashboard to be loaded on same workstation?	Clause is self explanatory.
1223	RDSO/SPN/TC/106/2019	16	4.6.15	Camera Tampering (Camera Blinding) analytics shall be provided for each Camera. The Camera Tampering alert shall be sent over Wi-Fi or 4G (LTE)/3G network to Datacenter/ Cloud.	Camera Tampering Analytics is required on Edge or on Datacenter server?	Clause as per tender prevails.
1224	RDSO/SPN/TC/106/2019	16	4.6.16	Face image cropping tool shall run on 4 CCTV cameras installed at 4 entry/exit doors of each coach. Face image cropping tool on the camera and/or video recording unit/Mobile NVR shall identify the faces of person from the live feed and crop it which should meet the requirement of FRS. This face image with the metadata shall be sent over Wi-Fi or 4G (LTE)/3G network to Face matching Server at Datacenter/ Cloud for matching.	Hardware resources available in VRU/Mobile NVR might not be enough to run face image cropping tool. Kindly clarify the scope & SOP.	Clause as per tender prevails.
1225	RDSO/SPN/TC/106/2019	16	4.6.16	Face image cropping tool shall run on 4 CCTV cameras installed at 4 entry/exit doors of each coach. Face image cropping tool on the camera and/or video recording unit/Mobile NVR shall identify the faces of person from the live feed and crop it which should meet the requirement of FRS. This face image with the metadata shall be sent over Wi-Fi or 4G (LTE)/3G network to Face matching Server at Datacenter/ Cloud for matching.	Can we propose Edge Based Face Detection?	Clause as per tender prevails.
1226	8.9 Type-II Switch As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggregation Switch shall have following minimum	243	8.9	17. Minimum Operating Temperature 0 to 50 degree.	24 port switch comes with 0 to 45 degree Celsius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree Celsius will limit only one or two OEM's to participate with industrial grade devices.	Clause as per tender prevails.

1227	8.10 Switches Type-IIIh As per RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2019 Revision 5.0 or latest with all amendments. 14.0 (I) Aggregation Switch: The Aggregation Switch shall have following minimum	243	8.10	20. Minimum Operating Temperature 0 to 50°C.	24 port switch comes with 0 to 45 degree Celsius temperature across leading OEM's with enterprise class product. Kindly modify the clause as RFP asked in Type 4 switch. Operating temperature up to 50 degree Celsius will limit only one or two OEM's to participate with industrial grade devices.	Tender condition prevails
1228	8.12 Managed PoE Ethernet Switch As per RDSO Specification of IP based Closed Circuit Television (CCTV) Surveillance System in Coaches of Indian Railways (RDSO Specification No. RDSO/SPN/TC/106/2019, Revision 1.0 or latest with all amendments.	247	8.12	4.3 Managed PoE Ethernet Switch: ii. Ethernet Ports : a) 8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector b) 02 No. 10/100/1000 Base T Ethernet interface with M12/M23 connector	we understand Managed 8 port switch required with RJ45 connectivity with POE functionality. Kindly confirm as all leading OEM's can provide RJ45 interface connectivity on Layer 2 switch. M12/M23 connector or RJ45 interface required? All Leading OEMs have RJ-45 Interface which is industry standard.	Clause as per tender prevails.
1229	RDSO/SPN/TC/65/2019- New Clause to be added	29 of 61	10.1	Server Specifications	The Server Platform OEM should be listed in the Top 3 Server Infrastructure vendors of IDC/Gartner in last 3 consecutive quarters.	Clause as per tender prevails.
1230	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Power Supply not more than 200W	The system would consume less energy, without compromising on the asked specification.	Clause as per tender prevails.
1231	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Cabinet Volume should be less than 8 Liters	The system would consume less desk space, without compromising on the asked specification.	Clause as per tender prevails.
1232	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Dust Filter for Dust protection	The system can be protected from possible wear and tear due to dust, which is generally the scenario at different stations PAN India.	Clause as per tender prevails.
1233	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Performance optimizer software	Helps in optimizing key ISV applications	Clause as per tender prevails.
1234	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	The workstation should be certified to run popular ISV applications	Mandatory to seamlessly run key ISV applications and get support from the respective ISV's as and when required.	Clause as per tender prevails.
1235	RDSO/SPN/TC/65/2019- New Clause to be added	33 of 61	11.3	Out-of-Band Systems Management (Intel vPro Technology)	Helps manage the Machine for Out-of-Band Management functionalities	Clause as per tender prevails.
1236	RDSO/SPN/TC/65/2019	34 of 61	12.2	Storage Specifications	Requesting to add the backend interface requirement with latest 12 Gbps speed, so that each bidder offers latest storage system for the bid. Requesting to add the clause, " Backend Interface – 12 Gbps or higher". This clause will ensure that Railtel will procure latest technology on the offered array as otherwise some bidders may offer storage with older backend speed of 6 Gbps.	Clause as per tender prevails.
1237	RDSO/SPN/TC/106/2019	11 of 21	4.2 (vi)	Storage: HDD/SSD of minimum 8 TB Capacity.	Storage : Internal or External HDD/SSD of minimum 8 TB Capacity. Justification: As per RDSO guidelines in RDSO/SPN/TC/106/2019 on Page 8 Section 3.15, The VRU, Wifi AP & Managed PoE Switch shall be housed in concealed, powder coated metal enclosure with suitable Ingress Protection for dust and water. So it should be allowed to propose this capacity as internal OR External to Video Recorder Unit, but located in ruggedized enclosure to allow maximum participation of vendors and level playing field for VRU & Mobile-NVR vendors.	Clause as per tender prevails.
1238	RDSO/SPN/TC/106/2019	11 of 21	4.2 (xvi)	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 for Rolling Stock application for Temperature, Humidity and Vibration.	Regulatory Approvals / Certifications : a) EN 50155/IEC 60571 OR MIL-STD-810G for Rolling Stock application for Temperature, Humidity and Vibration. Justification: MIL-STD-810G has been prescribed by RDSO in all their earlier specifications and has always considered to be industry's top class benchmark when it comes to rugged products. It is our request to allow MIL-STD-810G certification to be considered here and there by not restricting to limited vendors by including IEC/EN only.	Clause as per tender prevails.
1239	8.3.1.3	241		They are asking for cloud solution	we recommend server based because there is huge requirement of bandwidth when we upload all camera stream to cloud for Analytics.	Clause as per tender prevails.

1240	Tender Clause No: 8.12 RDSO:RDSO/SPN/TC/106/ 2019 Rev1 Section 4 (Technical Requirement)	12	iii	Power Supply: The switch should be able to work on power provided as per clause 3.16.	This clause regarding power supply referring clause 3.16. But we have not find relevant information at clause 3.16 of the tender as well as RDSO specification, hence here our request please clarify switch power requirement	Clause as per tender prevails.
1241	Section:3	97	3.B.6.1	At RailTel Datacenters (Gurugram and Secunderabad)	Design architecture including Core switch, but these switches are not asked in the SoR. Hence request please clarify these switch would be part of the supply or not, if yes what would be the quantity.	Bidder to quote as per SOR.
1242	RDSO Specification- RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	4	Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, 802.3ae 10 GbE, 802.3an 10GBASE-T, IEEE 802.3x Flow Control for Full- Duplex Mode, Auto-negotiation	As tender is referring RDSO specification for switches "RDSO/SPN/TC/65/2019 Revision 5.0" Clause no-1 & 4 of the Core Switch RDSO specification are contradict to each other, in clause asked port should be SFP+ based & clause no-4 ask to comply, Fast Ethernet & 1000BaseT port. We understand low rate electrical interface would not be part of the core switch, please clarify.	Clause as per tender prevails.
1243	RDSO Specification- RDSO/SPN/TC/65/2019 Revision 5.0 Clause No-13	34	38	Operating Temp.: 0 °C to 50 °C.	We understand core switch would be installed in controlled environment hence up to 40 °C is sufficient. Please consider the same.	Clause as per tender prevails.
1244	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	The EMS Solution (Hardware & Software) shall provide future scalability with the capacity to handle 20,000 devices from Day 1 without major architectural changes. Whenever required, the additional device licenses can be procured & added respectively.	As tender is asking around 28000 Switches in total. And clause is asking EMS capacity for 20000 from day one. 1) So request you please clarify ask EMS scalability is for the whole network or package wise. 2) If it's for entire network then need to increase EMS scalability like 25% higher than the asked quantity. 3) If it's package wise then our humble suggestion to optimize the scalability, because in a particular package total switch count is not more than 8000 and today's technology advancement scalability remains pay & grow hence at day one to consider 20000 is wastage of resources. So requesting please share optimized scalability of EMS architecture.	Please refer Corrigendum-V.
1245	Tender Clause No: 8.23 Enterprise Management System (EMS)		General	SoR is asking EMS as two set of hardware & two set of software in each package.	We understand two sets means one at Gurgaon & one at Secunderabad. Means server configuration 1+0 at Gurgaon & 1+0 at Secunderabad). Please confirm.	Clause as per tender prevails.
1246	Tender Clause No: 8.23 Enterprise Management System (EMS)	262	General	Solution shall be open, distributed, scalable, and multi-platform and open to third party integration	We understand EMS remains technology wise, multi-platform & open to third party integration remains part of the NMS or OSS. Please clarify.	Clause is self explanatory.
1247	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolida ted Dashboar d	Instruction Text (knowledge base) integrated into events /alarms for which incident tickets were created with ability to define trouble shooting steps.	Switch EMS will provide Fault Management and will send the events and alarms from the network to an NMS in real time. Ticket generation & management is not in the context of EMS. Please clarify.	Clause is self explanatory.
1248	Tender Clause No: 8.23 Enterprise Management System (EMS)	263	Consolida ted Dashboar d	Tool should be able to highlight Priority of an event. Priority is based on both the event severity and the business impact. CI Business Impact is calculated based on Business Criticality of all affected business services, applications and business process CIs and eg. SLAs.	Tool will provide the severity (Major/Minor/Critical) for an event. Business Impact is not in the scope of EMS. That is taken care by OSS. Please clarify	Clause is self explanatory.
1249	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Consolida ted Dashboar d	The system must allow modification and enhancement events during event processing.	Requirement is not clear need to elaborate please.	Clause is self explanatory.
1250	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reporting templates for performance, availability, inventory, operation, virtualization and configuration	Requesting to please elaborate "what is meant by Virtualization" here.	Clause is self explanatory.
1251	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Should provide reports that can prove IT service quality levels, such as application response times and server resource consumption	Requesting to please elaborate "What is application response time" for switches.	Clause is self explanatory.
1252	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should be able to deliver comprehensive, long- term, and customizable cross-domain reporting.	Requesting to please elaborate. "What is meant by cross-domain reporting" here.	Clause is self explanatory.

1253	Tender Clause No: 8.23 Enterprise Management System (EMS)	264	Service Level Reporter	Tool should provide reports from both Network devices and Servers from the same console.	We understand, reports are generated from EMS UI. The reports will have information about the devices. Please confirm that this is what's required.	Clause as per tender prevails.
1254	8.11	244	14. x.	It shall also support SYNC Ethernet and SNMPv3.	Globally IEEE 1588v2 is more accepted for Ethernet Synchronization , so we suggest to modify the clause as " It shall also support SYNC Ethernet or IEEE-1588 v2 (PTP) and SNMPv3 " Please refer IEEE Site link for more details on PTP >> http://www.ieee802.org/1/files/public/docs2008/as-garner-1588v2-summary-0908.pdf	Please refer Corrigendum-V.
1255	Package-V (Coach) SOR Head I	60	1.b	Managed PoE Ethernet Switch (8 nos. or more 10/100 Base T, IEEE 802.3af/at compliant PoE with M12/M23 connector with reference to RDSO TP "IP BASED CLOSED CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM IN COACHES OF INDIAN RAILWAYS RDSO/SPN/TC/106/2019 Rev. 1.0")	Globally followed standard configuration for train coach is 4/6 port for M12/M23 With PoE .For Multi-OEM participation, it is requested to change this clause to 4/6 nos. or allow OEM to give 2 quantities of 4 port switch .This will help get more competitive bids	Clause as per tender prevails.
1256	RDSO Specifications for IP based VSS Rev 5.0 Clause 5.1	14	xii.	8-50mm lens	Standard global practice is 12-50 mm request to modify the clause to accept 8/12-50mm lens	Clause as per tender prevails.
1257	RDSO Specifications for IP based VSS Rev 5.0 Clause 7.0	28	xxxvi.	PoE	PTZ cameras need more power to operate. PoE specification will not suffice the requirement. Request to modify to PoE ++ or allow additional AC adaptor	Clause as per tender prevails.
1258	Tender document	156	4.A.48	Make in India:	This clause was deleted in the last tender in 2018 to encourage the wider participation by the global OEM's Hence we request to delete this clause once again	Please refer Corrigendum-V.
1259	Tender Due date	165	Clause 4.A.36	Last Date of Submission of Offer (Online) Date: 10-06-2019 Time: 15:00 hours	request for 45 days Extension for bid Submission, from the date of last pre-bid /corrigendum issued for the above subject tender as the given time is not sufficient to prepare quality bid for the scope of work involved	Clause as per tender prevails.
1260	RDSO specification no. RDSO/SPN/TC/83/2014 revision 1.0 for LAN switches		clause no. 7.1	s	Indian OEMs of LAN switches need not to submit the certificates at the time of Bid submission. However OEM & SI will provide undertaing that related certificates will be provided at the time of supply of equipment (FAT), post SI winning the Tender.	Clause as per tender prevails.
1261	RDSO specification no. RDSO/SPN/TC/83/2014 revision 1.0 for LAN switches		clause no. 7.2	The LANswitch shall conform to EN 55022 class A/B or CISPR22 Class A/B or FCC class A/B standards for EMC.	Indian OEMs of LAN switches need not to submit the certificates at the time of Bid submission. However OEM & SI will provide undertaing that related certificates will be provided at the time of supply of equipment (FAT), post SI winning the Tender.	Clause as per tender prevails.
1262	Chapter 4	156	4.A.48	Make In India	This clause is a deterrent to Foreign Companies participation which can lead to quality issues in the overall architecture as there are technologies like FRS, Analytics etc which are at very naïve level in India. This can also be seen in FRS NIST report that how many pure Indian Manufacturers are there in that list. Request you to remove the same, at least for the new technologies like FRS. Also please clarify Why it is mandatory to setup of unit and increasing the capacity over the years, when delivery, installation and implementation will happen within 15 Months of contract signed? Are there any expansion plans over the period of time? If yes then request you to advise, so that things can be planned accordingly.	Please refer Corrigendum-V.
1263	RDSO/SPN/TC/65	15	19.12	The system shall have any tool for enhancement of quality of image before enrolment. The tool may be either a part of this software or may be provided as an add-on.	Request you to clarify the requirement for this tool: specially the number of users, and the office location(s) of these users?	Clause as per tender prevails.
1264	RDSO/SPN/TC/65/2019	51	19.7	The system shall be able for matching suspect faces from prerecorded video feeds obtained for CCTV deployed various identified locations.	Could you please clarify the requirement for this feature:specially the number of users, and the office location(s) of these users?	Clause as per tender prevails.
1265	RDSO/SPN/TC/65/2019	60	29	Schematic Diagram for Cluster of stations FRS system is located into "RFP Thana/Divisional HQ/Any other Location"	Our interpretation of this schematic diagram is FRS solution deployment could be proposed in divisional HQ or any other location. Could you please confirm our interpretation is correct?	Clause as per tender prevails.
1266	4.A.14.1.3	138	6	The Software OEM should have a CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	CMMI is irrelevant for Software (Product) vendors and applies to companies doing Bespoke development. ISO for quality and environment is relevant for hardware vendors having factories etc. This clause of CMMI level 5 will create a blocking point for new technology vendor like FRS and will decrease the number of players participating in the tender. It will in turn will reduce the competition and increase the cost. Request you to delete or make it optional as no pure Indian firms will have these so it will also contradict Make In India clause.	Please refer Corrigendum-V.

1267	CHAPTER-3,C	101		All the assets (pan-India) will be monitored through the central EMS deployed at one Data Center as a DC with the redundant infrastructure configured in other Data Center as a DR, in case of failover.	Will DR will be 100% of DC or 50%? Is this true for all applications. Ex: For FRS we understand there will be redundancy at DC w.r.t DB as well as FRS application. So would DR be having same architecture as DC i.e. Redundancy for FRS at DR too.	Clause as per tender prevails.
1268	3.B.6.1	97		At RailTel Datacenters (Gurugram and Secunderabad)	We understand that there is no redundancy required at Thana level for FRS. If FRS server at thana post goes down then it will fail over to FRS DC. However at any point of time there is connectivity problem in addition to FRS thana failure then how things will work. Please advise.	Clause as per tender prevails.
1269	Corrigendum-III	8	4.B.10.2.1	Reverse Auction (e-RA)	Have not seen reverse auction part of any big Solutions project (multiple product and services involved) like this. It is very hard for SI/vendor to execute the same. Over and above it will again lower down the quality of solution proposed by an SI. We request you to remove the same.	Clause as per tender prevails.
1270	4.A.14.1.3 - Eligibility Criteria Requirements for OEM's	140	6	The Software OEM should have an CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	This is the product based software requirement for which ISO 9001 will suffice the requirement. CMMI Certification is required for customised software development which is not in the scope of the RFP. Also most of the major VMS OEMs does not have CMMI certification. We request you to please remove CMMI Certification requirement for software OEM.	Please refer Corrigendum-V.
1271	RDSO specification no-RDSO/SPN/TC/83/2014 revision 1.0 for LAN switches		Clause No-7.1	The LAN switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards.	There are domestic manufacturers of LAN switches who are technically compliant with respect to the related RDSO specifications however they have not taken specific foreign certifications mentioned at Clause 7.1 & 7.2 so far. It is requested that for this tender the requirement of any foreign certification be relaxed and such certification requirement be made applicable at the time of award of contract / supply of equipment. Bidder may be asked to submit an undertaking at the time of bid submission confirming the same.	Clause as per tender prevails.
1272			Clause No - 7.2	The LAN switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC."		Clause as per tender prevails.
1273	4.A.14.1	135	5	Technical capability: The bidder should have completed For Package-I: a.) At least one similar work worth of INR 63.48 crores in last three financial years plus current year upto the date of opening of tender. Supporting document required: Completion certificates from the User Organizations is required to be submitted	Do we have to showcase only completed projects for this criterion? Or can we show the ongoing projects in which implementation period is completed and user certificate is issued for the same, please clarify.	Clause is self explanatory.
1274	4.A.14.1	137	#	Similar Work: Works entailing completion of Supply, Installation, Testing and Commissioning of a project in the field of Security/IT/ICT/Telecom for central government or any state government or semi/quasi-government entities or Public Sector Units or private enterprises having turnover of at least 500 crores.	Does this mean that the organization of which a bidder showcases experience should have a turnover of Rs.500 crores? We request the dept. to delete this turnover criteria to the customer organizations as there are Govt. depts. which do not generate much revenues but float bigger tenders with large order values. The deletion of this clause gives opportunity to many technically strong experienced system integrators to participate in this bid and give a cost effective solution	Clause is self explanatory. Turnover criteria is only applicable for Private Enterprises.
1275	Corrigen dum-3 dtd 03/06/2019	10	21	The last date for bid submission has been extended from 21.06.2019 at 15:00 hrs. to 22.07.2019 at 15:00 hrs.	As this is huge tender with various OEMs involved, we request the dept. to give ample time of 20 working days after publishing pre-bid minutes / corrigendum in the website to work on the proposal considering the changes made.	Clause as per tender prevails.
1276	RDSO/SPN/TC/65/2019 Rev 5.0 and RDSO /SPN/TC/106/2019 Rev 1			Onvif compliance- Onvif profile 'S' & 'G'.	An undertaking by OEM certifying that profile 'G' approval shall be obtained before supply of cameras and NVR should be incorporated in the subject Tender	Clause as per tender prevails.
1277	RDSO/SPN/TC/106/2019 Rev 1			Cameras Regularity approvals EN50155/IEC 60571	An undertaking by OEM certifying that EN50155 / IEC60571 certification shall be obtained before supply of cameras should be incorporated in the subject Tender	Clause as per tender prevails.
1278	Clause 4	page 139			Kindly add projects completed for ministry of home affairs (MHA), ministry of defence (MOD) In addition you are also requested to add command and control software in the above list items.	Clause as per tender prevails.
1279	4.A.23.1	145		Eligible MSEs are exempted from cost of tender document and EMD	As per guidelines of GOI for MSMEs, turnover criteria should not be applicable for company registered with MSMEs.	Clause as per tender prevails.
1280	RDSO/SPN/TC/65/2019 Rev 5.0				In the tender document wherever it mentioned bullet camera should be read as bullet/box camera	Clause as per tender prevails.
1281	3.A.1.3	76		Project background	Keeping above conditions in mind we request you to implement the additional clauses to ensure that national security is not compromised by guarding the project against backdoor entries and data	Clause as per tender prevails.
1282	3.B.1	86		Architecture overview		Clause as per tender prevails.
1283		93				Clause as per tender prevails.

1284	4.A.46	156		The network for customers	compromise as under. A.The cameras/NVR/VMS should not have any plain text authentication information stored in the system it should be stored in encrypted form.(Under taking from manufactured to be secured). B.The communication between VMS and clients should be encrypted. C.The CCTV vendor should comply to GDPR regulations article 5.1d and 5.1e. D.Camera should have capability to upload encryption certificates for secure communication.	Clause as per tender prevails.
1285	RDSO/SPN/TC/65/2019 Rev 5.0 and RDSO /SPN/TC/106/2019 Rev 1 ONVIF Compliance- Onvif Profile 'S' & 'G'			Onvif compliance- Onvif profile 'S' & 'G'.	An undertaking by OEM certifying that ONVIF profile 'G' approval shall be obtained before supply of VMS should be incorporated in the subject tender	Clause as per tender prevails.
1286	Tender clause 2	138		The Software OEM should have a CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	CMMI Level 5 is not required and this certification should not be a condition in the eligibility criteria as it favours large companies, prevents participation by capable Domestic MSME and restricts competition.	Please refer Corrigendum-V.
1287				OEMs turnover	There should be no turn over criteria for VMS and FRS.	Clause as per tender prevails.
1288				Not part of RFP	Inclusion of cryptography & Encryption for both wired & wireless based IP Video Surveillance solution.	Clause as per tender prevails.
1289	8.2.1 Server for CCTV at stations, 8.3.1.4 FRS software, 8.3.2.3 VAS Software and FRS				Allow GOU (Graphics processing unit) in the FRS solution to enhance the performance of FRS, in both stations and Coach	1. Please refer to RDSO para 10.1.2 of Rev 5.0 for CCTV at stations. As per the clause, bidder can propose other additional items like GPU etc. to fulfill FRS requirement in the server specification as mentioned in clause 10.1.1. 2. Please refer clause 4.8 (xvi) of Rev 1.0 for CCTV in coaches. As per the clause, bidder can propose other additional items like GPU etc. to fulfill FRS requirement in the server specification as mentioned in clause 4.8.
1290	4.A.14.1.3/Pt. 6	138		The software OEM should have a CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process	The role of CMMI level-5 certification is not relevant to this technology.Similarly ISO 14001:2004 is also not applicable to the companies working on this technologies. The ISO 9001 certification is quite relevant, please note that the current standard applicable is ISO 9001: 2015. Since ISO 9001:2008 has become obsolete as from sep 2018 onwards. We therefore request you to either delet this clause completely or written only with the requirement of ISO 9001:2015 Certification	Please refer Corrigendum-V.
1291	CLAUSE 8.20B	259-60		SPECIFICATION 4 patch cords- under sub point (V),IT SAYS "Connectors must be make of reputed OEM'S 3M,Huber-Shuner, R&M, TE connectivity/Raychem"	"connectors must be make of reputed OEM'S 3M,Huber-Shuner, R&M, TE connectivity/Raychem or any oyer cact approved manufacturer's having a valid approval against specification number TEC/GR/TX/OFJ-01-NOV.09 for the tendered connector type.	Please refer Corrigendum-V.
1292	Table 14	46		rank-1 accuracy (R>1,T=0)	the most challenging metric and the probability of retrieving the wanted personans the first result. This optimizes the time and confidence of human operators	Clause as per tender prevails.
1293	Question asked				1. Please confirm, whether EMS need to be deployed in each Zone or only at central site?	Clause is self explanatory.
1294	Question asked				1. Please confirm, If EMS needs to be deployed in each zone, does it need to be configured in local HA in each zone?	Clause is self explanatory.
1295	Question asked				1. Please confirm if EMS will collect data directly from the all devices like switch / firewall / router / CCTV / UPS directly or it needs to integrate with their EMS .	Clause is self explanatory.
1296	Question asked				1. It is request that Railtel should ask for Pink Elephant certificate for at-least 7 processes to ensure that quality and reliability of the software platform.	Clause as per tender prevails.
1297	Question asked				Request you to consider IEC-62443 conforming components, mainly the Managed Ethernet switches to avoid unauthorized access of passenger details.	Clause as per tender prevails.
1298	Question asked				EMD against Make In India Declaration	Clause as per tender prevails.
1299	Question asked				Reverse Auction	Clause as per tender prevails.
1300	Question asked				Single Make & Model	Please refer Corrigendum-V.
1301	Question asked				Current Project Timeline	Clause as per tender prevails.
1302	clause 8.20 and 8.21		chapter 8		1. We request you to please mention cat 6 Shielded Jack/Patch Panel .	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
1303					1. Also please incorporate Cat 6 Shielded Patch Cords .	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.
1304					1. For Field side please add Shielded Field Termination Plug as normal RJ45 plug will not work with STP cable .	Bidder to offer solution as per technical and functional requiremnet of the system as defined in the tender document.

1305	Chapter 4	156	4.A.48	Make in India	This clause is a deterrent to Foreign Companies participation which can lead to quality issues in the overall architecture as there are technologies like FRS, Analytics etc which are at very naïve level in India. This can also be seen in FRS NIST report that how many pure Indian Manufacturers are there in that list. Request you to remove the same, at least for the new technologies like FRS. Also please clarify Why it is mandatory to setup of unit and increasing the capacity over the years, when delivery, installation and implementation will happen within 15 Months of contract signed? Are there any expansion plans over the period of time? If yes then request you to advise, so that things can be planned accordingly.	Please refer Corrigendum-V.
1306	RDSO/SPN/TC/65	51	19.12	The system shall have any tool for enhancement of quality of image before enrolment. The tool may be either a part of this software or may be provided as an add-on.	Request you to clarify the requirement for this tool: specially the number of users, and the office location(s) of these users?	Clause as per tender prevails.
1307	RDSO/SPN/TC/65/2019	51	19.7	The system shall be able for matching suspect faces from prerecorded video feeds obtained for CCTV deployed various identified locations.	Could you please clarify the requirement for this feature:specially the number of users, and the office location(s) of these users?	Clause as per tender prevails.
1308	RDSO/SPN/TC/65/2019	60	29	Schematic Diagram for Cluster of stations FRS system is located into "RFP Thana/Divisional HQ/Any other Location	Our interpretation of this schematic diagram is FRS solution deployment could be proposed in divisional HQ or any other location. Could you please confirm our interpretation is correct?	Clause as per tender prevails.
1309	4.A.14.1.3	138	6	The Software OEM should have a CMMI Level-5 and ISO 9001:2008 and ISO 14001:2004 for its development & manufacturing process.	CMMI is irrelevant for Software (Product) vendors and applies to companies doing Bespoke development. ISO for quality and environment is relevant for hardware vendors having factories etc. This clause of CMMI level 5 will create a blocking point for new technology vendor like FRS and will decrease the number of players participating in the tender. It will in turn will reduce the competition and increase the cost. Request you to delete or make it optional as no pure Indian firms will have these so it will also contradict Make In India clause.	Please refer Corrigendum-V.
1310	CHAPTER-3,C	101		All the assets (pan-India) will be monitored through the central EMS deployed at one Data Center as a DC with the redundant infrastructure configured in other Data Center as a DR, in case of failover.	Will DR will be 100% of DC or 50%? Is this true for all applications. Ex: For FRS we understand there will be redundancy at DC w.r.t DB as well as FRS application. So would DR be having same architecture as DC i.e. Redundancy for FRS at DR too.	Clause is self explanatory.
1311	3.B.6.1	97		At RailTel Datacenters (Gurugram and Secunderabad)	We understand that there is no redundancy required at Thana level for FRS. If FRS server at thana post goes down then it will fail over to FRS DC. However at any point of time there is connectivity problem in addition to FRS thana failure then how things will work. Please advise.	Clause is self explanatory.
1312	Corrigendum-III	8	4.B.10.2.1	Reverse Auction (e-RA)	Have not seen reverse auction part of any big Solutions project (multiple product and services involved) like this. It is very hard for SI/vendor to execute the same. Over and above it will again lower down the quality of solution proposed by an SI. We request you to remove the same.	Clause as per tender prevails.
1313	4.A.14.1.3	eligibility criteria requirements for OEM's	serial no. 2	turnover for camera OEM is prescribed as 375 crores cumulative in last 3 financial years	We are a MSME & NSIC registered public limited company and are eligible for relaxations in public tenders. The prescribed turnover of 375 crores is very high for a MSME company like us	Clause as per tender prevails.
1314					Considering our above referred capability in similar large surveillance projects for smart cities, public institutions etc. turnover criteria may kindly be relaxed to 200 crores.	Clause as per tender prevails.
1315					Relaxation of the above turnover will allow may MSME's like us to participate in public tendering processes. In the current scenario where MSME's are tightly bound by banking sector regulations this minor relaxation of turnover will go a long way in providing encouragement and impetus for growth of MSME's and the MSME sector as a whole	Clause as per tender prevails.
1316	Question asked				Change of clause for single make and model across all packages to be amended for allowing multiple makes to provide best possible solution	Please refer Corrigendum-V.
1317					Amended of milestone project timeline from 4 months to 6 months as the existing project timeline is very stringent considering the scattered nature of project	Clause as per tender prevails.
1318					Request for deletion of the following clauses which were added in the corrigendum,	Clause as per tender prevails.
1319					a. Additional EMD if UNR 50 cr against declaration of Make in India parameters as stipulated in the RFP	Clause as per tender prevails.
1320					b. Reverse Auction Clause	Clause as per tender prevails.