

Response to prebid queries by IRCON.

Ref\_Tender No.: IRCON/1014/J&amp;K.KQ/S&amp;T /tunnel Com/Tender Date: 30.06.2021

Name of the work: Design, Supply, Installation, Testing &amp; Commissioning of Tunnel Communication system consisting of Emergency Call &amp; Service Telephone, CCTV, Tunnel Radio and PA system in Tunnel Environment on Dharam - Banihal section of Jammu Kashmir Rail Link Project under Ferozepur division of NR.

ASHOKA BUILDCON LIMITED				
S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
1/11	Section III ITT Page No. 22 Notes. : 1	Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.	Bidder requested to consider the experience of any Govt/PSU Sectors & amend the clause as per below. Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways/ <u>Any Govt / PSU</u> in India using Leaky Cable / Optic Fiber Cable / Data Cable	Please see the corrigendum-4
2/11	Section III Page No. 22 Notes. : 3	Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Comm.) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable	You are requested to kindly consider the any IT/ICT/ITES/Tele-com project & amend the similar work definition like below. Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable. Or Design, Supply and Installation of Any IT/ICT/ITES/Telecom project in India for Railways / Govt / Semi Govt/PSU.	Please see the corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
3/11	Section - 9.1 / Page No. - 2	Sch-A- IT Data Networking Infrastructure	Requesting to follow latest RDSO revision Technical Specification and incorporate latest RDSO revision number in BOQ	In case of any contradiction, latest RDSO specs are to be followed, complying special requirements of the Project as: High Availability of the solution Integration of all solutions
4/11	Section - 9.1 / Page No. - 3, Item - 18	Supply of 3 core 4 Sq.mm multi strand copper Conductor, LSZH armoured cable of reputed make	Requesting to provide Total Quantity requirement along with Detail Specification	Follow the requirement given in BOQ
5/11	Section - 9.1 / Page No. - 3	Sch-C- IP CCTV Surveillance Solution	Requesting to follow latest RDSO revision 6.0 Technical Specification for CCTV Surveillance Solution and incorporate latest RDSO revision number in BOQ	Refer to response of query 3/11
6/11	Section - 9.1 / Page No. - 5	Sch-D- IP Horn Type PA Speaker	Requesting to follow latest RDSO revision Technical Specification and incorporate latest RDSO revision number in BOQ	Tender specs are to be followed
7/11	Section - 9.1 / Page No. - 5	Sch-F- Supply and Laying of OFC for SCADA, Point No. 1 - Supply of OFC cable of specification ADF (ZN) 2Y 12X12 E9/125.	RDSO specification reference not mentioned for this item. Requesting to incorporate the same	FRLSZH sheath in OFC Cable is mandatory with equal no. of cores as per tender specifications in addition to RDSO specifications IRS: TC:55/2006 Rev-1 (Amdt. 1.1,2.0 & 3.0) .
8/11	Section - 9.1 / Page No. - 7	Schedule-G: VHF Simplex Radio System	Requesting to follow latest RDSO revision Technical Specification and incorporate latest RDSO revision number in BOQ	RDSO/SPN/TC/109/2019 Rev 0.0 or latest to be followed
9/11	Section - 4 / Page No. - 2 & Section 7.1, Page No. 153	Section- 4: DEFECT LIABILITY PERIOD: Twelve (12) months from the date of issue of Completion Certificate. Section - 7.1: The DLP period for components shall also be 2 years	There are different Defect Liability Period (DLP) Mentioned in both sections. Requesting to clarify about total DLP period	For DLP, follow Sec-5 of SCC (page-42 of 69)

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
10/11	Section 7.1 , Page No. 153	The DLP period for components shall also be 2 years.Plus yearly product warranty cost for the 3rd, 4th and 5th year to be separately mentioned	Operation and Maintenance is not part of the BOQ. Requesting to incorporate the same in BOQ Section 9.1	For DLP, follow Sec-5 of SCC (page-42 of 69)
11/11		Additional	We hope all the Bill of Quantity has mentioned accordingto tunnel Length. If any Variation in total quantity & additional items require then How it will be addressed.	Variations shall be governed as per SCC Clause-21
<b>HIKVISION</b>				
1/1	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78/A /Security Solution /1,2	Tender approved makes for CCTV systems for TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL make only	Bidder requested to consider HIKVISION for CCTV security products.	List of approved makes is withdrawn.
<b>SAMSUNG SDS</b>				

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
1/1	Section -III ITT - Revised-3, P- <u>22</u> :	"Joint Venture / Consortium of maximum three partners is allowed. Since work is primarily of Radio Communication, lead partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable."	Bidder requested to amend the clause as below "Joint Venture / Consortium of maximum three partners is allowed. Since work is primarily of Radio Communication, lead partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. In case of JV/ Consortium, either of the Substantial /Consortium members should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable." <b>Kindly clarify "Joint Venture/ Consortium of maximum of three firms is allowed."</b> Does it mean companies can participate either in JV or in Consortium?	Please see the corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
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**TRANSLINE TECHNOLOGIES PVT. LTD**

1/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 39 of 78 Wall mount rack (15U/12U)	Should be 15U/12U Height Rack and have 19" mounting bracket in front & rear and wall mountable with side panels, Front Glass Door with lock. Depth:600 mm	<u>Suggested Specs for Tunnel Application:</u> IP55 Outdoor Wall Mount Rack made of single sheet folded made of GI 1.2mm, Surface Finish: Nano Coated, electro-dip coat primed to 20 microns and powder coated to 80 to 120 microns. Zinc rich primer coated and then powder coated to RAL 7035 Super durable powder Matt finish. Should be 15U/12U Height Rack and have 19" mounting bracket in front & rear and wall mountable with side panels, Front Glass Door with lock and rear internal bolted cover. Dimension:- 600 mm Wide x 12U/15U Height x 600 mm deep. Regulatory Standard, ISO 9001, 14001, 45001, ROHS Compliant, UL 60950-1 & UL 2416	Tender specifications are minimum requirement. Bidder can opt for better specifications as per detailed design and site requirements.
		Fans 90 CFM 230 VAC with 2 cooling fans on top	2 Axial 90 CFM Fans and filter with canopy as per IP 55 standards	
		PDU Horizontal 5 Amp with 6 sockets	PDU Horizontal 5/15 Amp with 5 sockets	
		1U Wire Manager; Mounting Hardware	1U Wire Manager; Mounting Hardware	
2/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 40 of 78 Floor Mount Network rack	Modularity & Scalability, conforms to DIN 41494, Load rating go 850 Kgs, Aluminium and CRCA construction , depth:800mm	<u>Suggested Specs for Tunnel Application:</u> Rack frame made of CRCA and Flat Part in GI, consisting of more than Sixteen folded rolled hollow frame section punched in 25mm DIN pitch pattern, Modular-ity and Scalability, conforms to DIN 41494, having load bearing capacity of 10000 Newton, Dimension 800W x2000H (42U) x 1000D (mm). Surface Finish: Nano Coated, electro-dip coat primed to 20 microns and powder coated to 80 to 120 microns. Zinc rich primer coated and then powder coated to RAL 7035 Super durable	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			powder Matt finish. Regulatory Standard, ISO 9001, 14001, 45001, ROHS Compliant, UL 60950-1 & UL 2416	
		Door Steel 800W, 42 U, Perforated with Hex Perforation.	Rack are required for tunnel application hence it should have front and rear plain door with four point locking system with provision of fan and filter for air circulation with IP 55 standards. Door required comfort handle with key lock insert.	Tender specifications are minimum requirement. Bidder can opt for better specifications as per detailed design and site requirements.
		Castor Ft Brake 100Kg.	Suggested to Include Modular 4 piece base plinth of 100 mm height which can be assembled at site	
		Fan housing Unit with 4 Fans 90CFM 230VAC	Suggest to include fan and filter with IP 55 standards to avoid water and dust entrance inside the enclosure.	
3/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 40 of 78 Servers rack	Modularity and Scalability, conforms to DIN 41494, Load rating go 850 Kgs, Aluminium and CRCA construction , depth:1000mm	Suggested Specs for Tunnel Application: Rack frame made of CRCA and Flat Part in GI, consisting of more than Sixteen folded rolled hollow frame section punched in 25mm DIN pitch pattern, Modularity and Scalability, conforms to DIN 41494, having load bearing capacity of 10000 Newton, Dimension 800W x2000H (42U) x 1000D (mm). Surface Finish: Nano Coated, electro-dip coat primed to 20 microns and powder coated to 80 to 120 microns. Zinc rich primer coated and then powder coated to RAL 7035 Super durable powder Matt finish. Regulatory Standard, ISO	Tender specifications are minimum requirement. Bidder can opt for better specifications as per detailed design and site requirements.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			9001, 14001, 45001, ROHS Compliant, UL 60950-1 & UL 2416	
		Door Steel 800W, 42 U, Perforated with Hex Perforation	Rack are required for tunnel application hence it should have front and rear plain door with four point locking system with provision of fan and filter for air circulation with IP 55 standards. Door required comfort handle with key lock insert.	
		Castor Ft Brake 100Kg.	Suggested to Include Modular 4 piece base plinth of 100 mm height which can be assembled at site	
		Fan housing Unit with 4 Fans 90CFM 230VAC	Suggested to include fan and filter with IP 55 standards to avoid water and dust entrance inside the enclosure.	
		PDU 5x15AMP with 10 Socket, Earthing Kit	PDU 5x15AMP with 10 Socket, Earthing Kit	
4/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /Sno 1,2,5,6,8	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, and MERITLINIL only.	Bidder requested to include INDIGOVISION among the approved makes for the tender.	List of approved makes is withdrawn.
5/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 76 A/Security Solution /Sno2	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, and MERITLINIL only.	Bidder requested to include INDIGOVISION among the approved makes for the tender.	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
6/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 76 A /Security Solution /Sn 5	Tender approved makes of TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON only.	Bidder requested to include INDIGOVISION among the approved makes for the tender.	
7/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 76 A/SecuritySolution/Sno 6	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL Only	Bidder requested to include INDIGOVISION among the approved makes for the tender.	
8/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 A /Security Solution /SN 8	Tender approved makes of TYCO, XTRALIS, NICE, EASYVIGIL, SYNERGY LABS, MERITLINIL only.	Bidder requested to include INDIGOVISION among the approved makes for the tender.	
9/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 C ) LAN & Networking, S/N-5	Tender approved makes of HP, JUNIPER, CISCO, EXTREME, NEXXUS, ATRON, PLANET, ALLIED TELESIS only	Bidder requested to include D-Link among the approved makes for the tender.	List of approved makes is withdrawn.
10/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 C ) LAN & Networking, S/N-6	Tender approved makes of PRESIDENT, RITTAL, ATRON only	Bidder requested to include D-Link among the approved makes for the tender.	



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
11/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 C) LAN & Networking S/N-7,8,9	Tender approved makes of BELDEN, SEIMON, PANDUIT, CORNING only	Bidder requested to include D-Link among the approved makes for the tender.	
12/14	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 12. Cat 6A U/UTP Cable	Cat 6A U/UTP Cable	Bidder requested to confirm requirement and quoted "As per tech. spec Cat6A U/UTP Cable and as per BOQ, its Armoured LSZH Cat 6A S/FTP Cable. But as per RDSO Specifications and Approved product - Cat6 S/FTP is used in Railways Network so please change requirement on same.	FRLSZH CAT6A S/FTP as per clause 17.1 of specs RDSO/SPN/TC/65/2021 Rev.6 or latest are to be provided
	BILL OF QUANTITIES ABSTRACT Page no. 2 A/IT Data Networking Infrastructure	Supply of Armoured LSZH Cat 6A S/FTP Cable complete as per intend of design page.38/85 broadly conforming to RDSO standard RDSO/SPN/TC/65/2019 Rev.5 or latest.	Moreover, As per Field Requirement also, Cat6 S/FTP cable is Recommended for Network. Cat6A cable is recommended for 10G Network / Data Centre Network only."	FRLSZH Cat 6A S/FTP conforming to specs RDSO/SPN/TC/65/2021 Rev.6 or latest are to be used
13/14	Section VII - Page 56 of 144 12.1.3.3 IP NETWORK Sr. 4	Operating Temperature should be -40° to 75° C	Bidder quoted "Operating Temperature should be -20° to 70°C. Leverage will allow all the vendors to participate to comply with the specifications"	Specs RDSO/SPN/TC/65/2021 REV 6.0, with temperature range -20 deg C to +70 deg C to be followed
14/14	Section IX BILL OF QUANTITIES- S. No.A/3	SITC of 04 port Industrial Switch with 4X10/100/ 1000M bt PoE ports , 2X 100/1000M uplink SFP slot ports and 1 X RS232 console port And 2set of V+, V-redundant DC power interface etc all complete as per intend of design; page.31/78,___conforming to RDSO specifications RDSO/SPN/TC/65/2019 revision 5.0 or latest.	"Detailed Technical Specifications of 4 port Industrial Grade Switch are not generic, only single OEM will fully complied for same. Currently multiple Specifications for Industrial Switch, as per BOQ - Conforming to RDSO specifications RDSO/SPN/TC/65/ 2019 revision 5.0 or latest. Page 31 of 78 (IDT) - Additional Specifications (OEM Specific) Page 56 of 144 (12.1.3.3 IP NETWORK) - Additional Specifications"	Clause 13.0 of RDSO Specs RDSO/SPN/TC/65/2021 Rev 06 or latest, with modifications to Mil-Std and NEMA-TS2 certification for Electromagnetic Compatibility (EMC) and other electrical interference due to 25kv Overhead Railway Traction Line are to be followed.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			<p>Bidder requested to remove additional specifications and it should be as per Conforming to RDSO specifications RDSO/SPN/TC/65/2019 revision 5.0 or latest with additional basic Industrial specifications - Dual redundant PSU with reverse polarity protection. Switch Certification - Shock, Vibration &amp; Drop (IEC/MIL-STD), NEMA-TS2 certified.</p> <p>Switch should support IEEE 1588v2 Precision Time Protocol HW-Based E2E Transparent clock</p>	
<b>STERLING INFO PVT. LTD.</b>				
1/2	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 76 A/Security Solution/Sno5	Tender approved makes of TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON, makes only.	Bidder requested for inclusion of Mirasys among the approved makes.	List of approved makes is withdrawn.
2/2	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: A/Security Solution/Sno6	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL makes only.	Bidder requested for inclusion of Mirasys among the approved makes.	
<b>KEC INTERNATIONAL</b>				
1/8	3. Technical Eligibility Criteria Definition of similar work	Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for VoiceCommunication) fit for 160kmph (as per RDSO specs), CCTV/PA System on	Bidder requested to amend the clause as below: Design, Supply, Installation, Testing & Commissioning of Signaling and	Please see the corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
		Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable	Telecommunication or Telecommunication work".	
			Bidder queried " Does Active Radio Networks mentioned in the definition of similar works shall also mean the following work done on Indian Railways: 1. VHF transceiver simplex for mobile 5 watt. Motorola model no. GP 328 or similar with rechargeable battery. This will include battery charger and one rechargeable spare battery. 2. VHF transceiver simplex for mobile 25 watt. Motorola model no. GM 388 or similar AtWay Station with suitable Antenna and 30 Mtr RF Cable. "	Please see the corrigendum-4
2/8			Does the term "Railways in India" included in definition of similar work, also includes Metro systems executed in India?	Please see the corrigendum-4
3/8			With reference to clause no. 3 notes iv) in Essential qualification criteria, if the qualification sought is part of composite project work scope, the entire value of project work shall be considered to decide eligibility?	Please see the corrigendum-4
4/8			Bidder requested to conduct a Pre-Bid Meeting.	Please see the Corrigendums issued to this tender
5/8			Requested to extend deadline for submission of pre-bid queries by at least one week from its current due date 6 <sup>th</sup> July 2021 or till the date of pre-bid meeting (if decided)	Please see the Corrigendums issued to this tender

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
6/8			Requested for extension of bid submission due date by 4-6 weeks.	
7/8	Section VII Complete technical specification Page 74 13.3.8.3 Optical fiber cable	The individual radio units situated in the buildings and niches. Cabinets shall be connected with a single mode RDSO approved OFC cable with LSZH-FR sheath. This optical fiber cable shall be laid in the conduit already provided in the tunnel and shall transfer the signals to the buildings, where the information will be processed. The connections of the optical fiber cable to the patch fields shall be done by SC plug-in switching systems. OFC shall be supplied as part of radio system along with the OFC network equip	Kindly refer the tender clause, we understand that the RDSO specification RDSO/SPN/TC/110/2020 does not mention anything related to LSZH-FR sheath. Kindly confirm that during RDSO inspection, the LSZH-FR element of the cable shall not be inspected as per RDSO.	OFC cable is to be provided with FRLSZH sheath mandatorily with equal no. of cores as per tender specs, in addition to RDSO specifications IRS: TC:55/2006 Rev-1 (Amdt. 1.1, 2.0 & 3.0) .
8/8	Section IX BOQ Page 8, Sch G: VHF Simplex Radio System, Supply of RF & Radiating Cable & Connector Requirements, Point-16	Supply of 7/8" Leaky Radiating Cable as per specifications No. RDSO/SPN/TC/109/2019 or latest.	Most of the OEMs of leaky cables are not able to fully comply to the RDSO specifications. These include those OEMs as well who are already commercially proven and have supplied leaky cables for VHF communication in tunnels across the world including India. Since, there are very few leaky cable manufactures all over the world, (excluding China vendors), you are requested to modify the leaky cables specifications accordingly.	Cables conforming to latest specs RDSO/SPN/TC/109/2019 Rev 0.0 are to be used as per clause 3.1.5 of tender doc
<b>HEINRICH CORPORATION INDIA PVT. LTD.</b>				
1/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 76 A /Security Solution /Sno 1/ IP FIXED CAMERA WITH IR	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of HEINRICH among the approved makes.	List of approved makes is withdrawn.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
2/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /Sno 2/ IP PTZ CAMERAS WITH IR	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of HEINRICH among the approved makes.	
3/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 .A/Security Solution /Sno 5/ VIDEO MANAGEMENT SOFTWARE	Tener invited bids from TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON only	Bidder requested for inclusion of HEINRICH among the approved makes.	
4/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78A /Security Solution /Sno 6/ PTZ KEYBOARD	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of HEINRICH among the approved makes.	
5/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 B/Comm/. and Public Address /Sno 1/SOS	Tender approved makes of COMMEND, EASYVIGIL, NEXTRONICS, CISCO, MOTOROLA, ZENITEL only.	Bidder requested for inclusion of HEINRICH among the approved makes.	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
6/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 B/Communication and Public Address /Sno 2/IP SPEAKERS	Tender approved makes of COMMEND,EASYVIGIL, NEXTRONICS, HARMAN, 2N only	Bidder requested for inclusion of HEINRICH among the approved makes.	
7/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 B/Comm. and Public Address /Sno 3/ IPTELEPHONE	Tender approved makes of COMMEND,EASYVIGIL, NEXTRONICS, CISCO,MOTOROLA, ZENITEL only	Bidder requested for inclusion of HEINRICH among the approved makes.	
8/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 B/Comm. And Public Address/Sno 4 Unified Communication Platform (SOFTWARE)	Tender approved makes of EASYVIGIL, NEXTRONICS, CISCO, MOTOROLA, COMMEND only	Bidder requested for inclusion of HEINRICH among the approved makes.	
9/9	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78. B/Communication and Public Address /Sno 5/ Controller Server	Tender approved makes of DELL, HP, COMMEND, EASYVIGIL, NEXTRONICS, CISCO,MOTOROLA, ZENITEL only	Bidder requested for inclusion of HEINRICH among the approved makes.	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
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M/S IMPULSE CCTV				
1/4	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78A /Security Solution /Sno 1/ IP PTZ CAMERAS	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of IMPULSE CCTV among the approved makes.	List of approved makes is withdrawn.
2/4	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A/Security Solution /Sno2	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of IMPULSE CCTV among the approved makes.	
3/4	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78. A/Security Solution /Sno 3/ IP VIDEO SERVER	Tender approved makes of HP, DELL,ATRON	Bidder requested for inclusion of IMPULSE CCTV among the approved makes.	
4/4	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78. A/Security Solution /Sn 6/ PTZ KEYBOARD	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested for inclusion of IMPULSE CCTV among the approved makes.	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
<b>DERWISER INDIA</b>				
1/3	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & NETWORKING Sr. No.7 CAT 6A S/FTP Armoured Cable, Patch Cord, BASE PLATE, RJ45	Tender approved makes of BELDEN, SEIMON, PANDUIT, CORNING	Bidder requested for inclusion of DERWISER among the approved makes.	List of approved makes is withdrawn.
2/3	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & Networking Sr. No.8 Optical Fiber Single Mode Armoured Cable (24/48Core), Patch Cord	Tender approved makes of BELDEN, SEIMON, PANDUIT, CORNING	Bidder requested for inclusion of DERWISER among the approved makes.	
3/3	Section VII - List of Approved Make: Page 77 of 78 C/LAN & NETWORKING Sr. No.9 LIU / PATCH PANEL/ PATCH CORD	Tender approved makes of BELDEN, SEIMON, PANDUIT, CORNING	Bidder requested for inclusion of DERWISER among the approved makes.	
<b>VISTA INFORMATION SYSTEMS PVT LTD</b>				
1/5		Bidder should possess the experience of having successfully completed/ substantially completed similar works during last 7 years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following: a. one similar work costing not less than	Bidder requested to confirm that the values of works completed by individual JV/consortium partners as mentioned in their completion certificates will be arithmetically added to judge Technical Eligibility Criterion.	It is confirmed that the values of works completed by JV/consortium partners individually, as mentioned in partner's completion certificates, will be added



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
		<p>amount equal to 60% of advertised value of tender</p> <p>b. Two similar works of each costing not less than amount equal to 40% of the advertised value of tender.</p> <p>c. . Three similar works of each costing not less than amount equal to 30% of the advertised value of tender. It states that "Joint Venture / Consortium of maximum three partners is allowed. Since work is primarily of Radio Communication, lead partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable."</p>		arithmetically to evaluate their Technical Eligibility
2/5		List of make and model for CCTV and IT networking products are mentioned in page 76-77 of technical specification while it mentions to the compliance to the RDSO spec. also.	Clarification required that any Make model in compliance to the RDSO specs and compliance with land border agreement as per GOI guidelines can be supplied or only models suggested in tenders need to be supplied.	List of approved makes is withdrawn.
3/5			BOQ of Public addressing system specifies about Horn type PA speaker system whereas technical specification asks for entire PA system	Please refer Technical Specs 7.1, page no. 190/224 - IP PA Requirement; and page no. 216/224 - Schedule-4: IP Based Horn Speakers.
4/5			While tender mentions only about T74 design and drawing , the coverage needs to be provided to all tunnels , provide tentative details of all the tunnels to be provided in this	Successful bidder has to get the design approved before taking procurement action. Tunnel T74R will form the basis of

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			tunnel (T4R, 77,T-78,& c-n-c, T-49, T-48,47,46,44/45 &42/43)	designs, but design of other tunnels may be different due to different tunnel cross-sections and other site conditions.
5/5			In case of radio, There is no mention of in between tunnel coverage for VHF in RDSO specification and this is not covered in BOQ also, please clarify your requirement whether in between tunnel coverage is required or not.	Contractor has to provide coverage on bridges and other places in between tunnels
<b>BELDEN INDIA PVT. LTD</b>				
1/5	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & Networking Sr .1. Router	Tender approved makes HP, JUNIPER, CISCO, EXTREME, ARISTA, ALLIED TELSEIS	Bidder requested inclusion of BELDEN among approved makes	List of approved makes is withdrawn.
2/5	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & NETWORKING Sr .2 Firewall	Tender approved makes HP, JUNIPER, CISCO, EXTREME, ARISTA, ALLIED TELSEIS , CHECK POINT , PALTO	Bidder requested inclusion of BELDEN among approved makes	
3/5	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & Networking Sr.3. Core switch	Tender approved makes HP, JUNIPER, CISCO, EXTREME, ARISTA, ALLIEDTELESIS	Bidder requested inclusion of BELDEN among approved makes	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
4/5	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & NETWORKING Sr.4. Distribution Switch	Tender approved makes HP, JUNIPER, CISCO, EXTREME, ARISTA, ALLIED TELESIS	Bidder requested inclusion of BELDEN among approved makes	
5/5	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 77 of 78 C/LAN & NETWORKING Sr .5. Industrial Grade switch	Tender approved makes HP, JUNIPER, CISCO, Tender approved makes EXTREME,NEXXUS,ATRON,PLANET,ALLIED TELESIS	Bidder requested inclusion of BELDEN among approved makes	
<b>HONEYWELL</b>				
1/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /Sno 1,2,	Tender has approved item of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL makes only	Bidder requested to consider, Honeywell among approved makes “We would like to introduce our self as HBT India Buildings, a division of Honeywell International India Pvt Ltd (HIIPL), which is a wholly owned subsidiary of Honeywell Internat-ional Inc, USA. The products are manufactured by HBT Buildings, globally. Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products. “	List of approved makes is withdrawn.
2/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno 3	Tender approved makes of HP, DELL, MERITLINIL, IBM only	Bidder requested to consider, Honeywell among approved makes “Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products.”	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
3/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution Sno4	Tender approved makes of QSAN, HP, DELL , MERITLINIL only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products."	
4/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno 5	Tender approved makes of TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products."	
5/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make:Page 76 A /Security Solution /Sno 6	Tender approved makes of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products."	
6/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno 7	Tender approved makes of CHRISTIE, NEC, BARCO, LG , SAMSUNG, MERIT-LINIL only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved make for CCTV. We are having US and Non-China Products."	
7/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno 8	Tender approved makes of TYCO, XTRALIS, NICE, EASYVIGIL, SYNERGY LABS, MERITLINIL only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products."	
8/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of	Tender approved makes of ARBS, CES, TELENET, KAT6, C SYSTEMS only	Bidder requested to consider, Honeywell among approved makes "Kindly approve Honeywell as a approved	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	Approved Make: Page 76 A /Security Solution /Sno 9		make for CCTV. We are having US and Non China Products.”	
9/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno10	Tender approved makes of ARBS, CES, TELENET, KAT6, C SYSTEM only	Bidder requested to consider, Honeywell among approved makes “Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products.”	
10/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 A /Security Solution /Sno 11	Tender approved makes of HP , DELL, MERITLINIL, IBM only	Bidder requested to consider, Honeywell among approved makes “Kindly approve Honeywell as a approved make for CCTV. We are having US and Non China Products.”	
11/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 B /Comm. & address /Sno 1	Tender approved makes of COMMEND, EASYVIGIL, NEXTRONICS, CISCO, MOTOROLA, ZENITEL only	Bidder requested to consider, Honeywell among approved makes “Kindly approve Honeywell as a approved make for CCTV. We are having US and Non china Products.”	
12/15	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 B / Comm. & address /Sno 2	Tender approved makes of Tender approved makes of COMMEND, EASYVIGIL, NEXTRONICS, HARMAN, 2N only	Bidder requested to consider, Honeywell among approved makes “Kindly approve Honeywell as a approved make for CCTV. We are having US and Non china Products.”	
13/15		Full HD fixed box type colour IP color cameras with varifocal lens shall be as per clause no. 5.1 of RDSO specification:- RDSO/SPN/TC/65/2019 (Rev.5.0)	Kindly allow for Both Box/Bullet Camera. Bullet is more perfect for Tunnel kind of Requirement.	Kindly follow tender specs

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
14/15		In addition to the RDSO specification the cameras in tunnel area will be provided with blast proof housing.	Blast Proof Housing is not required for Tunnel. Please remove.	The clause is modified as "Vandalism proof housing as per specs RDSO/SPN/TC/65/2021 Rev 6.0 or latest is to be provided"
15/15		This waterproof camera housing and fixing arrangement shall be of highly corrosion resistant stainless steel material no. 1.4404.	Aluminium is also corrosive resistant material. Also Major of the OEM does not have Stainless Steel Housing.	Follow Tender Technical specification PDF Page no. 147-224; tech specs 7.1
			<p>Requested to add</p> <p>All Camera must comply to NDAA Section 889 National Defence Authorization Act 2019. (NDAA) is a United States federal law, which specifies the budget, expenditures and policies of the U.S. Department of Defence. The John S. McCain National Defence Authorization Act FY 2019 (NDAA), Section 889, prohibits the US Government from procuring video and telecommunication equipment from certain companies and their subsidiaries.</p> <p>All Camera must have AES128 / 256 Streamin Encryption. AES uses symmetric key encryption, which involves the use of only one secret key to cipher and decipher information. ... AES-256, which has a key length of 256 bits, supports the largest bit size and is practically unbreakable by brute force based on current computing power, making it the strongest encryption standard</p>	<p>Please refer Corrigendum dated 14<sup>th</sup> July 2021.</p> <p>Please follow tender specs</p>

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			All Camera must have FIPS Chipset Built-In. Built-in NIST FIPS 140-2 chipset provides hardware-based security and reduces risk of illegal access and data breaches. Federal Information Processing Standards, FIPS are standards and guidelines for federal computer systems that are developed by National Institute of Standards and Technology (NIST) in accordance with the Federal Information Security Management Act (FISMA) and approved by the Secretary of Commerce . There are certain levels of FIPS. and We are talking about 140-2 Chipset	Please follow tender specs
			Tunnel environment contain lots of humidity hence EnGORE® Vent Technology must be included in all cameras which creates a breathable barrier, keeps rain out and helps image quality remain consistent. ePTFE vent works by allowing air and other gases to pass freely through the membrane while stopping liquid and particles from entering the enclosure.	Please follow tender specs
<b>RAILTEL CORPORATION OF INDIA LIMITED</b>				
1/1	Annexure V: Definition of similar work	Design , Supply, Installation of Active Radio Networks VHF/Simplex/GSM-R/LTE-R for voice communication fit for 160kmph (as per RDSO specs) ,CCTV/PA system on Railways in India using Leaky Cable / Optic Fibre Cable / Data Cable	Bidder requested to amend the clause as below: “Design , Supply, Installation of Active Radio Networks VHF/Simplex/GSM-R/LTE-R for voice communication fit for 160kmph (as per RDSO specs) ,CCTV/PA system on Railways in India using Leaky Cable / Optic Fibre Cable / Data Cable or Telecommunication works”	Please see the corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
<b>SIEMENS LIMITED</b>				
1/8	1 Section -I e-Procurement Notice Page no. 2	Clarification End Date : 06.07.2021 17:30 Hrs	Requested to extend the Query submission date for at least till 7 more days from current date i.e., 14th of July 2021	Please see the Corrigendums issued to this tender
2/8	1 Section -I e-Procurement Notice Page no. 2	Clarification End Date : 06.07.2021 17:30 Hrs	Requested to allow time till 14th of July to submit Techno-Commercial Queries	Please see the Corrigendums issued to this tender
3/8	1 Section -I e-Procurement Notice Page no. 2	Pre-bid Meeting Date : NA 11.30 Hrs	Considering the volume, complexity, and 3rd party dependencies. Kindly arrange from one online prebid meeting.	Please see the Corrigendums issued to this tender
4/8	1 Section -I e-Procurement Notice Page no. 2	Bid Submission End Date : 26.07.2021 15:00 Hrs	Requested to extend the bid submission for at least 6 weeks from the current due date or from the prebid replies.	Please see the Corrigendums issued to this tender
5/8	3 Section -III ITT - Revised-3 Page no. 22	Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fibre Cable / Data Cable.	Quoted "Definition of Similar works is very restrictive, Please Accept Signalling & Telecom System works in Indian Railways/Indian Metro rail projects having Radio/CCTV/PA / Communication Systems experience in similar definition. Same was accepted during last tender reference: IRCON/1014/J&K.KQ/S&T/Tunnel-T74R/ tunnel Com/Tender dated August 2020."	Please see the corrigendum-4
6/8	5 Section -V SCC – revised Page no. 29	If any item of work not provided for in the accepted Bill of quantities and required to be executed for completion of work, the Contractor, shall be bound to carry out such items of work at no additional cost to IRCON. As the contract is design built the BOQ is indicative, and no extra payment shall be paid to contractor for any additional material required (Variation) or any non-schedule material for completion of Job given in the scope/ technical specification.	Requested to provide at least 6 weeks extension from current due date or from the last prebid replies for design and evaluation of works	Please see the Corrigendums issued to this tender



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
7/8		General	Considering the volume, complexity, and 3rd party dependencies. Kindly extend the Query submission date for at least till 7 more days from current date i.e., 14th of July 2021	Please see the Corrigendums issued to this tender
8/8		General	Considering the volume, complexity, and 3rd party dependencies and current pandemic situation, please extend the bid submission by at least 6 weeks from the current due date or from the last prebid replies.	Please see the Corrigendums issued to this tender
<b>HFCL Ltd</b>				
1/1	Section III ITT- Revised -3 Page 22 of 43/A	<p>The bidder should possess the experience of having successfully completed / substantially completed similar works during last 7-years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following:</p> <p>a. One similar work costing not less than the amount equal to 60% of advertised value of the tender.</p> <p>b. Two similar works each costing not less than amount equal to 40% of advertised value of the tender.</p> <p>c. Three similar works each costing not less than amount equal to 30% of advertised value of the tender.</p> <p>Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.</p> <p>i. Joint Venture / Consortium of maximum three partners is allowed. Since work is</p>	<p>Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable</p> <p>OR</p> <p>Design, Manufacture, Supply, Installation, Testing, Commissioning and Interfacing of telecom sub system(s) in Metro/LRT/Mono Rail /Airport/Railway/large infrastructure projects.</p> <p>It is to be clarified that only telecom portion of the composite works shall be considered for evaluation purpose.</p>	Please see the corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
		<p>primarily of Radio Communication, lead partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.</p> <p>ii.Substantially completed works are those for which 80% payment of Original Contract Value or Revised Contract Value (which-ever is lower) has been made by the Employer/ Main Contractor for the portion of work being claimed by the bidder. The bidder shall furnish completion certificate against purchase order / work order issued by the Employer/ Main Contractor along with the bid.</p> <p>iii. If a provisional completion certificate is issued by the concerned organization, such work shall be considered for fulfilment of credentials. However, the value of work done shall be considered to the extent of actual amount paid by the client.</p> <p>iv. In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost of that work including Price Variation amount if any shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility</p>		

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
<b>Allied Telesis</b>				
1/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 32	4 port industrial grade switch for tunnel/ Switching capacity Switching capacity 128 Gbps	For 4 port switch, the switching capacity should be 12Gbps, 128Gbps is required for a switch of 24x1G and 4x10G ports, so please change it to minimum 12 Gbps	As per RDSO/SPN/65/2021 rev. 6.0, 12 Gbps is acceptable.
2/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 33	4 port industrial grade switch for tunnel/ PoE Port Port 1- 4 @bt POE and backward compatible with IEEE802.3af/at	For cameras, 30w PoE+ is sufficient enough, IEEE 802.3bt (90w) has no relevance. Also, for 24x7 CCTV monitoring, we recommend the switch with capability to feed PoE power during switch reboot and transfer stream when switch up. so please change it to Port 1 - 4 @at POE and backward compatible with IEEE802.3af/at with capability to feed PoE+ power to device during switch reboot for Higher availability	Please follow technical specs of the tender
3/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 33	4 port industrial grade switch for tunnel/ Max Power Per Port 95W, IEEE802.3af/at/bt, when 4 ports are used at the same time, the average power per port is maximum 71W	For cameras, 30w PoE+ is sufficient enough, IEEE 802.3bt (90w) has no relevance, so please change it to 120w PoE budget IEEE802.3af/at, when 4 ports are used at the same time, the average power per port is maximum 30W	Please follow technical specs of the tender
4/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 33	4 port industrial grade switch for tunnel/ Operating Tempt / Humidity 40~+80°C; 5%~90% RH Non condensing	As an industry standard, operating temperature of industrial switches is -40 to 75C, so please change it to -40~+75°C; 5%~95% RH Non condensing	Specs RDSO/SPN/TC/65/2021 REV 6.0, with Min temperature range -20 deg C to +70 deg C to be followed
5/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 33	4 port industrial grade switch for tunnel/ Layer 3 Features L2+ network manage-ment ,IPV4/IPV6 manage-ment L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs	To ensure, IPv6 support, please clarify, IPv6 logo ready certificate is required? Also Please clarify the requirement - "Default route @ 128 pcs, APR @ 1024 pcs" So, please change clause as - L2+ network management,	Please follow technical specs of the tender

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			IPV4/IPV6 management, IPv6 logo ready switch certificate for IPv6 support	
6/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 34	4 port industrial grade switch for tunnel/ Port Aggregation. Port config. of Access, Trunk, Hybrid Max 3 aggregation groups and 8 ports per group.	Port configuration of Hybrid is OEM specific, please relax the same on a 4 port switch, 8 ports per group is not technically feasible, please change it to Max 2 aggregation groups and 2 ports per group	Please read the clause as Port configuration of Access / Trunk / Hybrid Max 2 aggregation groups and 2 ports per group. Final decision shall be taken at the time of detailed design
7/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 34	4-port industrial grade switch for tunnel/ Industrial Ring Network Protocol G.8032 (ERPS), Recovery time less than 20ms250 Ring at most, Max 250 devices per ring.	The ITU-T G.8032 support 50ms ring protection, requested to change it to G.8032 (ERPS), Recovery time 50ms	Recovery time of 50ms is acceptable as per ITU-T G.8032 (ERPS)
8/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page 34	4 port industrial grade switch for tunnel/ Multicast. MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out	For 4-port switch, maximum 4 multicast groups will be used, requested to consider maximum 256 multicast groups. MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, Max 256 multicast groups, Fast log out	As per RDSO/SPN/TC/65/2021 rev. 6.0, Max. 256 multicast groups are acceptable
9/11	Intend of Design and Technical Specification, Document Of Security, Data & Communication Package. Page 35	4 port industrial grade switch for tunnel/DHCP DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay	DHCP server is configured centrally, not required at edge switch, requested to relax it	Please follow technical specs of the tender
10/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package	4 port industrial grade switch for tunnel/	Requested to add "The industrial switch OEM must have supplied minimum 1000 switches in single project of similar nature/City Surveillance of Indian Government. Considering 1800 switches are installed in all the tunnels, the switch performance is highly recommended."	Please follow technical specs of the tender

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
11/11	Intend of Design and Technical Specification, Document Of Security, Data and Communication Package	4 port industrial grade switch for tunnel	Requested to add "The switch shall support USB inter-face for configuration backup. We highly recommend for ease of man-agement of switches as they are installed in remote tunnel locations"	Tender specifications are minimum requirement. Bidder can opt for better specification as per actual design and site requirements.
<b>ROSENBERGER</b>				
1/1			Requested for confirmation of the following:	
			List of equipment	Please refer tender BOQ 9.1: BOQ Quantities are tentative. Actual quantities will be as per detailed design
			Infra readiness of tunnel	Part of the Tunnels are ready
			Network KPI	Please refer tender doc technical specs 7.1 (Page 149 to 224) for detailed specs and scope of work.
			CCTV scope	
PA system scope				
<b>MERIT LILIN ENT. CO. LTD</b>				
1/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51/ 8MP BOX	Image Sensor: Progressive scan RGB 1/1.8" CMOS or better	Sensor Size 1/2.8" Sensor size gives you the Long Range Coverage while 1/1.8 will give you Wider, so request you to please make it 1/2.8 Sensor Size to Cover Long range distance for Tunnel area. The same is as per RDSO/SPN/TC/65/2021 Ver 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest for sensor size
2/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51/ 8MP BOX	Focus Control : One touch Auto focus or Remote adjustment	As per industry standard Box camera comes with the manual Focus. So request you to please make it Manual Focus. The same is as per RDSO/SPN/TC/65/2021 Ver6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
3/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data	Varifocal Lens: 4.5 to 55 mm, IR corrected, suitable for 100-meter full coverage, Auto IRIS Control, Manual focus and zoom control	No manufacturer manufactures this lens type of 4.5-55mm in 4K, request kindly revise it to 5-50mm which is available in the Market.	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	and Communication Package Page no 51/ 8MP BOX	Lens suitable for 4K Ultra HD Fixed Box type Camera.		
4/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 53/ 2MP BOX	Lens Type: Varifocal and Focus, P-Iris	Request you to allow P-IRIS/DC IRIS as well so that any Reputed OEM Can participate in the Bid this is as per RDSO/SPN/TC/65/2021 Ver 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
5/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54/ 2MP BOX	Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto-Negotiation	Request you to please make it 1 RJ45 10M/100M Ethernet port as this is enough speed for Box Camera to transfer the data over the LAN this is as per RDSO/SPN/TC/65/2021 Version 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
6/6			Requested for correction in OEM name from "MERIT LINIL" TO "MERIT LILIN" in the list of name for approved makes	List of approved makes is withdrawn.
<b>TYCO</b>				
1/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51/ 8MP BOX	Image Sensor: Progressive scan RGB 1/1.8" CMOS or better	Sensor Size 1/2.8" Sensor size gives you the Long Range Coverage while 1/1.8 will give you Wider, so request you to please make it 1/2.8 Sensor Size to Cover Long range distance for Tunnel area. The same is as per RDSO/SPN/TC/65/2021 Version 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
2/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51/ 8MP BOX	Focus Control : One touch Auto focus or Remote adjustment	As per industry standard Box camera comes with the manual Focus. So request you to please make it Manual Focus. The same is as per RDSO/SPN/TC/65/2021 Ver 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
3/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51/ 8MP BOX	Varifocal Lens: 4.5 to 55 mm, IR corrected, suitable for 100-meter full coverage, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type Camera.	Request you to make it as per the industry Standard 5-50mm Lens for 4K lens. No manufactures manufacture 4.5 -55mm lens in 4K	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
4/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 53/ 2MP BOX	Lens Type: Varifocal and Focus, P-Iris	Request you to allow PIRIS/DC IRIS as well so that any Reputed OEM Can participate in the Bid this is as per RDSO/SPN/TC/65/2021 Version 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
5/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54/ 2MP BOX	Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto-Negotiation	Request you to please make it 1 RJ45 10M/100M Ethernet port as this is enough speed for Box Camera to transfer the data over the LAN this is as per RDSO/SPN/TC/65/2021 Version 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
6/6	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54/ PTZ	Network Connectivity: 10/100/1000 BaseT.	Request you to please make it 1 RJ45 10M/100M Ethernet port as this is enough speed for 1080P Camera to transfer the data over the LAN this is as per RDSO/SPN/TC/65/2021 Version 6.0	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest
			<p>“We would like to have a clarity on the items prescribed as inspection under RDSO &amp; reference to the RDSO clause is mentioned “The item should conform to specification RDSO/SPN/TC/65/ 2019, rev.5 or latest”.</p> <p>Kindly note that referring to the latest RDSO Specifications - RDSO/SPN/TC/65/2021 Version 6.0 Do not specify Tunnels under there scope of implementation. We request to define the inspection specifications to certain which specification we need to comply while supplying the material &amp; get the product inspected.</p> <p>There are many points in the tender which we found specific to IRCON Tunnel &amp; not part of RDSO –</p> <ol style="list-style-type: none"> <li>1. High Availability Set up for all solutions.</li> <li>2. Integration for all solutions &amp; many more.”</li> </ol>	Specification RDSO/SPN/TC/65/2021, rev.6 or latest are the minimum specs, and system shall have to be provided for redundancy, high availability and integration of other sub-systems

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
<b>AXIS</b>				
1/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 46-47/ IP CCTV Surveillance System	CCTV cameras and Video Management system for the project must be from the same OEM to ensure seamless integration and single point of contact for technical support and ownership from the single OEM	Requested to change as CCTV cameras and Video Management system ensure seamless integration with each other	Please follow tender specifications
2/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 46-47/ IP CCTV Surveillance System	The OEM Should Have Support Centre with L1, L2 & L3 Support with the support portal	Requested to change as The OEM Should Have Local RMA center in India registered from last more than 8 year	Please follow tender specifications
3/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 46-47/ IP CCTV Surveillance System	OEM of CCTV and VMS must confirm NDAA (National Defence Authorization Act) Compliance & GFR Compliant	Requested to change as OEM of CCTV and VMS must confirm NDAA (National Defence Authorization Act) Compliance	Please follow tender clauses and specifications
4/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	Video resolutions & aspect ratios: 3840x2160 (4K) 16:9 3264x1840 16:9 2688x1520 16:9 1920x1080 (1080p) 16:9	Requested to change as 3840x2160 (4K) 16:9 to 1920x1080 (1080p) 16:9	Please follow tender specifications
5/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	Resolution and Frame Rate: 4K (3840x2160) @ 30 fps 2MP (1920x1080) @ 60 fps	Requested to change as 25/30 fps (50/60 Hz) in all resolutions	Please follow tender specifications
6/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data	Minimum Illumination A: Colour Mode : 0.05 Lux	Requested to change as Color: 0.15 lux, at 50 IRE F1.5	Please follow tender specifications



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	b) Night Mode (Black & White) : 0.005 Lux	Requested to change as B/W: 0.03 lux, at 50 IRE F1.5	Please follow tender specifications
7/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	Shutter speed : 1/4 - 1/10,000	Requested to change as 1/8500 s to 1/5 s	As per RDSO/SPN/TC/65/2021 rev. 6.0, Consider Maximum shutter speed should be 1/8000 sec or higher
8/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	Varifocal Lens: 4.5 to 55 mm, IR corrected, suitable for 100-meter full cover-age, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type Camera. The Lens may be of same make of Camera or different make	As this is BOX camera, so please add C/CS mount in the spec.Also, 4.5 -55 mm is not the standard lens type in market for box camera. Please change it to : C/CS mount 9-50 mm/5-50mm or better	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.
9/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 51-53/ 4K UHD Fixed Box Type IP Colour Camera	Regulatory Approvals/ Certifications : UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity. Note: The Regulatory Approvals/ Certifications are to be provided from NABL/NABCB accredited Labs or internationally reputed and accredited Labs/Agencies.	Requested to change as UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity or better	Please follow tender specifications
10/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	Image Sensor: 1/ 2.8" or larger, Progressive scan, CMOS sensor	Requested to change as 1/2.9	Please follow specs RDSO/SPN/TC/65/2021 Version 6.0 or latest for sensor size
11/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package	Video Resolution: 1920x1080 (1080p) 16:9 1664x936 (HD+) 16:9 1280x720 (720p) 16:9	Requested to change as 1920x1080 or better	Please follow tender specifications

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	1024x576 (PAL+) 16:9		
12/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	Minimum Illumination		
		A: Colour Mode : 0.05 Lux	Requested to change as Color: 0.1 lux at 30 IRE, F1.4	Please follow tender specifications
		b) Night Mode (Black & White) : 0.005 Lux	Requested to change as B/W: 0.02 lux at 30 IRE, F1.4	Please follow tender specifications
13/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	Lens type : Varifocal and Focus, P-Iris	Requested to change as Varifocal and Focus, DC-Iris -	Please follow tender specifications
14/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	Varifocal lens: 8 – 50 mm IR corrected, Auto IRIS Control, Manual focus and zoom control Lens suitable for Full HD Box type IP Colour Camera. The Lens may be of same make of Camera or different make.	Requested to change as 8 – 50 mm IR/12-50 corrected, C/CS Mount Auto IRIS Control, Manual focus and zoom control Lens suitable for Full HD Box type IP Colour Camera.	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.
15/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 54-56/ Full HD Fixed Box Type IP Colour Camera	Regulatory Approvals/ Certifications : UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity. Note: The Regulatory Approvals/ Certifications are to be provided from NABL/NABCB accredited Labs or internationally reputed and accredited Labs/Agencies.	Requested to change as UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity or better	Please follow tender specifications
16/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package	Power Supply : Power supply required for Housing shall be derived from Switch through PoE/PoE+.	Requested to change as Power supply required for Housing shall be derived from Switch through PoE/PoE+./AC/DC	Please follow tender specifications

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	Page no 57-58/ Housing and mount for fixed box IP Cam			
17/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 57-58/ Housing and mount for fixed box IP Cam	Built-in or External Infra-Red Illuminator comply-ing. IP66 or NEMA-4 or better with range 70-meter or better for cameras in Main & Escape Tunnel & 40meter or better for cameras in Cross passage. The Infra-Red Illuminator shall be of the same make as Housing	Requested to change as Built-in or External Infra-Red Illuminator complying.IP66 or NEMA-4 or better with range 60 meter or better for cameras in Main & Escape Tunnel & 40meter or better for cameras in Cross passage. The Infra-Red Illuminator shall be of the same make as Housing	Please follow tender specifications
18/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 57-58/ Housing and mount for fixed box IP Cam	Regulatory Approvals/ Certifications: Built-in or External Infra-Red Illuminator complying. IP66 or NEMA-4 or better with range 70meter or better for cameras in Main & Escape Tunnel & 40meter or better for cameras in Cross passage. The Infra-Red Illuminator shall be of the same make as Housing UL/EN/CE/IEC/ BIS certification for Safe-ty and CE/FCC Certificati-ons for EMC & Immunity. Note: The Regulatory Approvals / Certifications are to be provided from NABL/ NABCB accredited Labs or internationally reputed and accredited Labs/ Agencies.	Requested to change as UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC or better	Please follow tender specifications
19/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	Video resolutions: 1920x1080 (1080p) 16:9 1664x936 (HD+) 16:9 1280x720 (720p) 16:9 1024x576 (PAL+) 16:9	Requested to change as 1920x1080 to VGA resolution	Please follow tender specifications
20/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	Minimum Illumination: a) Colour Mode 0.2 Lux at 1/30s; 0.03 Lux at 1/4s b) Night Mode 0.001 Lux at 1/ c) With IR 0.0 Lux or better	Requested to change as Color: 0.06 lux at 30 IRE F1.4 B/W: 0.008 lux at 30 IRE F1.4	Please follow tender specifications

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
21/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	IR distance : 150 mtr or higher	Requested to change as 250 meter	Please follow tender specifications
22/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	Alarm Inputs / outputs : 1 input & 1 output	1 input & 1 output(Optional)	Please follow tender specifications
23/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	Input Voltage: Power should be drawn on PoE+, 220V AC Voltage	Power should be drawn on PoE+ or 220V AC Voltage Or (Nominal) / 24V AC or DC/ 12VDC	Please follow tender specifications
24/24	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 58/ PTZ Cam	PoE+: IEEE 802.3af/ at compliant	IEEE 802.3af/ at compliant/HIGH POE	Please follow tender specifications
<b>MILLENNIUM AUTOMATION PVT. LTD</b>				
1/9	Annex. V Point no.3 Technical Eligibility Criteria:	The bidder should possess the experience of having successfully completed / substantially completed similar works during last 7-years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following: a. One similar work costing not less than the amount equal to 60% of advertised value of the tender. b. Two similar works each costing not less	Request to amend the Technical Eligibility Criteria as under: The bidder should possess the experience of having successfully completed / substantially completed similar works during last 3-years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following in any of Government/PSU/Private Company/State Government etc..	Please see corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
		than amount equal to 40% of advertised value of the tender. c. Three similar works each costing not less than amount equal to 30% of advertised value of the tender.	a. One Project of IT/ICT/ ITES work costing not less than 40 Cr. b. Two Project of IT/ICT/ ITES work costing not less than 30 Cr. c. Three Project of IT/ICT/ ITES work costing not less than 20 Cr.	
2/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 37-38/ Fiber Optic Patch cord	Fiber Optic Pigtails & Patch Cords shall have Insertion Loss $\leq$ 0.30dB, Return Loss $\geq$ 55dB.	Requested to change as Fiber Optic Pigtails & Patch Cords shall have Insertion Loss $\leq$ 0.30dB, Return Loss $\geq$ 50dB.	Please follow tender specifications
3/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 37-38/ Fiber Optic Patch cord	Fiber Optic Patch cords shall be LC-LC duplex type with LSZH Jacket IEC 60332-3-24 Flame Rated.	Requested to change as LSZH Jacket IEC 60332-3 Flame Rated.	Please follow tender specifications
4/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 39/ Cat 6A Standard Patch Cords for Field Side	Maximum diameter of patch cord shall be 6.5mm. It shall have Operating Temperature range of -20°C To +60°C or Better.	Requested to change as Dimensions Overall Patch Cord (Nominal): 6.5 to 7.4 mm	Please follow tender specifications
5/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 41/ 4k LCD/LED– 55 Inch	1.7mm combined bezel to bezel not available VGA Not available	Please change it to 1.8MM IPS display VG A Port-0	Please follow tender specifications
6/9	Section VII: Complete technical specification Page 56 of 144	The external storage device shall comply to the clause 2.8 & 12 of the RDSO specification RDSO/SPN/TC/65/2019 (Rev.5.0). The	Clarification Required	It's referring to clause no.2.8 of specification no. RDSO/SPN/TC/65/2021, Rev 6.0 or latest

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	12.1.3.5 EXTERNAL STORAGE DEVICE	storage device shall be dimensioned for all the provided cameras.		
7/9	Section VII: Complete technical specification Page 105 of 144 17.5 Environment	Storage: -40 deg. C (140F) to 70 deg. C (158F) Storage: 5% to 95% Non-condensing	Requested to change as Storage: -40 deg. C to 65 deg. C Storage: 10% to 90% Non-condensing	Specs RDSO/SPN/TC/65/2021 REV 6.0, with Min temperature range -20 deg C to +70 deg C to be followed
8/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 68/ Storage	Dual Controller in High Availability. In case of one Controller failure, the takeover must be seamless and instant without any additional reconfiguration. Each processor should have Intel Xeon Processor	Requested to change as Dual Active-Active Controllers in High Availability. In case of one Controller failure, the takeover must be seamless and instant without any additional reconfiguration. Each controller should have minimum 2 x processor should have Intel Xeon Processor	Tender specs are minimum requirement and systems / equipment of better specs are acceptable.
9/9	Section VII: Intend of Design and Technical Specification, Document Of Security, Data and Communication Package Page no 68/ Storage	As per design calculation for recording and storing of CCTV data for all integrated cameras at full resolutions and 15 FPS at least for a period of 30 days. 20% spare slot for installation of additional disc and disc array for future use to be kept in the system. Storage Should be expandable up to 4.5 PB Raw Capacity.	Request to amend as As per design calculation for recording and storing of CCTV data for all integrated cameras at full resolutions and 15 FPS at least for a period of 30 days. 20% spare slot for installation of additional disc and disc array for future use to be kept in the system. Storage Should be expandable up to 4 PB Raw Capacity	Please follow tender specifications
<b>DINESHCHANDRA R. AGRAWAL INFRACON PVT. LIMITED (DRAIPL)</b>				
1/1	Tender Doc. Part - 1, Section III - ITT - Revised-3 / A. Essential Qualifying Criteria: - Technical Eligibility Criteria Page no. 22	Definition of Similar Work: Notes: i. Joint Venture / Consortium of maximum three partners is allowed. Since work is primarily of Radio Communication, lead partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. Each JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.	"RFP ask for the lead bidder's experience in radio communication is limiting factor for the experience company to participate in this project. RFP permits JV / Consortium for maximum three members. RFP stipulates Lead Member to take majority (at least 51%) share of interest in the JV. Hence, Lead Member who has strong financials can only come forward and participate in this project. In order to have healthy competition, we feel that technical eligibility criteria should be framed in such a way that more number of capable and experienced	Please see Corrigendum-4

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			<p>bidders can participate in the bidding process. Therefore we are of the opinion that the given criteria should be reviewed and be amended accordingly. If our submission of allowing collective experience in radio communication / CCTV / PA system is considered then more number of bidders will be able to qualify technically and participate in the bidding process and that will generate fair and healthy competition among the bidders and will result beneficial to Government. Hence we request you to amend the criteria as follows:</p> <p>Definition of Similar Work: Notes:</p> <p>i. Joint Venture / Consortium of maximum three partners is allowed. Since work is primarily of Radio Communication, any of JV / Consortium partner should have experience of Active Radio Networks fit for 160kmph as per RDSO specs on Railways. Any JV / Consortium partner should have experience of at least one system out of Active Radio Network or CCTV or PA system on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.”</p>	
<b>UFLIX INTERNATIONAL PVT LTD.</b>				
1/24	Section IX BILL OF QUANTITIES ABSTRACT Page no. 6 of 10 F Sch-F- Supply and Laying of OFC for SCADA	1 Supply of OFC cable of specification ADF (ZN)2Y 12X12 E9/125. 3 Supply of OFC cable of specification ADF (ZN)2Y 4X12 G50/125.	OEM Specific Cable, Part Code Mentioned. Please share generic specification	OFC cable is to be provided with FRLSZH sheath with equal no. of cores as per specs mentioned in BOQ, in addition to specifications IRS: TC:55/2006 Rev-1 (Amdt. 1.1,2.0 & 3.0) .
2/24	Section VII - Page 56 of 144 12.1.3.3 IP NETWORK	4. Operating Temperature should be -40° to 75° C	4. Operating Temperature should be -20° to 70° C Leverage will allow all the vendors to participate to comply with the specifications.	Specs RDSO/SPN/TC/65/2021 Rev 6.0, with min. temperature range -20 deg C to +70 deg C to be followed

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
3/24	<p>Section IX BILL OF QUANTITIES- S. No.2</p> <p>Intend of Design and Technical Specification Document Of Security, Data and Communication Package for "4 port Industrial Grade Switch" Page: 31</p>	<p>"SITC of 04 port Industrial Switch with 4 X 10/100/1000M bt PoE ports, 2 X 100/1000M uplink SFP slot ports and 1 X RS232 console port And 2 set of V+, V- redundant DC power interface etc all complete as per intend of design page.31/78, conforming to RDSO specifications RDSO/SPN/TC/65/2019 revision 5.0 or latest."</p>	<p>Detailed Technical Specifications of 4 port Industrial Grade Switch are not generic, only single OEM will fully complied for same. Currently multiple Specifications for Industrial Switch, As per BOQ - Conforming to RDSO specifications RDSO/SPN/TC/ 65 /2019 revision 5.0 or latest. Page 31 of 78 (IDT) - Additional Specifications (OEM Specific) Page 56 of 144 (12.1.3.3 IP NETWORK)- Additional Specifications.</p> <p>Please remove additional specific-ations and it should be as per Conforming to RDSO specifications RDSO/SPN/TC/65/2019 rev 5.0 or latest with Additional basic Indus-trial specifications - Dual redundant PSU with reverse polarity protect-ion. Switch Certification - Shock, Vibration &amp; Drop (IEC/MIL-STD), NEMA-TS2 certified.</p> <p>Switch should support IEEE 1588v2 Precision Time Protocol HW-Based E2E Transparent clock.</p>	<p>Please follow specification RDSO/SPN/TC/65/2021, rev.6 or latest, which are minimum specs, and system shall have to be provided for redundancy, high availability and integration of other sub-systems.</p> <p>Switches to be certified to MIL-STD for ruggedness and NEMA-TS2 for Electromagnetic Compatibility (EMC) and other electrical interference from 25kv Overhead Traction Line</p>
4/24	<p>Section VII - List of Approved Make: Page 77 of 78 Intend of Design and Technical Specification Document Of Security, Data and Communication Package C LAN and Networking S/N - 1, 3, 4, 5</p>	<p>Tender approved makes of HP, JUNIPER, CISCO, EXTREME, ARISTA, ALLIED, TELESIS</p>	<p>Bidder requested to add D-Link among approved makes.</p>	<p>Approved list of vendors is withdrawn.</p>
5/24	<p>List of Approved Make: Page 77 of 78 Intend of Design and Technical Specification Document Of Security, Data and Comm-unication Package C LAN and Networking S/N - 5</p>	<p>Tender approved makes of HP, JUNIPER, CISCO, EXTREME, NEXXUS, ATRON, PLANET,ALLIED TELESIS</p>	<p>Bidder requested to add D-Link among approved makes</p>	<p>Approved list of vendors is withdrawn.</p>



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
6/24	List of Approved Make: Page 77 of 78 Intend of Design and Technical Specification Document Of Security, Data and Communication Package C LAN and Networking S/N - 6	Tender approved makes of PRESIDENT, RITTAL, ATRON	Bidder requested to add D-Link among approved makes	Approved list of vendors is withdrawn.
7/24	List of Approved Make: Page 77 of 78 Intend of Design and Technical Specification Document Of Security, Data and Communication Package C LAN and Networking S/N – 7,8,9	Tender approved makes of BELDEN,SEIMON,PANDUIT, CORNING	Bidder requested to add D-Link among approved makes	Approved list of vendors is withdrawn.
8/24	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: page 77 12. Cat 6A U/UTP Cable	Cat 6A U/UTP Cable	Bidder requested to confirm requirement and quoted "As per tech. spec Cat6A U/UTP Cable and as per BOQ, its Armoured LSZH Cat 6A S/FTP Cable. But as per RDSO Specifications and Approved product - Cat6 S/FTP is used in Railways Network so please change requirement on same. Moreover, As per Field Requirement also, Cat6 S/FTP cable is Recommended for Network. Cat6A cable is recommended for 10G Network / Data Center Network only."	Cat FRLSZH 6A S/FTP as per clause 17.1 of RDSO specs RDSO/SPN/TC/65/2021 Rev.6 or latest are to be provided
9/24	BILL OF QUANTITIES ABSTRACT Page no. 2 A/IT Data Networking Infrastructure	Supply of Armoured LSZH Cat 6A S/FTP Cable complete as per intend of design page.38/85 broadly conforming to RDSO standard RDSO/SPN/TC/65/2019 Rev.5 or latest.		Cat FRLSZH 6A S/FTP as per clause 17.1 of RDSO specs RDSO/SPN/TC/65/2021 Rev.6 or latest are to be provided
			It is a restrictive clause for domestic manufacturer that only global OEM is asked to participate in the tender and against the DPIIT	Please refer Corrigendum dated 14 <sup>th</sup> July 2021.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			Public Procurement (preference to Make-in - India) order 2017 dated 16th September, 2020. "Specific Foreign Certifications/unreasonable technical specifications /brands/ models in the bid document is restrictive and discriminatory practise against local suppliers" Requesting you to incorporate the DPIIT Public Procurement (preference to Make-in -India) order 2017 dated 16th September, 2020 in the tender and allow Class-I Indian OEM to participate in the tender. So, We are requesting you to add SPARSH brand in the approved make List to get the equal opportunity to Indian OEM to Participate in the tender.	
10/24	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A/ Security Solution/Sno 1,2,6	Tender has approved item of TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL makes only	Bidder requested to consider, <b>Spارش</b> among approved makes	List of approved vendors is withdrawn
11/24	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /Sno5	Tender has approved item of TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON makes only	Bidder requested to consider, <b>i2v</b> among approved makes	List of approved vendors is withdrawn
12/24	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm.	Tender has approved item of TYCO, XTRALIS, NICE, EASYVIGIL, SYNERGY LABS, MERITLINIL makes only	Bidder requested to consider, <b>i2v</b> among approved makes	List of approved vendors is withdrawn

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	Package/ List of Approved Make: Page 76 of 78 A /Security Solution /Sno8			
13/24	12 CCTV SYSTEM 12.1.3 TECHNICAL SPECIFICATIONS 12.1.3.1 CCTV FIXED CAMERA, Page: 57	Full HD PTZ Dome camera with night vision capability shall be as per clause no.7.0 of RDSO specification. This will be installed at the tunnel portals and will have night vision capability to the range of minimum 300 meters.	Requested to amend the clause as: Full HD PTZ Dome camera with night vision capability shall be as per clause no.7.0 of RDSO specification. This will be installed at the tunnel portals and will have night vision capability to the range of minimum 200 meters. Justification 300mtr IR generally not available in blast proof housing of PTZ Camera and mostly OEM have 200mtr IR in blast proof housing. None of the Indian OEM comply this point and it also restrict the Indian OEM to participate in the tender. We are requesting you to accept 200mtr IR in blast proof housing	Please follow RDSO/SPN/TC/65/2021, rev.6 or latest
14/24	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IPCCTV Solution: Page: 193	The OEM for IP Cameras should be a member of the any of the "ONVIF Technical Committee "on the date of bid submission. Suitable evidence document to be submitted	Requesting you to amend the clause as: Camera OEM should be of the any of the ONVIF Technical Committee member/ User Committee Member & not had been suspended and restricted by ONVIF - Temporarily / Permanently, ever. Undertaking by the OEM on the Letter head Membership level will be verified from ONVIF portal Justification Camera OEM have ONVIF Technical Committee member is specific to few Foreign OEMs and restrict the other reputed Indian OEM to participate in the tender. Mostly OEM have ONVIF complied models and those models are listed on the ONVIF website for verification and they are registered on ONVIF website as a user committee Member.	Please follow RDSO/SPN/TC/65/2021, rev.6 or latest

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
15/24	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IPCCTV Solution: Page: 193	CCTV cameras and Video Management system for the project must be from the same OEM to ensure seamless integration and single point of contact for technical support and ownership from the single OEM	Requesting you to remove this point as you have already asked in Point no: 11 of Special condition that Camera OEM and Software OEM may be from different Manufacturer. Justification: Camera OEM and VMS OEM should comply the latest RDSO Rev 6.0 specification. Same OEM is a restrictive Criteria for Indian OEM to participate in the tender and also the violation of PPP-MII order 2017. CCTV Cameras and Video Management system from same OEM is a restrictive Clause for Indian OEM and against the violation of PPP-MII Order	IP Camera and Software (Video Management, Video Recording and Video Analytic Software) may be from the same manufacturer or from different manufacturers. In case, IP Cameras and Softwares are from different manufacturers, then all features of Cameras shall be available through the Software for viewing, recording and analytics
16/24	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IPCCTV Solution: Page: 193	CCTV OEM should have its Service line number and e-mail Id in India for any technical support query from the SI or end customer and ticketing website for logging calls, Status tracking and obtain service ticket/docket num-ber Service line number should be mentioned in the manufacturer's authorization letter to be submitted along with the bid duly signed by the country Head/Director/CEO of OEM	Request you to remove this clause point "ticketing website for logging calls, Status tracking and obtain service ticket/docket number " because it restrict the Indian OEM to participate in the tender Justification None of the Indian OEM have ticketing website for compliant Logging only few foreign OEMs can comply this criteria and it restrict the Indian to Participate in the tender. This clause is favouring to foreign OEM only. Requesting you to remove ticketing clause	Please follow RDSO/SPN/TC/65/2021, rev.6 or latest. The requirement of availability of ticketing website for logging calls, Status tracking and obtain service ticket/docket number is not there in RDSO specs, and hence withdrawn. All such requirements, not covered by RDSO specs are withdrawn
17/24	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IPCCTV Solution: Page: 193	OEM of CCTV and VMS must confirm NDAA (National Defence Authorization Act) Compliance & GFR Compliant	Requesting you to remove this point NDAA (National Defence Authorization Act) Compliance is not applicable to Indian OEM. Justification NDAA (National Defence Authorization Act) Compliance is a US federal laws and applicable in the US and it is not applicable in India for Indian OEMs. So, we are requesting you to remove NDAA compliance	Please refer Corrigendum dated 14th July 2021.  All requirements such as registration, validation and certification etc., not covered by RDSO specs are withdrawn

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
			and ask only GFR Compliance which is applicable in India.	
18/24	Schedule 3. IP CCTV Surveillance Solution: Design Criteria Page: 195	Facility of Edge storage (SD Card) of 512 GB Or better may also be available in each camera with the facility to transfer edge storage recording to main storage i.e. NAS/SAN, after resumption of link in case of network failure.	Support 512GB SD Card in camera is specific to foreign OEMs only and restrict the Indian OEM Justification In RDSO Rev 6.0 specification, Maximum 128GB SD Card is asked whereas in RFP you have mentioned 512GB SD Card Support which is specific to foreign OEMs and it restrict the Indian OEM to participate in the tender. So, we are requesting you to make the specification generic so that other reputed Indian OEM can also participate in the tender.	Please provide storage as per RDSO/SPN/TC/65/2021, rev.6 or latest.
19/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: Page: 197	4K UHD Fixed Box Type IP Colour Camera (Location: Main Tunnel & Escape Tunnel, at suitable interval depending upon the tunnel conditions on both sides of tunnel wall in zig zag manner)	Please confirm which specification we have to follow either RDSO Rev. 6.0 or specification mentioned in the tender.	Specification RDSO/SPN/TC/65/2021, rev.6 or latest are minimum specification to be followed. System shall have to be provided for redundancy, high availability and integration of other sub-systems
20/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: 4K UHD Fixed Box Type IP Colour Camera Page: 197	10. Focus Control: One-Touch Auto Focus or Remote Adjustment 11. Lens Type: Varifocal and Focus, P-Iris. The Lens may be of same make of Camera or different make	Point 10 & 11 Both are contradict with each Other. Box camera basically come with manual VF lens instead of Auto focus <u>Justification</u> : Box Camera generally come with CS mount lens which is operated manually. In the RDSO Specification also C or CS mount lens is asked which is basically come in box camera and also available with most of the OEMs.	RDSO/SPN/TC/65/2021, rev.6 or latest along with Auto IRIS is acceptable
21/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: 4K UHD Fixed Box Type IP Colour Camera	12. Varifocal Lens : 4.5 to 55 mm, IR corrected, suitable for 100-meter full coverage, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type	4.5-55mm Lens in 4K Camera is not standard lens and also not available with any Indian OEM Justification 4.5-55mm Lens is specific to any foreign OEM and none of the Indian OEM	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON Response
	Page: 198	Camera. The Lens may be of same make of Camera or different make.	have this lens in 4K Camera and it is also not a standard lens size. Most of the OEM have either 2.8-12mm Lens or 6-22mm Lens in the 4K Camera. So, we are requesting you to amend the clause as 6-22mm lens which is available with most of the OEMs. Asked specification is a restrictive specification for Indian OEM to participate in the tender.	
22/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: 4K UHD Fixed Box Type IP Colour Camera. Page: 198	18 Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation	10/100/1000 BaseT port not required and recommended for Full HD and 4K Camera as Full HD Camera consume maximum 4Mbps Speed and 4K Camera Consume Maximum 8Mbps Speed then why 1000Mbps Port is required for Cameras. 100Mbps Port is more than sufficient for Full HD and 4K Camera. So, We are requesting you accept our submission.	100 Mbps Port is acceptable
23/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: Full HD Fixed Box Type IP Colour Camera (Location: Cross Passage). Page: 201	18 Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation		
24/24	Schedule 3. IP CCTV Surveillance Solution: Technical Specification: Page: 206. Full HD P/T/Z (Pan/Tilt/ Zoom) IP Colour Camera:	23. Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
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<b>Bosch Limited</b>				
1		Query on PA system specifications	In all previous tunnel tenders, IP based till amplifiers system was asked. Digital and fully IP based and after amplifier speakers are always analog. Request you to please allow normal horn speakers.	Please follow tender specs
2			As system is designed for public safety we request you to consider all PA system should be EN-54 certified and EVAC compliant.	Please follow tender specs
3			There was a MoM released by Railway authority for all tunnel projects according to which all amplifiers should be digital and 600 watts and all horn speakers should be 30 watts and IP 66 compliant following the RDSO specifications.	Please follow tender specs

1. Full HD Box camera				
#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
1	Image Sensor	1/ 2.8" or larger, Progre-ssive scan, CMOS sensor		Please follow tender specs
2	Pixels	2.0 Mega Pixel Full HD (1920x1080)		
3	Video Compression	H.265 or Higher	H.264/H.265 , M- JPEG	
4	Dual Stream	Dual H.265 or higher Streams	Dual H.264/ H.265 or higher Streams	
5	Video Resolutions	a) For Main stream: i)1920x1080 (Full HD) ii)Configurable from Full HD to other HD/SD resolution b) For Second Stream: Configuration from D1 to other HD/SD resolutions.		Please follow tender specs

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
6	Resolution and Frame Rate	Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.265 or higher compression on one stream & D1@ 25 FPS with H.265 or higher compression on another stream.	Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.264/H.265 or higher compression on one stream & D1@ 25 FPS with H.264/ H.265 or higher compression on another stream.	Please follow tender specs
7	Minimum Illumination			
8	Colour Mode	0.5 Lux		
9	Night Mode (Black & white Mode)	0.05 Lux		
10	Shutter speed	Maximum shutter speed should be 1/8000 sec or higher	Maximum shutter speed should be 1/15000 sec or higher	
11	Signal To Noise Ratio	> 45 dB	> 50 dB	
12	Video Standard	PAL		
13	Lens Mount	CS/C mount or any other mount		
14	Varifocal Lens	8 – 50 mm IR corrected, 1 m minimum object distance, Auto IRIS Control, Manual focus and zoom control Lens suitable for Full HD Box type IP Colour Camera. The Lens may be of same make of Camera or different make.		
15	Day/Night Camera	Auto Day/Night Configuration		



#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
16	Data Rate	<p>i) 8 Mbps maximum for H.265 or higher Video Compression</p> <p>ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.265 or higher Video Compression</p>	<p>i)8 Mbps maximum for H.264/H.265 or higher Video Compression</p> <p>ii)Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.264/H.265 or higher Video Compression</p>	<p>Please follow spec RDSO/SPN/TC/65/ 2021, rev.6 or latest, which are the minimum specs. System shall have to be provided for redundancy, high availability and integration of other sub-systems</p>
17	Video streaming	Unicast and Multicast streams		
18	Text Superimposing	Camera shall support superimposing the title and date & time on the video		
19	Edge Storage	Edge Storage slot suitable for 128 GB SD/SDHC/ SDXC memory or higher along with memory card.		
20	Activity Controlled Video Recording	<p>Required.</p> <p>During periods of negligible motion, the bits rate shall drop and when motion occurs, the bit rate shall return to normal without any perceptible delay.</p>		
21	Network connectivity	Ethernet, 10/100 Base T		<p>Please follow tender specs</p>
22	Discovery Interface	OEM interface to detect the Camera automatically and configure network settings		
23	Network protocols	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response	
24	Web server	Internal Web server required with embedded operating system.			
25	Automatic Gain Control	Required			
26					
27	Back light Compensation (BLC) or High Light Compensation (HLC)	Required			
28	Automatic White Balance	Required			
29	Wide Dynamic Range (WDR)	≥ 90 dB	≥ 120 dB		
30	Two way/ Bidirectional Audio Input / Output	Required			
31	Alarm Inputs / outputs	1 Input & 1 Output			
32	Input Voltage	Power should be drawn on PoE, 220V AC Voltage (Nominal) / 24V AC or DC /12V DC			
33	POE	IEEE 802.3af/ at compliant			
34	Operating Temp	0°C to + 50°C			
35	Humidity	20 to 80% RH non-condensing			
36	MAC Address	The MAC address of the IP Cameras must be regis-tered in the name of OEM supplying the Cameras.			Please follow tender specs
37	ONVIF Compliance	ONVIF Profile 'S' & 'G'. 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.			
38	Regulatory Approvals/ Certifications	UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity. Note: The Regulatory Approvals/			

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
		Certifications are to be provided from NABL/NABCB accredited Labs or internationally reputed and accredited Labs/Agencies.		
	Additional Points can be added			
	Edge Base Analytics	Rule based alarms and tracking, Line crossing, Enter / leave field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation		
	Data Security	<ul style="list-style-type: none"> <li>• Secured connections supported (HTTPS)</li> <li>• Password enforcement at initial set up</li> <li>• Execution of 3rd party software is disabled</li> <li>• Firmware updates via OEM digitally signed firmware files only</li> <li>• Detect changes in a configuration</li> <li>• Support of customer specific certificates</li> <li>• Support of Microsoft Active Directory for safe management of user access rights</li> <li>• Regular updates via security patches</li> </ul>		Please follow tender specs

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
2. 4k Box Camera				
1	Image Sensor	1/ 1.8" or larger, Progressive scan, CMOS sensor	1/ 2.3" or larger, Progressive scan, CMOS sensor	Please follow tender specs
2	Pixels	8.0 Mega Pixel Ultra HD (3840x2160) or Higher		
3	Video Compression	H.265 or Higher	H.264/H.265 or Higher	
4	Streaming Capability	Dual streams with one H.265 or higher Stream		
5	Video Resolutions	a) For Main stream: i) Ultra HD (3840x2160) ii)Configurable from Ultra HD to other HD/SD resolution b) For Second Stream: Configuration from Full HD to other HD/SD resolutions.		
6	Resolution and Frame Rate	Ultra HD (3840x2160) @ 25 FPS or more with H.265 or higher compression on one stream & Full HD @ 15 FPS or more with H.265/MJPEG or higher compression on another stream.	Ultra HD (3840x2160) @ 25 FPS or more with H.264/H.265 or higher compression on one stream & Full HD @ 15 FPS or more with H.264/H.265/ MJPEG or higher compression on another stream.	Please follow tender specs
7	Minimum Illumination			Please follow tender specs
8	Colour Mode	0.5 Luc		
9	Night Mode (Black & white Mod	0.05 Lux		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
10	Shutter speed	Maximum shutter speed should be 1/8000 sec or higher	Maximum shutter speed should be 1/15000 sec or higher	
11	Signal To Noise Ratio	> 45 dB	> 50 dB	
12	Video Standard	PAL		Please follow tender specs
13	Lens Mount	CS/C mount or any other mount		
14	Varifocal Lens	4.5 to 10 mm, IR corrected, 1 m minimum object distance, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type Camera. The Lens may be of same make of Camera or different make.		
15	Day/Night Camera	Auto Day/Night Configuration		
16	Data Rate	16 Mbps maximum		
17	Video streaming	Unicast and Multicast streams		
18	Edge Storage	Edge Storage slot suitable for 128 GB SD/SDHC/SDXC memory or higher along with memory card.		Please follow tender specs
19	Activity Controlled Video Recording	Required. During periods of negligible motion, the bits rate shall drop and when motion occurs, the bit rate shall return to normal without any perceptible delay.		
20	Network connectivity	Ethernet, 10/100 Base T		
21	Discovery Interface	OEM interface to detect the Camera automatically and configure network settings		Please follow tender specs

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
22	Network protocols	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)		
23	Web server	Internal Web server required with embedded operating system.		
24	Automatic Gain Control	Required		
25				
26	Back light Compensation (BLC) or High Light Compensation (HLC)	Required		
27	Automatic White Balance	Required		
28	Wide Dynamic Range (WDR)	≥ 90 dB		
29	Two way/ Bidirectional Audio Input / Output	Required		
30	Alarm Inputs /outputs	1 Input & 1 Output		
31	Input Voltage	Power should be drawn on PoE, 220V AC Voltage (Nominal) / 24V AC or DC /12V DC		Please follow tender specs
32	POE	IEEE 802.3af/ at compliant		
33	Operating Temp	0°C to + 50°C		
34	Humidity	20 to 80% RH non-condensing		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
35	MAC Address	The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.		
36	ONVIF Compliance	ONVIF Profile 'S' & 'G'. 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.		
37	Regulatory Approvals/ Certifications	UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity. Note: The Regulatory Approvals/ Certifications are to be provided from NABL/NABCB accredited Labs or internationally reputed and accredited Labs/Agencies.		Please follow tender specs
	Additional Points can be added			
	Edge Base Analytics	Rule based alarms and tracking, Line crossing, Enter / leave field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation.		Please follow tender specs
	Data Security	<ul style="list-style-type: none"> <li>• Secured connections supported (HTTPS)</li> <li>• Password enforcement at initial set up</li> <li>• Execution of 3rd party software is disabled</li> <li>• Firmware updates via OEM digitally signed firmware files only</li> <li>• Detect changes in a configuration</li> <li>• Support of customer specific certificates</li> <li>• Support of Microsoft Active Directory for safe management of user access rights</li> <li>• Regular updates via security patches</li> </ul>		Please follow tender specs

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
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3. FULL HD PTZ				
#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Please follow tender specs
1	Image Sensor	1/ 2.8" or larger, Progressive scan, CMOS sensor		
2	Pixels	2.0 Mega Pixel Full HD (1920x1080)		
3	Video Compression	H.265 or Higher		
4	Dual Stream	Dual H.265 or higher Streams		
5	Video Resolutions	a) For Main stream: i)1920x1080 (Full HD) ii)Configurable from Full HD to other HD/SD resolution b) For Second Stream: Configuration from D1 to other HD/SD resolutions.		
6	Resolution and Frame Rate	Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.265 or higher compression on one stream & D1@ 25 FPS with H.265 or higher compression on another stream.		
7	Minimum Illumination			
8	Colour Mode	0.5 Luc		
9	Night Mode (Black & white Mode)	0.05 Lux		



#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
10	Shutter speed	Maximum shutter speed should be 1/8000 sec or higher	Maximum shutter speed should be 1/15000 sec or higher	
11	Signal To Noise Ratio	> 45 dB	> 50 dB	Please follow tender specs
12	Video Standard	PAL		
13	Lens	a) Optical zoom 30x or better IR corrected lens suitable for Full HD PTZ Camera. b) Focal length of lens: Upper range shall be 125 mm or higher. c) 1 m minimum object distance, IR corrected Lens		
14	Digital zoom	12x or better		
15	Infra Red	Built-in Infra-Red Illuminator with range 125 Mtr or more	Built-in Infra-Red Illuminator with range 160 Mtr or more	
16	Focus and Iris	Automatic with manual Override		
17	Pan/Tilt adjustment	360° continuous pan; 00 to 90° tilt from horizontal plane		
18	Preset speed	90°/sec ± 0.5° accuracy		
19	Pan/Tilt speed	1°/sec to 90°/sec		
20	Sector Blanking	Required. Camera 360-degree pan rotation to be divided in 8 sectors and any sector shall be blanked as required by the operator		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
21	Preset Tilting	The Camera shall allow the storage of up to 99 preset scenes with each preset programmable for 16-character titles		Please follow tender specs
22	Data Rate	i) 8 Mbps maximum for H.265 or higher Video Compression ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.265 or higher Video Compression		
23	Video streaming	Unicast and Multicast streams		
24	Text Superimposing	Camera shall support superimposing the title and date & time on the video		
25	Edge Storage	Edge Storage slot suitable for 128 GB SD/SDHC/ SDXC memory or higher along with memory card.		
26	Activity Controlled Video Recording	Required. During periods of negligible motion, the bits rate shall drop and when motion occurs, the bit rate shall return to normal without any perceptible delay.		
27	Network connectivity	Ethernet, 10/100 Base T		Please follow tender specs
28	Discovery Interface	OEM interface to detect the Camera automatically and configure network settings		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
29	Network protocols	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment.(As required for system working)		
30	Web server	Internal Web server required with embedded operating system.		
31	Automatic Gain Control	Required		
32				
33	Back light Compensation (BLC) or High Light Compensation (HLC)	Required		
34	Automatic White Balance	Required		
35	Wide Dynamic Range (WDR)	≥ 90 dB		
36	Two way/ Bidirectional Audio Input / Output	Required		Please follow tender specs
37	Alarm Inputs / outputs	1 Input & 1 Output		
38	Input Voltage	Power should be drawn on PoE, 220V AC Voltage (Nominal) / 24V AC or DC /12V DC		
39	POE	IEEE 802.3af/ at compliant		
40	Operating Temp	0°C to + 50°C		
41	Humidity	20 to 80% RH non-condensing		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
42	Enclosure Protection	Vandal Proof Impact Resistant Aluminium enclosure with IP66 or NEMA-4 or better with suitable mounting accessories.		
43	MAC Address	The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.		
44	ONVIF Compliance	ONVIF Profile 'S' & 'G'. 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.		Please follow tender specs
45	Regulatory Approvals/ Certifications	UL/EN/CE/IEC/BIS certification for Safety and CE/FCC Certifications for EMC & Immunity. Note: The Regulatory Approvals/ Certifications are to be provided from NABL/ NABCB accredited Labs or internationally reputed and accredited Labs/Agencies.		
Additional Points can be added				
	Edge Base Analytics	Rule based alarms and tracking, Line crossing, Enter / leave field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation		

#	Parameter	RDSO latest specifications	Suggestions/ Amendments as per Industry standards	Ircon Response
	Data Security	<ul style="list-style-type: none"> <li>• Secured connections supported (HTTPS)</li> <li>• Password enforcement at initial set up</li> <li>• Execution of 3rd party software is disabled</li> <li>• Firmware updates via OEM digitally signed firmware files only</li> <li>• Detect changes in a configuration</li> <li>• Support of customer specific certificates</li> <li>• Support of Microsoft Active Directory for safe management of user access rights</li> <li>• Regular updates via security patches</li> </ul>		Please follow tender specs

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
<b>AVINCIA INDIA PVT. LTD</b>				
1/13	ProjectNO: IRCON/1014/J&K.KQ/Consultancy T74R/178 Dt. 10.03.2010Page 3 & Page 147 of 224		There are two tender Technical specification in the RFP, kindly confirm which one to follow. From Tender Page No 3 to 146 mentions Electrical works along with Scada & ELV system not meant for BOQ works whereas Page No 147 only confirms subject matter BOQ i.e. IT, CCTV, PA, SOS, Emergency telephone, Unified & Radio portion VHF	Please follow tender specs
2/13	Basic Information of T74R Tunnel Page 148 of 224		Only details of T74R are mentioned in the Tender, should we consider same design all tunnels kindly share the length & details of other Tunnel as well.	Please refer tender document specifications. Tunnel T74R is the basis of design, and similar design to be prepared for other tunnels
3/13	4 port Industrial Grade Switch Location within Tunnels Page 223 of 224		Make name correction - 'NEXUS' is a CISCO brand which is wrongly mentioned as Nexus, kindly correct it to CISCO (NEXUS)	Please read Nexus as CISCO(Nexus)
4/13	40 Gbps QSFP Modules, 10 Gbps SFP+ Modules, 1 Gbps SFP Modules, Stacking cable with Pair Module Page 181, 182 of 224		Make for SFP modules is not mentioned. Please clarify	Approved makes and models are withdrawn
5/13	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IP CCTV Solution: Page 193 of 224	CCTV cameras and Video Management system for the project must be from the same OEM to ensure seamless integration and single point of contact for technical support and ownership from the single OEM.	RDSO allows different OEM for both CCTV & VMS, kindly approve as per RDSO	Please follow latest RDSO specs

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
6/13	Schedule 3. IP CCTV Surveillance Solution: Special Condition for OEM of IPCCTV Solution: Page 193 of 224	The System i.e. IP Cameras, Software (Video Management and Video Recording) shall be compliant to global standards ONVIF Profile 'S' & 'G' for the interface of network video product (ONVIF – Open Network Video Interface Forum). 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 kindly approve as per RDSO clause -The Video Management Software shall be compliant to global standards ONVIF Profile „S“ & „G“ or interoperability compliance as per Clause 3.2.SDK is to be shared with the purchaser for integration purposes.	Please follow latest RDSO specs
7/13	Schedule 3. IP CCTV Surveillance Solution: Design Criteria Page 195 of 224	Facility of Edge storage (SD Card) of 512 GB Or better may also be available in each camera with the facility to transfer edge storage recording to main storage i.e. NAS/SAN, after resumption of link in case of network failure. As per RDSO it is 128 GB, kindly confirm which one to follow	Kindly confirm which one to follow	Please provide storage as per RDSO/SPN/TC/65/2021, rev.6 or latest.
8/13	Schedule 3. IP CCTV Surveillance Solution: Design Criteria Page 196 of 224	UPS Power shall be required for smooth & continuous running of cameras, monitors, Video Wall, the UPS power shall be feed through centralized Extra Low Voltage (ELV) UPS.	No UPS make or items mentioned in the BOQ. Will it provided under E&M.	UPS Power Supply shall be provided by other contractor

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
		ELV UPS will feed the following equipment: <ul style="list-style-type: none"> <li>• Distribution Switches</li> <li>• Edge Switches</li> <li>• Public Address System</li> <li>• CCTV System</li> <li>• Emergency Push to talk SOS</li> </ul>		
9/13	Schedule 3. IP CCTV Surveillance Solution: Design Criteria Page 196 of 224	Warranty– All products should be offered with 2 Years OEM Warranty from the date of completion of SAT (Site Acceptance Test). After 2 Years, products shall be under 5 Years CMC (Comprehensive Maintenance support) with OEM Support/Service for all items.		Please refer Sec 5 of V SCC - Page 42 of 69 for warranty and DLP
10/13	Sec 5 of V SCC - Page 42 of 69	<b>GUARANTEE/ WARRANTY:</b> The Contractor shall guarantee the Works (including bought-outs) for a defect liability period for a duration as per Appendix to tender from the date of issue of Completion Certificate against inadequacy in design, if design is by Contractor, defective materials, and error in detailing work, faulty workmanship etc. The Guarantee/	Kindly confirm which one to follow	Please refer Sec 5 of V SCC - Page 42 of 69 for warranty and DLP



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
		warranty period shall be 12(twelve) months from the date of issue of completion certificate.		
11/13			NMS - for such substantial system we have not seen NMS in the BOQ, kindly clarify	Please refer tender document
12/13			Since RDSO specification ask for Railway & Subsequent Stations & not meant for Tunnel / Complex applications, should we consider technical specifications page No - 147 - 248, superceding RDSO Specs, please confirm.	Latest RDSO specs to be followed with additional requirement of redundancy and integration with other sub-systems
13/13	Wall Mount 15U/12U Rack, Floor Mount Network 42U Rack, Servers Rack Page 223 ot 224	19" NETWORK / SERVER RACK - PRESIDENT, RITTAL, ATRON	List of approved make mentions only 19" NETWORK / SERVER RACK,	List of approved makes is withdrawn
<b>SAMRIDDIHI AUTOMATIONS PVT LTD (SPARSH)</b>				
1/17			Requested to incorporate the following Policy in the tender to give preference to Class-I Local Supplier.  "Bid should be compliant to the Policy and Make in India makes shall be given preference as per Order 2017-Revision vide the Department of Industrial Policy and Promotion (DIPP) Order No.	Please refer Corrigendum dated 14 <sup>th</sup> July 2021.

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
			P-45021/2/2017-PP (BE-II) dated 16th September, 2020 or latest. OEMs under make in India must submit Undertaking and supporting documents”	
2/17	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /1	1. IP FIXED CAMERA WITH IR: TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL	"It is a restrictive clause for domestic manufacturer that only global OEM is asked to participate in the tender and against the DPIIT Public Procurement (preference to Make-in -India) order 2017 dated 16th September, 2020. ""Specific Foreign Certifications/unreasonable technical specifications /brands/models in the bid document is restrictive and discriminatory practise against local suppliers"" Requesting you to incorporate the DPIIT Public Procurement (preference to Make-in -India) order 2017 dated 16th September, 2020 in the tender and allow Class-I Indian OEM to participate in the tender. SPARSH make is already approved make in Konkan Railway Corporation Limited (KRCL) and we have won four phases tender KRCL Tunnel Case. So, We are requesting you to add SPARSH brand in the approved make List to give the equal opportunity to Indian OEM to Participate in the tender. "	Please follow tender specs
3/17	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /2	2. IP PTZ CAMERAS WITH IR: TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL		Please follow tender specs
4/17	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /6	6. PTZ KEYBOARD: TYCO, AXIS, MOBOTIX, AVIGILON, MERITLINIL		List of approved makes is withdrawn
5/17	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make:	5. VIDEO MANAGEMENT SOFTWARE: TYCO, AXIS, MILESTONE, NICE, MERITLINIL, AVIGILON	"We are requesting you to add i2V brand in the approved make List for VMS and Video Analytics Software to get the equal opportunity to Indian OEM to Participate in the tender. Asking Foreign OEM only is a restrictive criteria which stop the Indian to participate in tender and also it is a simple violation of	List of approved makes is withdrawn

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
	Page 76 of 78 A /Security Solution /5		DPIIT Public Procurement (preference to Make-in -India) order 2017"	
6/17	Section VII /Intend of Design and Technical Specification Document Of Security, Data and Comm. Package/ List of Approved Make: Page 76 of 78 A /Security Solution /8	8. VIDEO ANALYTICS: TYCO, XTRALIS, NICE, EASYVIGIL, SYNERGY LABS, MERITLINIL		List of approved makes is withdrawn
7/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u>  Special Condition for OEM of IPCCTV Solution: Page 193	The OEM for IP Cameras should be a member of the any of the "ONVIF Technical Committee "on the date of bid submission. Suitable evidence document to be submitted with bid.	<u>Requesting you to amend the clause as:</u> Camera OEM should be of the any of the ONVIF Technical Committee member/ User Committee Member & not had been suspended and restricted by ONVIF - Temporarily / Permanently, ever. Undertaking by the OEM on the Letter head Membership level will be verified from ONVIF portal <u>Justification</u> Camera OEM have ONVIF Technical Committee member is specific to few Foreign OEMs and restrict the other reputed Indian OEM to participate in the tender. Mostly OEM have ONVIF complied models and those models are listed on the ONVIF website for verification and they are registered on ONVIF website as a user committee Member.	Please follow latest RDSO specs RDSO/SPN/65/2021 Rev6.0. for CCTV
8/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u>  Special Condition for OEM of IPCCTV Solution: Page 193	CCTV cameras and Video Management system for the project must be from the same OEM to ensure seamless integration and single point of	Requesting you to remove this point as you have already asked in Point no: 11 of Special condition that Camera OEM and Software OEM may be from different Manufacturer. <u>Justification:</u> Camera OEM and VMS OEM should comply the latest RDSO Rev	Please follow latest version of specs RDSO/SPN/65/2021 Rev6.0. No deviation from RDSO specs on such issues are to me made

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
		contact for technical support and ownership from the single OEM	6.0 specification. Same OEM is a restrictive Criteria for Indian OEM to participate in the tender and also the violation of PPP-MII order 2017	
9/17	<p><u>Schedule 3. IP CCTV Surveillance Solution:</u></p> <p>Special Condition for OEM of IPCCTV Solution: Page 193</p>	<p>The CCTV OEM should have its Service line number and e-mail Id in India for any technical support query from the SI or end customer and ticketing website for logging calls, Status tracking and obtain service ticket/docket number. Service line number should be mentioned in the manufacturer's authorization letter to be submitted along with the bid duly signed by the country Head/Director/CEO of OEM</p>	<p>Request you to remove this clause point "ticketing website for logging calls, Status tracking and obtain service ticket/docket number " because it restrict the Indian OEM to participate in the tender</p> <p><u>Justification</u> None of the Indian OEM have ticketing website for compliant Logging only few foreign OEMs can comply this criteria and it restrict the Indian to Participate in the tender. This clause is favoring to foreign OEM only. Requesting you to remove ticketing clause</p>	<p>Please follow RDSO/SPN/TC/65/2021, rev.6 or latest. The requirement of availability of ticketing website for logging calls, Status tracking and obtain service ticket/ docket number is not there in RDSO specs, and hence withdrawn. All such requirements, not covered by RDSO specs are withdrawn</p>
10/17	<p><u>Schedule 3. IP CCTV Surveillance Solution:</u></p> <p>Special Condition for OEM of IPCCTV Solution: Page 193</p>	<p>Facility of Edge storage (SD Card) of 512 GB Or better may also be available in each camera with the facility to transfer edge storage recording to main storage i.e. NAS/SAN, after resumption of link in case of network failure.</p>	<p><u>Requesting you to amend the clause as:</u> Facility of Edge storage (SD Card) of 256 GB Or better may also be available in each camera with the facility to transfer edge storage recording to main storage i.e. NAS/SAN, after resumption of link in case of network failure.</p> <p><u>Justification</u> In RDSO Rev 6.0 specification, Maximum 128GB SD Card is asked whereas in RFP you have mentioned 512GB SD Card Support which is specific to foreign OEMs and it restrict the Indian OEM to participate in the tender. So, we are requesting you to make the specification generic so that other reputed Indian OEM can also participate in the tender.</p>	<p>Please provide storage as RDSO/SPN/TC/65/2021, rev.6 or latest. Higher storage.</p>

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
11/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u> Special Condition for OEM of IPCCTV Solution: Page 197	4K UHD Fixed Box Type IP Colour Camera (Location: Main Tunnel & Escape Tunnel , at suitable interval depending upon the tunnel conditions on both sides of tunnel wall in zig zag manner )	Please confirm which specification we have to consider to propose the product because few points are different from RDSO specification. We are requesting you to follow the latest RDSO Rev. 6.0 specification because extra Points which you have mentioned in the tender document it will increased the product cost.	Please follow specs RDSO/SPN/TC/65/2021, rev.6 or latest with additional requirement of redundancy and integration with other sub-systems
12/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u>	10. Focus Control: One-Touch Auto Focus or Remote Adjustment 11. Lens Type: Varifocal and Focus, P-Iris. The Lens may be of same make of Camera or different make	<u>Requesting you to amend the clause as:</u> 10. Focus Control: Manual Focus <u>Justification</u> Box Camera generally come with CS mount lens which is operated manually. In the RDSO Specification also C or CS mount lens is asked which is basically come in box camera and also available with most of the OEMs.	Focus Control as specs RDSO/SPN/TC/65/2021, rev.6 or latest along with Auto IRIS is acceptable
13/17	<u>Special Condition for OEM of IPCCTV Solution: Page 198</u> 4K UHD Fixed Box Type IP Colour Camera (Location: Main Tunnel & Escape Tunnel , at suitable interval depending upon the tunnel conditions on both sides of tunnel wall in zig zag manner	12. Varifocal Lens : 4.5 to 55 mm, IR corrected, suitable for 100-meter full coverage, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type Camera. The Lens may be of same make of Camera or different make.	<u>Requesting you to amend the clause as:</u> 6-22 mm, IR corrected, suitable for 100-meter full coverage, Auto IRIS Control, Manual focus and zoom control Lens suitable for 4K Ultra HD Fixed Box type Camera. The Lens may be of same make of Camera or different make. <u>Justification</u> 4.5-55mm Lens is specific to any foreign OEM and none of the Indian OEM have this lens in 4K Camera and it is also not a standard lens size. Most of the OEM have either 2.8-12mm Lens or 6-22mm Lens in the 4K Camera. So, we are requesting you to amend the clause as 6-22mm lens which is available with most of the OEMs. Asked specification is a restrictive specification for Indian OEM to participate in the tender.	6-22mm Varifocal Lens for 4K UHD Cameras; or any other lens to get 100-meters full coverage is acceptable.
14/17		18 Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation	"Requesting you to amend the clause as: 10/100 BaseT, RJ-45, Auto- Negotiation	Please follow RDSO/SPN/TC/65/2021, rev.6 or latest with 100 MBPS port

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
15/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u> Full HD Fixed Box Type IP Colour Camera (Location :Cross Passage )	18 Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation	As 10/100/1000 BaseT port not required and recommended for Full HD and 4K Camera as Full HD Camera consume maximum 4Mbps Speed and 4K Camera Consume Maximum 8Mbps Speed then why 1000Mbps Port is required for Cameras.  100Mbps Port is more than sufficient for Full HD and 4K Camera. So, We are requesting you accept our submission. "	
16/17	<u>Schedule 3. IP CCTV Surveillance Solution:</u> Full HD P/T/Z (Pan/Tilt/Zoom) IP Colour Camera:	23. Network Connectivity: 10/100/1000 BaseT, RJ-45, Auto- Negotiation	"Requesting you to amend the clause as:  10/100 BaseT, RJ-45, Auto- Negotiation  As 10/100/1000 BaseT port not required and recommended for Full HD and 4K Camera as Full HD Camera consume maximum 4Mbps Speed and 4K Camera Consume Maximum 8Mbps Speed then why 1000Mbps Port is required for Cameras.  100Mbps Port is more than sufficient for Full HD and 4K Camera. So, We are requesting you accept our submission. "	

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
17/17	<p>ANNEXURE -V</p> <p>A. Essential Qualifying Criteria: -</p> <p><u>3. Technical Eligibility Criteria:</u></p>	<p>The bidder should possess the experience of having successfully completed / substantially completed similar works during last 7-years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following:</p> <p>a. One similar work costing not less than the amount equal to 60% of advertised value of the tender.</p> <p>b. Two similar works each costing not less than amount equal to 40% of advertised value of the tender.</p> <p>c. Three similar works each costing not less than amount equal to 30% of advertised value of the tender.</p> <p>Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable.</p>	<p><u>Requesting you to amend the clause as:</u></p> <p>Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTE-R for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways/ State Govt/ PSU in India using Leaky Cable / Optic Fiber Cable / Data Cable</p> <p><u>Justification</u></p> <p>Please add few more department in the criteria so that other eligible bidder can also participate in the tender.</p>	<p>Please see corrigendum-4</p>

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
<b>MOBILE COMMUNICATIONS (INDIA) PVT. LTD</b>				
1/2	Section III Page No. 22 Notes. : 3	Definition of Similar Work: Design, Supply, Installation of Active Radio Networks (VHF Simplex / GSM-R / LTER for Voice Communication) fit for 160kmph (as per RDSO specs), CCTV/PA System on Railways in India using Leaky Cable / Optic Fiber Cable / Data Cable	Requested to include Signalling or telecommunication or telecommunication work including wire-less communication railways.	Please see corrigendum-4
2/2			Requested for extension of bid submission by 21 days.	Please see corrigendum-4
<b>GREEN CONNECT TECHNOLOGY</b>				
1/9	Section Vii Complete technical specd. i. Page 45 of 144 to page 51 of 144 (Section 1) Intend of design ii. Page 45 of 78 to page 46 of page 78 (section 2) iii. Page 71 of 78 to page 76 of 78 ( section 2 )	Emergency SOS system	There are 3 different sets of specifications on the Emergency SOS System i. Page 45 of 144 to page 51 of 144 (Section 1) ii. Page 45 of 78 to page 46 of page 78 (section 2) iii. Page 71 of 78 to page 76 of 78 (section 2) As most of the above three specs are in conflict to each other we would like clarifications on which specs are to be followed. We feel the first set of specifications are sufficient enough & the other set of specifications should be removed to have consistency in the overall requirements.	In case of conflict between the clauses of specifications, the ones with technical superiority should be considered.
2/9	Section 10.3.1 page 46 of 144	Furthermore, the telecontrol system shall enable the operation of these calls. That means, the emergency call's information shall be shown at the operator's screen and different functional processes shall be activated as described in - Tunnel Control and	Requested details on the telecontrol system or its operator screen.as it is not defined .Also there is no interface defined for external Public telephone system or the no of lines required for external system.	Please follow tender specs



S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
		Instrumentation System. If a service telephone call arrives, the system shall check if this call is determined for the external (public) or internal telephone system		
3/9	Section 10.3.2 page 47 of 144	<p>Technical data of Emergency Call Station:</p> <p>Degree of Protection :IP 65</p> <p>Frequency range: 200 – 7000 Hz</p> <p>Amplifier :25 W</p> <p>Microphone sensitivity: adjustable between -21 and +12db</p> <p>Loudspeaker sound-pressure: (25 W / 1 m) : 110 dB</p>	The frequency range for all telephony system should be as per the universal standard 300Hz to 3400 Hz And also the Amplifier/ loudspeaker of 25 Watt is too high for a call box as the person would be close by to the Call box while speaking ( within 1 feet) & such high wattage would cause ear damage. & it should be limited to 10 Watts.	Please follow tender specs
4/9	Section 10.3.2 page 48 of 144	Emergency Telephones (IP-Telephones) The IP-telephones shall include a microphone, a loudspeaker, a push button, etc. The protection class shall be at least IP 65, the power supply 24 V-42 V AC. Further they shall contain 2 potential free outputs and 2 inputs for potential free contacts. These values are valid for emergency and service telephones	The power rating should be 220 V ( 24V -42 V Ac is not attainable) . Also potential free input /output is redundant and is not available in IP 65 grade IP phones.	Please follow tender specs

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
5/9	Section 10.3.3/ page 48 of 144	The intercom stations shall be equipped with different modules. The modules are for preparing an interface to the SCADA, to the external (public) telephone system, desktop call station or else. Each module can operate at least 8 telephones Participant-cards TCP/IP for 8 participants - Participant-card for connecting the desktop call station - Network card ISDN with one basic terminal - Network interfaces - Digital audible coupling- and recording-card The following cards are required for the Intercom Station at the secondary building: Participant-cards 2-wired for 8 participants - Participant-card for connecting the desktop call station - Output card for 8 relays, potential free – Network card - Network interfaces	The present IP exchanges which are server based integrated systems with all functionalities inbuilt & do not have different modules (cards). The functionality required should only be stated as this functionalities arte made available through different software applications also .	Please follow tender specs
6/9	Section 10.3.3 page 50 of 144	Voice Recorder Technical Specification Frequency: 20 – 6800 Hz	The frequency should be 300 Hz to 3400 HZ	Please follow tender specs
7/9	Section 10.3.5 page 51 of 144	Main Telephone Apparatus (IP-telephone) This telephone shall be positioned at the	This requirement is not available in the BOQ as is redundant as at the control room you have the desktop Call station.	Please follow tender specs

S.NO	Ref. Section/Page No.	Reference Clause	Query Raised/additional information required	IRCON response
		operator's desk. The handset shall be impact-resistant, made of plastic, coloured as required of the employer. Further it shall consist of a rectifier for hearing protection and a cord. But the operator even may communicate by the desktop call stations.		
8/9		IP ECS -SOS -Push to Talk System :-	This specifications are redundant & conflicting with the previous specifications & hence should be removed from the tender as the requirements given here also does not match the BOQ	Please follow tender specs
9/9	Intend of design and tech spec of security, data and comm. Pkg/ Schedule 5 Page 72 of 78	IP Emergency Call and Service Telephone Solution:	This specifications are redundant & conflicting with the previous specifications & hence should be removed from the tender as the requirements given here also does not match the BOQ	Please follow tender specs
		Clarification Required:	The Technical specifications as given in annexure 7.1 has two parts for all items & both the specifications are conflicting each other. The first part consists of page 1-147 & the 2 <sup>nd</sup> part is from 148 to 224	Specification RDSO/SPN/TC/ 65/ 2021, rev.6 or latest are to be followed, which are the minimum specs. System shall have to be provided for redundancy, high availability and integration of other sub-systems
			Also we have seen in some items only foreign brands are given as approved makes. We would like Indian companies also to be able to participate in the tender & hence this clause should be removed	Please refer corrigendum-1

**Revised ANNEXURE -V**

(Ref. Clause 3.0 of e-Procurement Notice &amp; sub-clause 19.1 of ITT)

**A. Essential Qualifying Criteria: -**

1. Wherever there is conflict/variation in any Eligibility and Qualification Criteria as mentioned in GCC and in EQC, the latter shall prevail.
2. Consortium/Joint Venture of maximum of three firms is allowed.  
One of the members of the JV/Consortium shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV/Consortium. The other members shall have a share of not less than 20% each in case of JV/Consortium with up to three members. In case of JV/Consortium with foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.
3. Technical Eligibility Criteria:

The bidder should possess the experience of having successfully completed / substantially completed similar works during last 7-years (ending last day of the month previous to the one in which tenders are invited) which should be any of the following:

- a. One similar work costing not less than the amount equal to 60% of advertised value of the tender.
- b. Two similar works each costing not less than amount equal to 40% of advertised value of the tender.
- c. Three similar works each costing not less than amount equal to 30% of advertised value of the tender.

**Definition of Similar Work:** Design, Supply, Installation, Testing and Commissioning of Telecommunication work on Indian Railway network.

**Notes:**

- i. Joint Venture / Consortium of maximum three partners is allowed. Values of works completed by individual JV / Consortium partners, as mentioned in their completion certificates will be arithmetically added to judge Eligibility Criterion. Each JV / Consortium partner should have experience of at least one system out of Active Network or CCTV or PA system.
- ii. Substantially completed works are those for which 80% payment of Original Contract Value or Revised Contract Value (whichever is lower) has been made by the Employer/ Main Contractor for the portion of work being claimed by the bidder. The bidder shall furnish completion certificate against purchase order / work order issued by the Employer/ Main Contractor along with the bid.
- iii. If a provisional completion certificate is issued by the concerned organization, such work shall be considered for fulfillment of credentials. However, the value of work done shall be considered to the extent of actual amount paid by the client.
- iv. In case a work is considered similar in nature for fulfillment of technical credentials, the overall cost of that work including Price Variation amount if any shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility. In case of composite work, amount of Similar Work from the value of completed work shall be considered for evaluation. The works of supply and laying of cables shall not be considered for evaluation.

#### 4. Financial Eligibility Criteria:

The average annual financial turnover during the last three financial years should be at least 40% of the estimated cost. In case bidder is Joint Venture / Consortium, "financial capacity" of the lead partner of JV/Consortium shall not be less than 51% of the financial eligibility criteria. The arithmetic sum of individual "financial capacity" of all the members shall be taken as JV/Consortium's "Financial Capacity" to satisfy this requirement.

#### Notes for Financial Eligibility Criteria:

- a. The financial turnover shall mean Revenue from Operations of standalone Financial Statements of the Bidder.
  - b. Revenue from Operations shall be judged from Audited Balance Sheet Profit & Loss A/c relevant notes to A/Cs and Statutory Audited Report/relevant abstracts of Annual Reports covering above documents and the same shall be certified by statutory auditor with UDIN where the accounts are audited. In other cases, the same may be certified by Chartered Accountant with UDIN.
  - c. In case financials of immediate prior Financial Year have not yet been audited till the time of submission of tender, the bidder can submit an Affidavit to this effect stating that "the financial results of the immediate prior Financial Year has actually not been audited so far". In such cases, the financial of preceding three audited financial years will be taken into consideration for evaluating the Annual Financial Turnover of the bidder. In the absence of such an Affidavit, the benefit of considering three preceding years would not be given and the bid would be evaluated considering turnover of two preceding years only.
5. **Net Worth:** The Net Worth of the bidder should at least 10% of the estimated cost of the work. This will be judged from audited Balance Sheet of last financial year ending on a date not prior to 18 months from the date of submission of the tender but not earlier than a year immediate financial year. In case of Joint Venture/Consortium, the net worth of the lead partner of JV/Consortium partner shall not be less than 50% of this criterion and each other partners should have positive net worth. The arithmetic sum of individual net worth of all the members shall be taken as JV net- worth for satisfying this requirement. Net-worth of OEM firms of major critical equipment (LAN Switches, Radio Equipment, CCTV and PA system) should be positive and the firms should not beloss making in any three financial years immediately before current financial year.

#### Explanatory Notes:-

- a) The supporting documents for technical eligibility criteria & financial eligibility criteria in case of JV/Consortium should be submitted for all members of the JV/Consortium
- b) Joint And Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to IRCON / Railway for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the IRCON/Railways during the course of execution of the contract or due to non-execution of the contract or part thereof.
- c) Value of a successfully /substantially completed work done by a member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the abovementioned technical eligibility criteria in the tender under consideration. A copy of the JV agreement submitted to client at the time of award or any subsequent change in the provision of original JV agreement as agreed by the client shall be submitted along with tender document, while claiming share of the experience in the previous JV.
- d) A Tenderer and all partners constituting the Tenderer shall submit only one tender in the same tendering process, either individually as a Tenderer or as a partner of a JV. A Tenderer who submits or participates in, more than one tender will cause all of the proposals in which the Tenderer has participated to be disqualified. However, this doesn't limit the inclusion of the same subcontractor in more than one bid.

- (f) In case of failure of JV / Consortium member, all liabilities will be on lead member. The lead bidder shall be responsible (technically and financially) for complete execution of the work as per timeline given in the contract.
- (g) Contractual payment received by a Member in an earlier JV Firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying compliance of the above mentioned eligibility criteria in tender under consideration).
- (h) The contractor should submit certificates and Letter of Award in reference to S.No.3 above issued by Government Organizations/Semi Government Organizations / Public Sector Undertakings/Autonomous bodies/Municipal bodies for having successfully completed similar works in the last 3 years. -
- (i) In case tenderer submits work experience certificates issued by Public Limited Company / Concessionaire Company, the bidder shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities bill-wise details of payment received and copy of final / last bill paid by the company in support of above work experience certificate.
- (j) The performance certificate issued by foreign organization shall be accompanied by attestation of either Indian Embassy abroad or Foreign Country Embassy in India and true translation certified by public notary or attorney or government authorized translator, if performance certificate is in any language other than English.
- (k) Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:
- The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India for the relevant date. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.
6. The bidder shall sign the Affidavit as enclosed in Annexure-IV of Instruction to Tenderers. In case of Joint Venture / Consortium, the affidavit shall be signed by all the members of the JV/Consortium.
7. Bid Capacity: The tender / technical bid will be evaluated based on bid capacity formula detailed as Annexure-VI of Indian Railways GCC-July'2020

#### Clarifications:

1. Bid value: INR 173.61 Cr+12% GST (Total: INR 194.44 Cr)
2. The word "vendor" in item-18.0 (Public Procurement (preference to Make in India)) of corrigendum-1 means Bidders as well as OEMs of major critical equipment (LAN Switches, Radio Equipment, CCTV Camera and Storage)
3. The major critical equipment (LAN Switches, Radio Equipment, CCTV Camera and Storage) should have satisfactorily worked in similar environment in India for minimum 12 months.