

SECTION VI
SCOPE & TECHNICAL SPECIFICATIONS

Name of the work: -

Provision of CCTV Cameras for Escalators at MYS, DVG and Lifts at HAS, ASK, DRU, RRB, SMET, KRNR, TTR & SBHR stations of Mysuru Division.



SCOPE OF WORK

- a) Supply, installation, testing and commissioning of IP based CCTV surveillance system for monitoring of escalator at MYS, DVG and lift locations at HAS, ASK, DRU, RRB, SMET, KNR, TTR & SHBR stations of Mysuru Division including integration with existing Video Surveillance System (VSS) network.
- b) Supply, installation, testing and commissioning of Full HD Fixed Dome & Bullet Type IP Colour Cameras along with suitable mounting arrangements, housing and accessories conforming to RDSO Specification **RDSO/SPN/TC/65/2021 Version 6.0 with Amendment No. 1, 2 & 3 or the latest**, Video Management System (VMS) and Video Recording Software licenses for newly provided CCTV cameras including configuration, monitoring and recording arrangements.
- c) Integration of newly installed IP cameras with existing CCTV network and monitoring system including camera configuration, IP addressing, network connectivity testing and ensuring proper live viewing and recording.
- d) Supply, installation, testing and commissioning of CCTV connectivity infrastructure comprising Layer-2 Managed Ethernet Switches, equipment racks with accessories, Single Mode Armoured OFC with splicing and termination in FDMS, FDMS units, STP CAT-6 cables with associated LAN accessories, PVC conduits/casing-capping for cable protection, AC Distribution Boxes (ACDBs) with necessary electrical arrangements and copper power cables for providing network and power connectivity to CCTV cameras and associated equipment.
- e) Preparation and submission of completion documents including cable route details, IP addressing details, configuration records, test reports and as-built diagrams.

Technical Specifications

Sl. No	Explanation of Items
01	Current RDSO specifications are mentioned along with the items. However, procurement and inspection shall be as per the latest RDSO specifications prevailing at the time.
02	Materials shall be procured from the RDSO approved vendor list; prior approval of Railways shall be obtained before placing the order with vendors under Development orders.
03	Drawing number mentioned here are current and may be updated. Latest drawings are required to be followed while execution of work.
04	The quantities of sub items against each item are to be calculated/assessed and approval of Engineer to be taken before consolidated procurement of such items and for arranging inspection by RDSO/RITES, as indicated under Inspection Agency.
05	The explanation mentioned for the schedule items below is to clarify further on the technical details about the schedule item. The items available in the schedule of this NIT shall be executed as per the explanation & Technical specifications given below.
06	The works are to be done as per instructions of supervisor/officer in charge of the work and details mentioned in the schedule and all miscellaneous materials required for the work shall be supplied by the Contractor.
07	S&T works shall be carried out under proper disconnection or line block as applicable.

Sl. No	Explanation of Items
08	All the work shall be done as per technical specifications attached with the tender document as applicable and to be executed under direct supervision of Consignee or his authorized representative.
09	All materials required to execute the work are to be carried by the contractor from Consignee's Godown to work site at his own cost.
10	Released materials, if any are to be deposited to Consignee's Godown.
11	<p>The Ministry of Electronics and Information Technology (MeitY) Gazette Notification No. CG-DL-E-08032024-252738, dt: 07.03.2024, and the Railway Board letter No. 2020/TeleDev/ CCTV Projects (3322183); dt: 05.02.2024, mandates security auditing and testing with STQC only. The bidder must ensure the following:</p> <ul style="list-style-type: none"> <i>i.</i> The bidder must submit a valid Security Test Certificate for the offered CCTV/VSS products issued by the Standardisation Testing and Quality Certification (STQC) Directorate or any other agency notified by MeitY from time to time. <i>ii.</i> The certificate shall confirm that the products have been tested and found compliant with the "Essential Requirements (ERs) for Security of CCTV" provided in Appendix 'A' of the aforementioned MeitY Gazette Notification dated 26.04.2024. <i>iii.</i> The STQC Security Test Certificate shall have a validity of three years from its date of issue.
12	The Railway Board Letter 2020/Tele/15(18)/4 (3317053) dated 10.02.2026 states that CCTV Cameras are covered under PPP-MII and also under the Electronics & IT Goods (Requirements for Compulsory Registration Order (CRO)). The security testing report for CCTV/VSS is to be issued by STQC or any agency notified by MeitY with validity of three years from the date of issue. It has further been clarified that STQC will issue the test report as per the Essential Requirements (ERs) under CRO which shall also be applicable for compliance under PPP-MII. The security certification issued by STQC has no linkage with the value addition requirement under PPP-MII.
13	The Railway Board Letter No 2019/Tele/6(3)/2(3297667) dated 10.02.2026 regarding the correct display of date and time in CCTV system provided at stations shall be complied with in full.
14	<ul style="list-style-type: none"> i. In compliance with Railway Board Telecom Circular No. 12/2023 dated 11.10.2023, all telecom equipment such as LTE e-Node-B, cell site routers, switches, IP/MPLS routers, and similar equipment - irrespective of whether procured under VSS, IP/MPLS, or VoIP-based TCCS specifications - shall be cleared only through the Trusted Telecom Portal prior to supply. ii. No telecommunication equipment for which a prescribed standard exists shall be sold, deployed or used in any telecommunication network in India unless it possesses a valid Certificate of Conformity Assessment as mandated by the competent authority. iii. The instructions issued by Headquarters regarding the applicability of the Trusted Telecom Portal for inspection of non-RDSO approved telecom items, vide letters dated 19.04.2024 and 12.08.2024 (copies enclosed), shall be strictly complied with.
15	<ul style="list-style-type: none"> i. The RDSO Technical Advisory Note (TAN) titled "Comprehensive Security Guidelines for CCTV Network", issued vide STT/ITAN/CCTV/2024 Ver. 1.0 dated 24.04.2024, shall be strictly adhered to during implementation. ii. The Gazette Notification issued by the Ministry of Electronics and Information Technology (MeitY) dated 06.03.2024 regarding procurement of CCTV cameras shall be complied with in full.
16	Period completion is six months [06] .
17	All supply items inspected by RDSO/Consignee as mentioned in inspection clause/schedule/technical specification.
18	The contractor shall provide a comprehensive warranty and maintenance support for a period of 1 year from the date of completion of work .
19	Clarification about the latest policies/ practices for execution of work can be received from the Office of Sr Divisional Signal and Telecommunication Engineer/Mysuru Division, 2nd floor, DRM Building, Irwin Road, South Western Railway, Mysuru-570001

Item-Wise Technical Specification



SWR SOR Items (2025)

Sl No	Item No	Description	Rate per Unit	Qty	Amount	Inspection Agency
1	061500	Supply and fixing of PVC casing and capping/Pvc pipe of minimum 25 mm size or higher as per requirement at site on the wall/floor etc., using bends, coupler and T joints and flexible pipe wherever necessary with fixture in the OFC room from equipment rack to common termination and from OFC room to SM room/Reservation office /Data logger/FO/S room etc. (All required material for fixing to be arranged by the contractor	66.00	3400 Mtrs	224400	Consignee
2	073700	Supply of STP CAT 6 cable as per latest specification. <i>Shielded Twisted Pair (STP) Strengthened outdoor CAT-6 cable. 4 twisted pairs, solid bare copper, diameter of 23 AWG, Ethernet speed of 1000Mbps, support PoE of all classes, maximum DC resistance 100 Ohms/Km. jacket should be PVC & lead free, Cable Compliant with EIA/TIA-568-C.2 standard for CAT6, cable of 305 Mtrs length in box or roll. Shield should be earthed. Make -D-Link/ Finolex or equivalent.</i>	38.00	6100 Metre	231800	Consignee
3	073300	Supply of 12 Core single mode outdoor armoured optical fiber cable as per latest specification. <ul style="list-style-type: none"> NO. OF FIBRES: 12F TYPE OF FIBRE: SM G652 D LOOSE TUBE DIAMETER: 2.00 mm NOMINAL STRENGTH MEMBER: METAL OR GLASS YARN & FRP 2 NOS STRENGTH MEMBER COLOUR OF FIBRE: BLUE, ORANGE, GREEN, BROWN, GREY, WHITE, RED, BLACK, YELLOW, VIOLET PINK, & AQUA OUTER SHEATH MATERIAL: HDPE – BLACK OUTER SHEATH THICKNESS: 1.80 MM NOMINAL OR HIGHER OUTER CABLE DIAMETER: 6.0 + 0.50 mm CABLE WEIGHT: 34 + 10% Kg/Km PRINTING ON CABLE: AS PER CUSTOMER REQUIREMENTS STANDARD LENGTH: 2 + 10% KMS MAX. OPERATING TENSION: 500 N MAX INSTALLATION TENSION: 1000 N / 10 cm <i>They should be compliant with the latest ITU-TG-652-D Standard. All the accessories required for installation should be provided along with the cable.</i>	22.00	6000 Metre	132000	Consignee
4	071000	Supply of power cable copper PVC insulated flexible 3-core multi strand 2.5 sqmm as per latest specification No.IS:694:1990	100.00	850 Metre	85000	Consignee

5	212000	<p>Supply, installation, termination and testing of Rack/Wall mountable FDMS and termination IN and OUT 24 fiber OFC cables (with all connecting materials) routing/dressing fiber as per direction of engineer/In charge. this work includes termination/splicing of fibers and testing of fibers in the section/block and report of fiber to be submitted in hard and soft copy.</p> <p><i>The FDMS should have the following:</i></p> <ul style="list-style-type: none"> ❖ <i>It should be mountable in standard 19" rack and of slider type.</i> ❖ <i>There should be an arrangement of termination of 24 Nos. of fibers.</i> ❖ <i>It should be supplied with 24 Nos. of pigtails of respective type of connector of minimum 3-meter length.</i> ❖ <i>Colour coded pigtails (un tight jacket) shall be provided for easy identification.</i> ❖ <i>The FDMS should be supplied with arrangement of required Nos. of adapters (as per SOR).</i> ❖ <i>The adaptors shall be fixed in such a way that these shall be easily accessible protecting the eye from direct exposure to laser.</i> ❖ <i>There should be nos. of trays or as per site requirement for the provision of termination of the fibers & sufficient space for routing of the fibers in the trays.</i> ❖ <i>Trays shall be numbered bottom to top (tray no. 1 is lower most).</i> ❖ <i>Pigtails shall follow tray numbering and labelled through colour coding/ferruling.</i> ❖ <i>Adaptors shall be numbered Bottom to Top or Left to Right in ascending order and provided with dust protection caps.</i> ❖ <i>Important Do's and Don'ts about the operation of the FDMS shall be clearly indicated at a convenient place on the FDMS.</i> ❖ <i>Insertion Loss: ≤ 0.3 dB or less</i> ❖ <i>Return Loss: ≤ 45 dB or less</i> ❖ <i>The FDMS shall be manufactured as per latest state of art technology.</i> ❖ <i>The FDMS shall be protected against the entry of dust and insects, rodents etc.</i> ❖ <i>Body should be of MS steel; powder coating painting (min. 70 micrometer thickness) shall be provided with rust resistance paint.</i> ❖ <i>Marking: The marking on the system shall be indelible and following minimum information shall be provided by way of engraving or Laser printing method:</i> ❖ <i>"SWR" should be written on each FMS to be visible from front.</i> ❖ <i>Manufacturer's name & date/ year of production.</i> ❖ <i>Model No./Batch No./ Serial No.</i> ❖ <i>Capacity i.e. No. of cables and the fibers.</i> ❖ <i>Identification details/ cables/ Fiber/ labelling facility.</i> ❖ <i>Preferred type of connector is SC/APC for all connectors.</i> 	24253.00	42 Nos.	1018626	Consignee
6	212200	<p>Supply of RJ 45 connector suitable for STP/UTP cable.</p> <p><i>RJ-45 modular plug supports 4 twisted pairs, 8 positions, 8 connectors of 100pcs/Pack. transparent color. Contact Terminal: Copper Alloy. Finished: 03 MU micro inch gold plating.</i></p>	3.00	500 Nos.	1500	Consignee

		<i>Use for 23-26AWG stranded wires, meet wiring scheme T568A/T568B. It should be suitable for STP/UTP CAT-6 cable as per field requirements. Reputed Brand D-Link or better</i>				
7	212300	Supply of CAT-6 Patch Cord-5mtrs length. <i>UTP CAT6 Cable Patch cord 5mtrs, cable jacket low Smoke zero halogen (LSZH), conductor di 23 AWG, confirming to ANSI/TIA/EIA-568-C.2 or latest. Reputed Brand Finolex, Digisol, D-Link or equivalent</i>	394.00	50 Nos.	19700	Consignee
8	214400	Supply and fixing of OFC patch cards 5 Mtrs length as per site requirements. (LS-SC, SC-SC, LC-LC, FC-FC patch cards as per site requirement) <i>As per schedule description Make- 3M, TE Connectivity, R&M or any other reputed make.</i>	753.00	50 Nos.	37650	Consignee
Total Value - SWR SOR Items						

Non-SOR Items																																		
SI No	Item No	Description	Rate per Unit	Qty	Amount	Inspection Agency																												
1	1	Supply & Installation of 9U Rack (depth of Rack around 600 mm+/- 10mm) with hinge door cooling fan, 5 Socket power extension board, cable manager, partition tray and accessories with locking arrangement on both door and wall mount arrangement. Make: Comrack, Rittel, APW, President, HCL, D-link or similar.	12402.70	21 Nos.	260456.7	Consignee																												
		<table><tr><th>Specifications</th><th>Details</th></tr><tr><td>Item Description</td><td>9U Wall-Mountable Dust Proof Rack</td></tr><tr><td>Size</td><td>600 mm (W) × 450 mm (D), 9U height</td></tr><tr><td>Mounting Type</td><td>Wall Mountable</td></tr><tr><td>Rack Frame Material</td><td>Mild Steel</td></tr><tr><td>Front Door</td><td>Single front glass door, 4 mm thick glass, silicon-sealed on frame</td></tr><tr><td>Front Door Frame</td><td>Mild Steel, ≥ 0.9 mm thickness, 180° opening, detachable hinges, lockable</td></tr><tr><td>Gasket</td><td>Polyurethane gasketing on front & rear doors</td></tr><tr><td>Tray</td><td>1 Equipment tray included</td></tr><tr><td>Top & Bottom Cover</td><td>≥ 1.2 mm thickness, with 40 mm dia. cable entry holes, rubber rings, gland plates</td></tr><tr><td>Power Distribution Channel (AC)</td><td>6 × 5-pin sockets (5A each), with fuse, switch & indicator</td></tr><tr><td>Power Cable</td><td>3-core cable, 3 meters long, with 15A mains plug</td></tr><tr><td>Color / Finish</td><td>Powder coated in dual tone – Dark & Light Grey (Doors in Light Grey)</td></tr><tr><td>Mounting Hardware</td><td>20 sets of Cup Washer + Cage Nut + M6 Screw per rack</td></tr></table>					Specifications	Details	Item Description	9U Wall-Mountable Dust Proof Rack	Size	600 mm (W) × 450 mm (D), 9U height	Mounting Type	Wall Mountable	Rack Frame Material	Mild Steel	Front Door	Single front glass door, 4 mm thick glass, silicon-sealed on frame	Front Door Frame	Mild Steel, ≥ 0.9 mm thickness, 180° opening, detachable hinges, lockable	Gasket	Polyurethane gasketing on front & rear doors	Tray	1 Equipment tray included	Top & Bottom Cover	≥ 1.2 mm thickness, with 40 mm dia. cable entry holes, rubber rings, gland plates	Power Distribution Channel (AC)	6 × 5-pin sockets (5A each), with fuse, switch & indicator	Power Cable	3-core cable, 3 meters long, with 15A mains plug	Color / Finish	Powder coated in dual tone – Dark & Light Grey (Doors in Light Grey)	Mounting Hardware	20 sets of Cup Washer + Cage Nut + M6 Screw per rack
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2	2	<p>Supply, Installation and Commissioning of Layer 2 Switch as per RDSO/SPN/TC/65/2021, Rev.6.0 or latest. Minimum 8+2 Port Manageable with 8 Nos 10/100/1000 Mbps Ethernet port, POE+ & Single Fiber 2 Nos 1G SFP Port with BX SM SFP Optical Modules loaded. with all accessories etc. As per RDSO/SPN/TC/65/2021, Rev.6.0 or latest. with all accessories and detailed specification enclosed along with a standard/reputed make.</p> <p>❖ <i>It should meet the requirements as per Clause no. 14.0 (III) of RDSO Specification of IP Based Video Surveillance System Specification No. RDSO/SPN/TC/65/2021 Revision 6.0 with Amendment No.1, 2 & 3 or latest. It should include the required OEM SFP BX SM Modules loaded and all the accessories required for installation. OEM shall certify that service support will be extended up to completion of Codal life & AMC.</i></p> <p>❖ <i>Necessary OEM warranty certificate to be submitted.</i></p>	36087	21 Nos.	757827	RDSO
3	3	Supply and Installation of ACDB for AC Distribution Box along with required MCBs, Lock and Key arrangement and ISI Mark MCBs of Various Rating as per site requirement.	4069	21 Nos.	85449	Consignee
4	4	Supply, Fixing and Termination of dual I/O box with RJ45 socket. Dual information outlet with surface mount box (SMB), RJ45 socket faceplate with shutter facility to be supplied and fixed. UTP cable should be terminated in I/O box.	500.00	59 Nos.	29500	Consignee
5	5	Supply and fixing of 25 sizes of medium class PVC conduit along with accessories in surface /recess including cutting the wall and making good the same in case of recessed conduit as required	125	450 Mtrs.	56250	Consignee
6	6	Laying of UTP cat 6 cable, 6 fiber OFC cable in PVC casing / pipe/Cable tray /trough as per the instructions of in charge at site."	10	12000 Mtrs.	120000	Consignee
7	7	<p>Supply Installation, Testing & Commissioning of Full HD Fixed Dome type IP Colour Camera along with 128 GB or Higher SD Card, Housing & Mount and all accessories required for installation purposes as per RDSO Spec No RDSO/SPN/TC/65/2021, Rev 6.0 or latest. Inspection RDSO along with a standard/reputed make.</p> <p>❖ <i>As per Clause No. 6.0 of RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2021 Revision 6.0 with Amendment No. 1, 2 & 3 or latest with all amendments.</i></p> <p>❖ <i>The Installation, Commissioning and testing is to be done as per RDSO Specification No. RDSO/SPN/TC/65/2021 Revision 6.0 or latest and instructions of supervisor/officer in charge of the work and details mentioned in the schedule, all miscellaneous materials required for the work shall be supplied by the Contractor.</i></p> <p><i>Necessary OEM warranty certificate to be submitted.</i></p>	14627	17 Nos.	248659	RDSO

8	8	<p>Supply Installation, Testing & Commissioning of Full HD Fixed Bullet type IP Colour Camera along with 128 GB or Higher SD Card, housing and mount and all accessories required for installation purposes per RDSO Spec No RDSO/SPN/TC/65/2021, Rev 6.0 or latest. Inspection RDSO along with a standard/reputed make.</p> <p>❖ <i>As per Clause No. 5.4 of RDSO Specification IP Based Video Surveillance System, Specification No. RDSO/SPN/TC/65/2021 Revision 6.0 with Amendment No. 1, 2 and 3 or latest with all amendments.</i></p> <p>❖ <i>The Installation, Commissioning and testing is to be done as per RDSO Specification No. RDSO/SPN/TC/65/2021 Revision 6. 0 or latest and instructions of supervisor/officer in charge of the work and details mentioned in the schedule, all miscellaneous materials required for the work shall be supplied by the Contractor.</i></p>	14627	42 Nos.	614334	RDSO
9	9	<p>Supply Installation, Testing and Commissioning of Software for VMS and Video Recording software. (Per camera Licence means Video Management and Video Recording at multiple locations such as Station, RPF Post & DC Server room covered by the same license) as per technical spec and functional requirement as per RDSO Spec No RDSO/SPN/TC/65/2021 Rev.6 or latest.</p>	3896.17	59 Nos.	229874.03	Consignee
10	10	<p>Integration of the Camera as well as different make/model of a VSS server (located at a different station controlling 03 cameras) with ICCC server (Intellve ICCC) located at MYS Mysuru) station</p> <p>❖ <i>It shall ensure interoperability between equipment of different manufacturers without affecting the existing functionality of the VSS servers or ICCC system and shall comply with the latest Railway Board guidelines, RDSO specifications, and cybersecurity requirements applicable to CCTV/VSS systems.</i></p> <p>❖ <i>Survey, Design, integration, Software upgradation, extending feed to Command Control Centre at Centralized Location (MYS), Integration of the same as well as different make/model of a VSS server (located at a distant station and data centre controlling 200 cameras) with ICCC server (Intellve ICCC) located at MYS Data Centre. The system shall accommodate future integration of additional camera feeds, with provisions to support up to 200 cameras per division, including those specified in the current tender).</i></p> <p>❖ <i>Camera Connect Licenses (Live View & playback only, no recording) 200 Cameras.</i></p> <p>❖ <i>Integration Adaptor License for VMS application & VA.</i></p>	3055.55	59 Nos.	180277.45	Consignee

Special Technical Conditions

(Railway Board / GOI / RDSO Guidelines)

(All applicable provisions shall be followed under this tender)

1. MeitY Gazette Notification No. CG-DL-E-08032024-252738 dated 07.03.2024 and Railway Board Letter No. 2020/TeleDev/CCTV Projects (3322183) dated 05.02.2024

The CCTV/VSS products shall comply with MeitY security requirements. Valid Security Test Certificate issued by STQC Directorate or any MeitY notified agency shall be submitted. The certificate shall confirm compliance with Essential Requirements (ERs) for Security of CCTV and shall be valid for three years from date of issue.

2. Railway Board Letter No. 2020/Tele/15(18)/4 (3317053) dated 10.02.2026

CCTV Cameras covered under PPP-MII and Electronics & IT Goods (CRO) shall comply with applicable security testing requirements. STQC certification issued as per Essential Requirements shall also be applicable for PPP-MII compliance.

3. Railway Board Letter No. 2019/Tele/6(3)/2 (3297667) dated 10.02.2026

The CCTV system provided at stations shall ensure correct display and synchronization of date and time as per Railway Board instructions.

4. Railway Board Telecom Circular No. 12/2023 dated 11.10.2023

(Ref: Railway Board Letter No. 2023/Tele Dev/Trusted Sources dated 11.10.2023)

LTE e-Node-B, cell site routers, switches, IP/MPLS routers and applicable telecom equipment used in Indian Railways shall be cleared through the Trusted Telecom Portal (TTP) before supply.

5. RDSO Letter No. RDSO-TELE0LK0(TECH)/8/2020 dated 09.02.2024

Trusted Telecom Portal (TTP) clearance shall be mandatory for LTE e-Node-B, cell site routers, switches and IP/MPLS routers irrespective of whether procured under VSS, IP/MPLS or VoIP based TCCS specifications.

6. RDSO Technical Advisory Note (TAN) No. STT/ITAN/CCTV/2024 Version 1.0 dated 24.04.2024

Comprehensive Security Guidelines for CCTV Network shall be followed during design, installation, configuration, testing and commissioning of CCTV/VSS systems.

7. MeitY Gazette Notification regarding procurement of CCTV Cameras dated 06.03.2024

Procurement of CCTV cameras shall comply with applicable MeitY cybersecurity, security testing and procurement guidelines.

