

Schedule of Work

S N	Description of Items	Unit	Qty.	Rate in Rs (in figures)	Rate in Rs. (in words)	Amount in Rs. (in Figures)	Amount in Rs. (in Words)
1	Supply, Installation of 2MP Bullet IP Colour Camera with all other accessories as per Technical Specification Annexure 'A' Make :- Matrix, VivoTek, Bosch, Sony, Axis.	Nos.	7				
2	Supply, Installation of 2MP Dome IP Colour Camera and all other accessories as per Technical Specification Annexure 'A' Make :-Matrix, VivoTek, Bosch, Sony, Axis.	Nos.	7				
3	Supply, Installation of 16 Channel Network Video Recorder with accessories as per Technical Specification Annexure 'A' Make :- Matrix, VivoTek, Bosch, Sony, Axis.	Nos.	1				
4	Supply and Installation of 55 Inch Display system (TV) with HDMI and LAN Port with accessories as per Technical Specification Annexure 'A' Make:- Sony/LG/ Samsung/Panasonic	Nos.	1				
5	Supply of Wether Proof RJ-45 Connector for CAT6 Cable as per Technical Specification Annexure 'A' Make: Standard Make	Nos.	100				
6	Supply of PC workstation including software with license for monitoring the Network with accessories as per Technical Specification Annexure 'A' Make :- HP /Dell/Acer	Nos.	1				
7	Supply of Laptop for Maintenance with accessories as per Technical Specification Annexure 'A' Make :- HP /Dell/Acer	Nos.	1				
8	Supply of CAT6 cable (305m/ Box), Make:- D-Link, Molex, Commscope, Beldon.	Mtr.	305				
9	Supply of Armoured CAT6 cable (305m/ Box), Make:- D-Link, Molex, Commscope, Beldon.	Mtr.	610				
10	Supply and Installation of Jack Panel 24 p0tt Make: D-Link, Molex, Commscope, Beldon	Nos.	2				
11	Supply of 6U 19" Rack with all other accessories as per Technical Specification Annexure 'A' Make:- D-Link/APW/Rittal	Nos.	2				
12	Supply of weather proof I/O box complete as per Technical Specification Annexure 'A' Make:- D-Link, Molex, Commscope, Beldon.	Nos.	20				
13	Supply of CAT6 STP Patch cord RJ-45 (10 Mtr.) as per Technical Specification Annexure 'A' Make:- D-Link, Molex, Commscope, Beldon	Nos.	20				
14	Supply of CAT6 STP Patch cord RJ-45 (2Mtr.) as per Technical Specification Annexure 'A' Make:- D-Link, Molex, Commscope, Beldon	Nos.	20				

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15	Supply of 8TB Surveillance Hard Disk for Recording of camera as per Technical Specification Annexure 'A'. Make: Toshiba/Seagate/WD	Nos.	2			
16	Supply & Installation of Layer-2 Switch PoE 8 Ethernet port with 2 SM Fiber LX Modules as per Technical Specification Annexure 'A'. Make: D-Link/Juniper /Cisco	Nos.	3			
17	Supply & Installation of 6 Mtrs Hot dip galvanized octagonal pole with foundation J bolt & 1 mtr. pipe & clamp as per Technical Specification Annexure 'A'.	Nos.	5			
18	Supply & Installation of 12-port Fiber Optical Patch panel (LIU) along with all accessories as per Technical Specification Annexure 'A'. Make: D-Link/Commscope/Beldon	Nos.	2			
19	Supply of Fiber Duplex Patch Cord as per Technical Specification Annexure 'A'. Make: D-Link/Commscope/Beldon	Nos.	6			
20	Laying of underground cable of Armoured CAT6 cable through HDPE pipe.	Mtr.	610			
21	Laying of CAT-6 Cable inside PVC conduit pipe/ PVC casing capping	Mtr.	1115			
22	Cutting of wall fixing Of PVC conduit pipe 25mm and re-installation of wall in original condition	Mtr.	20			
23	Fixing and Termination of CAT6 information outlet box with single port face plate fitted inside box on the wall.	Nos.	20			
24	Termination of Fibre cable in FMS/LIU Splicing of fiber with pig tail.	Nos.	30			
25	Testing & Commissioning of all equipments as per scope of work.	Job	1			
			Total Amount			

Note: Unit Rate and amount should be written both in figure and words. In case of any discrepancy, unit rate written in words will be taken as final.

Terms & Conditions

General Conditions:

- 1.1. The validity of quotation shall be for 30 days from the date of opening of quotation.
- 1.2. The amount given in schedule of work shall be quoted including all taxes.
- 1.3. RDSO reserves the right not to consider conditional quotation and reject the same without assigning any reason.
- 1.4. All the papers should duly signed by the contractor.

2. Completion Period

- 2.1 The work of **Provision of Video Surveillance System at DG Camp Office** should be completed within 60 days from the date of receipt of work order.

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3. Payments

- 3.1 100% Payment shall be done after successful installation & commissioning of the work and after submission of bill.
- 3.2 Bank account details including IFSC, PAN & GSTIN shall be submitted along with bill. Income Tax will be deducted at source from the bill as per rule as applicable.

Execution of Schedule of work

Brief Description of work:

- 1.1 As mentioned in Schedule of Work and as per the direction of site engineer.
- 2 **Video surveillance system :**
 - 2.1 This work is for Video Surveillance system with recording of minimum one month and provision of display, for CCTV at DG Camp Office, RDSO, Lucknow.
 - 2.2 Cameras are to be installed on wall proper wiring and termination through NVR. All these wirings are to be done as per standard practices.
 - 2.3 PVC conduit pipes and PVC casing-n-capping channels are to be fixed on the wall properly with help of suitable clamps & screws. All required accessories like T joints, bends screws etc. are to be supplied by contractor as per the site requirements. All required masonry work like making holes in the wall for taking these pipes, repairing of wall after laying pipes are to be done by the contractor.
 - 2.4 Network Video recorder and Hard disk for recording are suitable for the cameras, before installation all equipments check by Telecom maintenance section. It will change as per site requirement.
 - 2.5 The site engineer of RDSO shall decide the places where the Camera, Rack and other equipments pipes & channels are to laid and Cable wirings are to be provided on the walls such as verandas, Kitchen and other location.
 - 2.6 Camera, Network Video Recorder, Hard Disk, Display System should be proper functioning.
 - 2.7 All connecting CAT6 Cables, power board wiring should be laying inside in PVC pipe or Casing-n- capping in a straight alignment and should be neat and clean and nicely executed. The rack must be tightly mounted to the wall. Poles are minimum 1Mtr depth on the ground and the foundation will be neat and looking nicely.
 - 2.8 Various items mentioned in schedule are to be executed as per standard practices being following nationally/internationally as applicable.

Annexure 'A'

Technical Specification of 2 MP Fixed Bullet Camera (item No. 1)			Compliance (Yes/NO)	Remarks
S. No	Parameter	Specifications		
1	Image Sensor	<p>½.8" Progressive Scan, Backlight illuminated CMOS Sensor</p> <p>Note: The bidder must state the Make and model of the sensor to ensure the authenticity of the component. the bid would be disqualified if the sensor used is not as mentioned by the bidder</p>		
2	Maximum Resolution	2 MP (1920 x 1080)		
3	Lens Type	2.8 mm fixed lens		
4	Noise Reduction	2 DNR, 3 DNR		
5	Adaptive streaming	Should reduce the FPS and Bit rate during no activity period.		
6	Signal to Noise Ratio (SNR)	≥70 dB		
7	ONVIF Compliance	Profile S & Profile G The IP Camera make, and model shall appear on the ONVIF Conformant products List		
8	MAC Address	The Mac Address of the Camera shall be registered in the name of the OEM.		

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Video		
9	Supported Resolutions	1920 x 1080, 720p,D1,2CIF,CIF
10	No of Stream Profiles	4
11	Video Compression	H.265 , H.264 , MJPEG
12	Frame Rate (FPS)	1 to 30
13	Video Standard	PAL
Network		
14	Ethernet	10Base-T/100BaseTX Ethernet (RJ-45)
General		
15	Power	POE (802.3af/at), 12 V 2A
16	Operating Temperature	-30°C- +60°C
17	Storage Temperature	-30°C- +60°C
18	Operating Humidity	90% or less

Technical Specification of DOME Camera (item No. 2)				
S. No	Parameter	Specifications	Compliance (Yes/NO)	Remarks
1	Image Sensor	½.8" Progressive Scan, Backlight illuminated CMOS Sensor. Note: The bidder must state the Make and model of the sensor to ensure the authenticity of the component. the bid would be disqualified if the sensor used is not as mentioned by the bidder		
2	Maximum Resolution	2 MP (1920 x 1080)		
3	Lens Type	2.8 mm fixed lens		
4	Noise Reduction	2 DNR, 3 DNR		
5	Adaptive streaming	Should reduce the FPS and Bitrate during no activity period.		
6	Signal to Noise Ratio (SNR)	≥70 dB		
7	ONVIF Compliance	Profile S & Profile G The IP Camera make, and model shall appear on the ONVIF Conformant Products List		
8	MAC Address	The Mac Address of the Camera shall be registered in the name of the OEM.		
Video				
9	Supported Resolutions	1920 x 1080, 720p,D1,2CIF,CIF		
10	No of Stream Profiles	4		
11	Video Compression	H.265 , H.264 , MJPEG		
12	Frame Rate (FPS)	1 to 30		
13	Video Standard	PAL		
Network				
14	Ethernet	10Base-T/100BaseTX Ethernet (RJ-45)		
General				

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15	Power	POE (802.3af/at), 12 V 2A	
16	Operating Temperature	-30°C- +60°C	
17	Storage Temperature	-30°C- +60°C	
18	Operating Humidity	90% or less	

Technical Specification of Network Video Recorder (NVR) (item No. 3)

Sr. NO	SOFTWARE SPECIFICATIONS	Compliance (Yes/NO)	Remarks
1	It Should be Possible to configure, playback & live streaming of cameras added to other NVR from the main NVR without the need of any Server/workstation.		
2	The system should be capable of integrating with IP cameras of any brand which supports ONVIF 2.0 & above or ONVIF S profile.		
3	it should be possible to define a different number of Retention days for individual cameras.		
4	NVR should have a configuration wizard for quick configurations.		
5	NVR should show the estimated number of storage days.		
6	The device must be capable of taking Snapshot with integrated Access control and time attendance system of the same brand in case of user allow/denied events.		
7	Digital Zoom during live view.		
8	The system should be able to take a Snapshot during live view/ playback in JPEG format.		
9	The Device Must Provide Configuration Backup.		
10	it Should Have its Own Free DNS Server.		
11	Video pop-up for both Desktop and Local clients.		
12	3 User Access Levels (Default): Admin, Viewer, and Operator		
13	10,000 Events Log		
14	NVR Should Be Capable of Exporting Files in Native and AVI File Format to FTP and USB.		
15	NVR should have IP Address Filtering to Enhance Security.		
16	System Admin Should Be Capable of Programming PTZ Tour.		
17	Dual Stream Option Should Be Available for Simultaneous Recording and Transmission of Video on The Network Depending on The Bandwidth.		
18	The system should support Daylight Saving Time (DST).		
19	The Device Should Be Designed, Developed, and Manufactured in India.		
	MOBILE CLIENT		
20	Mobile application should be Provided by The Vendor Free of Cost with the NVR.		
21	it should be possible to see the playback from a mobile client.		

Technical Specification of PC workstation (item No. 6)

S. No	Parameter	Specifications	Compliance (Yes/NO)	Remarks
1	Processor	Core i5, 10 th Generation or higher		

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2	Memory	8 GB RAM		
3	HDD	1 TB		
4	Monitor	LED monitor with 18.5" or higher		
5	Accessories	Key Board and mouse		
6	OS	Windows 10 or higher		
7	Warranty	Minimum Two years warrantee. The bidder should submit the license key and other document.		

Technical Specification of Laptop (item No. 7)

S. No	Parameter	Specifications	Compliance (Yes/NO)	Remarks
1	Processor	Core i5, 10 th Generation or higher		
2	Memory	8 GB RAM		
3	HDD	512GB or higher		
4	SSD	256GB or higher		
5	Display Size	14" or higher		
6	OS	Windows 10 or higher		
7	Warranty	Minimum One years warrantee. The bidder should submit the license key and other document.		

Technical Specification of Hard Disk (item No. 15)

S. No	Parameter	Specifications	Compliance (Yes/NO)	Remarks
1	Interface	SATA		
2	Type	HDD		
3	Capacity	8 TB		
4	Supported	Surveillance system		
5	Warranty	Minimum One years warrantee.		

Technical Specification of 8 port PoE Switch (item No. 16)

S. No	Parameter	Specifications	Compliance (Yes/NO)	Remarks
1	Interface	8xgigabit PoE ports, 2XSFP uplink port		
2	PoE budget	65 watt or higher		
3	IPV4/IPV6	Supported		
4	Switching Capacity	20 Gbps or higher		
5	Warranty	Minimum one years warrantee.		

Contractor Signatures
(Seal)

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