

Scope of Work:

It is proposed to establish facility surveillance at Control System Integration Facility(CSIF) of LPSC, Valiamala. The block diagram of the facility and tentative layout are attached as Annexure 3. All the activities involved in establishing the facility including Supply, Installation, Training, Operations and Maintenance of the facility during the warranty and post warranty period shall be carried out by the supplier on a Turn-Key basis. The camera requirements for the facilities situated at CSIF building are given in Table-1,2&3 below.

Table 1

Sl.No	CSIF-Ground Floor	Camera Type 1	Camera Type 2	Qty (Nos.)
1	Non A/c Integration Bay	PTZ	Fixed Bullet	2
2	AC Integration Bay	Fixed dome		1
3	Clean Room	PTZ	Fixed Dome	2
4	Water Calibration Bay	Fixed Dome		1
5	AC HP Bay	Variable lens		1
6	Proof Pressure Test	Fixed Bullet		1
7	Corridor	Fixed Bullet	Fixed dome	2
8	Stair case	Fixed dome		1
Total				11

Table 2

Sl.No	CSIF-Basement Floor	Camera Type 1	Qty (Nos.)
1	Main bay	Fixed Dome	3
2	Corridor	Fixed dome	1
3	Server, CCTV & Networking room	Fixed dome	1
4	IPA Flushing room	SS Fixed Dome	1
Total			6

Table 3

Sl.No	CSIF-First floor	Camera Type 1	Qty (Nos.)
1	Lobby	Fixed Dome	1
2	Staircase	Fixed dome	1
Total			2

Annexure 1: List of active and passive devices

Annexure 2: Technical Specifications

Annexure 3: Block diagram of CSIF

Annexure-1

List of active and passive devices

SL. No.	Description	Qty	UOM
CCTV System			
1	PTZ Camera	2	Nos
2	SS Camera	1	Nos
3	Indoor Fixed Bullet Camera	2	Nos
4	Variable lens camera	2	Nos
5	Indoor Fixed Dome Camera	12	Nos
6	NVR with 180 days backup	1	Nos
7	Video Decoder	1	Nos
ACTIVE SYSTEM			
8	PoE Switch	3	Nos
9	SFP Modules	6	Nos
10	55" Display	2	Nos
PASSIVE SYSTEM			
11	9U Wall mount Rack	3	Nos
12	Patch Panel	3	Nos
13	CAT 6 I/O with SMB	19	Nos
14	0.5 Mtr CAT6 Patch Cord	19	Nos
15	1 Mtr CAT6 Patch Cord	19	Nos
16	27 U rack floor mount	1	Nos
17	3 KVA UPS	1	Nos
18	Batteries and accessories for the UPS	1	Set
19	Multimode Fiber 6 core	50	Mtr
20	CAT6 cable 305 mtr	5	Box
21	12 Port LIU loaded with SM Pigtail	4	Nos
22	LC-LC MM Duplex Patch Cord, 3 Meter	6	Nos
23	3 Core cable for UPS supply to rack in each floor	90	Mtr
24	Power Socket	3	Nos
25	Conduit PVC 1" Supply	1590	Mtr
SERVICE			
26	Installation and configuration of Camera	19	Nos
27	Installation and configuration of NVR	1	Nos
28	Installation and configuration of Switch	3	Nos
29	Installation and configuration of Display	3	Nos
30	Installation and configuration of Computer/Viewing Device	1	Nos
31	Installation and fixing of 9 U Rack	3	Nos
32	Installation and fixing of 600VA UPS	1	Nos
33	Installation and fixing of 27U Rack	1	Nos
34	Installation and fixing of 3 KVA UPS	1	Nos
35	Laying of Multimode Fiber	50	Mtr
36	Laying of Multimode CAT6 cable	1525	Mtr
37	Installation and Configuration of SFP module	6	Nos
38	Installation and Configuration of 12 Port LIU	4	Nos
39	Installation and fixing of Patch Cord	4	Nos
40	Splicing of LIU	6	Nos
41	Laying of PVC Conduit	1590	mtr
42	Fiber and Cable Testing	1	Ls

Annexure-2

TECHNICAL SPECIFICATIONS

1) PTZ Camera:

PTZ Camera (4MP or Higher)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Features	Weather proof PTZ camera	
2	Compliance	Onvif profile G,M,S,T	
3	Camera resolution	2688x1512 or better	
4	Image Sensor	1/2.9" progressive scan RGB CMOS	
5	Lens Focal Length	Varifocal, 4.5-135 mm, P-Iris contro or better	
6	Field of View (FoV)	Horizontal field of view: 57.1° - 2.1°, Vertical field of view: 34.4° - 1.2°	
7	Video compression	H.264/H.265/MJPEG,	
8	Minimum illumination	Color: 0.1 lux at 30 IRE F1.6. B/W: 0.01 lux at 30 IRE F1.6 0 lux with IR illumination on Color: 0.11 lux at 50 IRE F1.6. B/W: 0.03 lux at 50 IRE F1.6 0 lux with IR illumination on	
9	IR Specification	Long Life 850 nm LEDs, IR, Range: 200 m (656 ft) or Better	
10	Application Programming Interface	Onvif profile G,M,S,T	
11	Frame rate	Up to 60/50 fps for 60/50 Hz in all resolutions	
12	Number of video streams	3 or more	
13	Ingress protection	IP66-, NEMA 4X	
14	Lens type	Motorized	
15	Optic Zoom	30X or better	
16	Memory	1024 MB RAM, 512 MB Flash	
17	Memory card slot	1 TB or More	
18	AI Object Classification	Object classes: humans, vehicles Features: line crossing, object in area, crossline counting	
19	Tilt rotation	Pan: 360° endless, 0.1° - 350° /s Tilt: 0-90°, 0.1° - 350° /s Zoom: 30x optical, 12x digital, Total 360x zoom 256 preset positions, nadir flip, limited guard tour, control queue, on-screen directional indicator, set new pan 0°, focus recall, spot focus	
20	Power supply	Power Over Ethernet (PoE) and 24 V AC or DC	
21	Network connectivity	RJ45 10BASE-T/100BASE-TX PoE.	
22	Shutter speed	1/50000 s to 1/5 s with 50 Hz	
23	Streaming	RTSP, RTCP, RTP/IPV4	
24	Protocol	TCP/IP, UDP, DHCP, NTP, RTSP, PPPoE, SMTP, FTP, SNMP, UPnP, Unicast, Multicast, ICMP, HTTP, HTTPS, DNS, DDNS, RTP, RTCP, IGMP, 802.1X, QoS, IPv4, IPv6, Bonjour, ARP, IEEE 802.1X (EAP-TLS), IEEE 802.1AR, HTTPS/HSTS, TLS v1.2/v1.3a, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering	
25	Authentication and Security	TLS, HTTPS (HTTP over TLS), WS-Security, Certificate Management, Multi-level password protection, IP address filtering, HTTPS encryption, Enhanced Security (One-Click Security Hardening), User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE 802.1x (PEAP, EAP-TLS, EAPoL). IP address filtering, HTTPSa encryption, IEEE 802.1x (EAP-TLS) network access control, user access log, centralized certificate management. Software: Signed firmware, brute force delay protection, digest	

		authentication, password protection, SD card encryption Hardware: Hardware Vault on edge, device ID, secure keystore, signed video, secure boot. System on Chipset (SoC) from same Oem.	
26	Power	Typical 13 W (no IR), max 26 W. IEEE 802.3at Type 2 Class 4 Camera consumption: typical 13 W (no IR), Max 29 W. IEEE 802.3bt Type 3 Class 6.	
27	NDA Compliance	Required	
28	Safety	IEC/EN/UL 62368-1 ed. 3, CAN/CSA C22.2 No. 62368-1 ed. 3, IEC 62471 risk group 2	
29	Casing	IP66, NEMA 4x and IK10 rated. Housing: Aluminium alloy	
30	Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), ISO 21207 (Method B)	
31	Operating conditions	-30 °C to 50 °C . Humidity 10-100% RH (condensing)	
32	Integration	Support for Session Initiation Protocol (SIP)	
33	Approvals	The Camera to be provided by the bidder- all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings. Products to be with NDA & BIS.	
34	Certification	CE, FCC, UL & BIS	
35	MAF	To be attached from OEM	
36	Warranty	5 Years	

2) SS Camera

SS Camera (4 MP or better)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Features	Marine-grade, stainless steel casing, with robust and DNV-certified camera, should withstand the corrosive effects of seawater and cleaning chemicals.	
2	Compliance	ONVIF Profile G,S,M,T	
3	Camera resolution	2688x1512 or better	
4	Image Sensor	1/1.8" progressive scan RGB CMOS	
5	Lens Focal Length	Varifocal, 4.5-8.5 mm.	
6	Field of View (FoV)	Horizontal field of view: 100°-53° Vertical field of view: 54°-30°	
7	Video compression	H.265 / H.264 / MJPEG	
8	Minimum illumination	Color: 0.14 lux at 50 IRE, F1.5 B/W: 0 lux at 50 IRE, F1.5	
9	IR Specification	Long Life 850 nm LEDs, IR, Range:40 m (130 ft) or Better	
10	Application Programming Interface	ONVIF Profile G,S,M,T	
11	Frame rate	25/30 fps (50/60 Hz) or better	
12	Number of video streams	3 or more	
13	Ingress protection	IP6K9K, IP68 and NEMA 4X-rated	
14	Angle Adjustment	Pan ±190°, tilt -10 to +80°, rotation ±190°	
15	Memory	1024 MB RAM and 512 MB Flash	
16	Memory card slot	1 TB	

17	Image Setting	Time stamp, text overlay, flip & mirror, ROI, Saturation, Brightness, Chroma, Contrast, Wide Dynamic, Sharpen, white balance, video rotation, Scheduled profile settings, AGC etc	
18	Power supply	Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3 Typical 5.5 W , max 11.5 W	
19	Network connectivity	RJ45 10BASE-T/100BASE-TX PoE	
20	Shutter speed	1/8500 s to 1/5 s	
21	Streaming	RTSP, RTCP, RTP/IPV4	
22	Protocol	TCP/IP, UDP, DHCP, NTP, RTSP, PPPoE, SMTP, FTP, SNMP, UPnP, Unicast, Multicast, ICMP, HTTP, HTTPS, DNS, DDNS, RTP, RTCP, IGMP, 802.1X, QoS, IPv4, IPv6, Bonjour, ARP, Network Time Security , X.509 Certificate PKI, host-based firewall	
23	Authentication and Security	HTTPS, IP Filter , IEEE 802.1X, Blacklist & whitelist , IEEE 802.1x (EAP-TLS) network access control, user access log, centralized certificate management. Software: Signed OS, brute force delay protection, digest authentication, password protection, SD card encryption Hardware:: Hardware Vault on edge, Own System on chip, device ID, secure keystore, signed video, secure boot, encrypted filesystem, Network security IEEE 802.1X (EAP-TLS), IEEE 802.1AR, HTTPS. System on Chipset (SoC) from same Oem.	
24	NDA Compliance	Required	
25	Safety	IEC/EN/UL 62368-1 ed. 3, CAN/CSA C22.2 No. 62368-1 ed. 3, IEC 62471	
26	Casing	IP6K9K-, IP66-, IP67- , IP68- and NEMA 4X-rated	
27	Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66, IEC/EN 60529 IP67, IEC/EN 60529 IP68	
28	Operating conditions	-40 °C to 50 °C. Humidity 10-100% RH (condensing).	
29	Integration	Support for Session Initiation Protocol (SIP)	
30	Approvals	The Camera to be provided by the bidder- all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings. Products to be with NDAA & BIS.	
31	Certification	CE, FCC, UL & BIS	
32	MAF	To be attached from OEM	
33	Warranty	5 Years	

3) Indoor Fixed bullet Camera

Indoor Fixed Bullet Camera (4MP or better)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Features	Indoor Fixed Bullet	
2	Compliance	ONVIF Profile G,M,S,T	
3	Camera resolution	2304x1728 to 320x240 (4:3). 2668x1512 to 640x360 (16:9)	
4	Image Sensor	1/2.7" progressive scan RGB CMOS	
5	Lens Focal Length	2.4 mm	
6	Field of View (FoV)	Horizontal field of view: 130° & Vertical field of view: 71° or better	
7	Video compression	H.265, H.264, MJPEG	

8	Minimum illumination	Color: 0.18 lux at 50 IRE, F2.1. B/W: 0.04 lux at 50 IRE, F2.1 0 lux with IR illumination on	
9	IR Specification	Long Life 855 nm LEDs, IR, Range:20 m (65.6 ft) or Better	
10	Application Programming Interface	ONVIF Profile G,M,S,T	
11	Frame rate	25/30 fps (50/60 Hz) or better	
12	Number of video streams	3 or more	
13	Ingress protection	IP67, NEMA 4X or better	
14	Memory	Memory 1024 MB RAM, 512 MB Flash	
15	Memory card slot	1TB or better	
16	Image Setting	Compression, color, brightness, sharpness, contrast, white balance, exposure control, motion-adaptive exposure, text and image overlay, privacy masks, mirroring of images Rotation: 0°, 90°, 180°, 270°, including Corridor Format	
17	Power supply	Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3. Typical 5 W, max 13 W	
18	Network connectivity	RJ45 10BASE-T/100BASE-TX PoE	
19	Shutter speed	1/38500 s to 1/5 s	
20	Streaming	RTSP, RTCP, RTP/IPV4	
21	Protocol	IPv4, IPv6 USGv6, HTTP, HTTPSb, HTTP/2, TLSb, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, DHCPv4/v6, SOCKS, SSH, LLDP, MQTT v3.1.1	
22	Authentication and Security	HTTPS / IP Filter / IEEE 802.1X / Blacklist & whitelist / account security / telnet access control / serial password, digest authentication, HTTPS encryption, IEEE 802.1x (EAP-TLS)b, network access control, centralized certificate management, brute force delay protection, signed firmware, secure boot, signed video, hardware Vault on edge, device ID, secure keystore.	
23	NDA Compliance	Required	
24	Safety	IEC/EN/UL 62368-1, CAN/CSA C22.2 No. 62368-1, IEC/EN/UL 60950-22, CAN/CSA-C22.2 No. 60950-22, IEC 62471, IS 13252	
25	Casing	IP66-/IP67-, NEMA 4X- and IK08-rated Aluminium and plastic casing	
26	Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK08, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)	
27	Operating conditions	-30 °C to 50 °C. Humidity 10-100% RH	
28	Integration	Support for Session Initiation Protocol (SIP)	
29	Approvals	The Camera to be provided by the bidder- all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings. Products to be with NDA & BIS.	
30	Certification	CE, FCC, UL & BIS	
31	MAF	To be attached from OEM	
32	Warranty	5 Years	

4) Variable Lens Bullet Camera

Variable lens Bullet camera (4MP or better)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Features	Variable Lens Bullet Camera	
2	Compliance	ONVIF Profile G,S,M &T	
3	Camera resolution	2592x1944 to 160x90 or better	
4	Image Sensor	1/2.7" progressive scan RGB CMOS	
5	Lens Focal Length	Varifocal of 3-8 mm	
6	Field of View (FoV)	Horizontal field of view 106°-38° Vertical field of view 78°-29° or better	
7	Video compression	H.265, H.264, MJPEG	
8	Minimum illumination	Color: 0.13 lux, at 50 IRE F1.3 B/W: 0.03 lux, at 50 IRE F1.3 0 lux with IR illumination on	
9	IR Specification	long-life 850 nm IR LEDs Range of 40 m (131 ft) or better	
10	Application Programming Interface	ONVIF Profile G,S,M &T	
11	Frame rate	25/30 fps (50/60 Hz) or better	
12	Number of video streams	3 or more	
13	Ingress protection	IP67, NEMA 4X	
14	Memory	1 GB RAM, 1 GB Flash or better	
15	Memory card slot	1TB or better	
16	Image Setting	Saturation, contrast, brightness, sharpness, Forensic WDR, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, motion-adaptive exposure, defogging, barrel distortion correction, compression, orientation: auto, 0°, 90°, 180°, 270° including Corridor Format, mirroring of images, dynamic text and image overlay, polygon privacy masks	
17	Power supply	PoE of IEEE 802.3af/802.3at Type 1 Class 3. Typical: 6 W, max 13 W. 10-28 V DC	
18	Network connectivity	RJ45 10BASE-T/100BASE-TX/1000BASE-T	
19	Shutter speed	1/50000 s to 1/5 s	
20	Streaming	RTSP, RTCP, RTP/IPV4	
21	Protocol	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPSa, HTTP/2, TLSa, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTCP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, DHCPv4/v6, ARP, SOCKS, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address	
22	Authentication and Security	Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, digest authentication, user access log, centralized certificate management, System on Chipset (SoC) from same OeM. brute force delay protection, signed firmware, secure boot, signed video, hardware Vault on edge, Device ID, secure keystore.	
23	NDAA Compliance	Required	
24	Safety	IEC/EN 62368-1, IEC/EN 62471, IS 13252	
25	Casing	IP66/IP67-, NEMA 4X-, and IK10-rated casing Polycarbonate blend and aluminium	
26	Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)	
27	Operating conditions	-40 °C to 60 °C. Humidity 10-100% RH (condensing)	
28	Integration	Support for Session Initiation Protocol (SIP)	

29	Approvals	The Camera to be provided by the bidder- all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings. Products to be with NDAA & BIS.	
30	Certification	CE, FCC, UL & BIS	
31	MAF	To be attached from OEM	
32	Warranty	5 Years	

5) Indoor Fixed Dome Camera

Indoor Fixed Dome Camera (4MP or better)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Features	Indoor Fixed Camera	
2	Compliance	ONVIF Profile G,S,M,T	
3	Camera resolution	2688x1512 to 320x240 or better	
4	Image Sensor	1/2.7" progressive scan RGB CMOS	
5	Lens Focal Length	2.4 mm	
6	Field of View (FoV)	Horizontal field of view: 130° Vertical field of view: 72° or better	
7	Video compression	H.265, H.264, MJPEG	
8	Minimum illumination	Color: 0.19 lux at 50 IRE, F2.1 B/W: 0.04 lux at 50 IRE, F2.1 0 lux with IR illumination on	
9	IR Specification	Long-life 850 nm IR LED Range 20 m (65 ft)	
10	Application Programming Interface	ONVIF Profile G,S,M,T	
11	Frame rate	25/30 fps (50/60 Hz) or better	
12	Number of video streams	3 or more	
13	Ingress protection	IP66- and NEMA 4X-rated or better	
14	Memory	1GB RAM and 512MB Flash	
15	Memory card slot	1TB or better	
16	Image Setting		
17	Power supply	IEEE 802.3af/802.3at Type 1 Class 3 Typical: 4.75 W, Max.: 8.75 W	
18	Network connectivity	RJ45 10BASE-T/100BASE-TX PoE	
19	Shutter speed	1/33500 s to 1/5 s	
20	Streaming	RTSP, RTCP, RTP/IPV4	
21	Protocol	IPv4, Ipv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UpnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, SIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address, SIP	
22	Authentication and Security	Password protection, IP address filtering, HTTPS encryption, IEEE 802.1x (EAP-TLS), network access control, Digest authentication, User access log, Centralized Certificate. System on Chipset (SoC) from same Oem. Management, brute force delay protection, signed firmware, secure boot	
23	NDAA Compliance	Required	
24	Safety	IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IEC/EN 62471, IS 13252	

25	Casing	IP66/IP67- and NEMA 4X-rated, IK08 impact-resistant casing Encapsulated electronics	
26	Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78, IEC 60068-2-14, IEC 60068-2-6, IEC 60068-2-27 IEC/EN 62262 IK08, IEC/EN 60529 IP66/IP67, NEMA 250 Type 4X	
27	Operating conditions	-30 °C to 50 °C. Humidity 10-100% RH (condensing)	
28	Integration	Support for Session Initiation Protocol (SIP)	
29	Approvals	The Camera to be provided by the bidder- all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings. Products to be with NDAA & BIS.	
30	Certification	CE, FCC, UL & BIS	
31	MAF	To be attached from OEM	
32	Warranty	5 Years	

6) NVR

NVR & Video Management Software with 180 days backup			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	CPU	Intel® Xeon® Silver	
2	System Memory	2x 8 GB	
3	Main Storage	Min 40 TB overall storage including Raid 5 with profile of 180 days x 25FPS x Continuous recording	
4	Raid	0, 1, 5, 6, 10	
5	Security	Support for encrypted operating system drive and recording drive FIPS 140-2 level 2 certified Trusted Platform Module (TPM 2.0)	
6	USB port	3	
7	Form Factor	Rackmount	
8	LED Indicators	Required	
9	Operating Temperature	10 °C to 35 °C (50 °F to 95 °F). Humidity 20-80% RH (non-condensing)	
10	Storage Temperature	-40 °C to 65 °C	
11	Power Supply Unit	2 x 800 W hot-plug redundant power supplies.	
12	Fan	required	
13	Accessories	2U Rail Kit, Expansion Card (Add M.2 SSD Slots), cable, power code	
14	Operating system	Microsoft® Windows® 10 IoT Enterprise LTSC 2021 Built-in operating system recovery: yes Operating system drive: 240 GB SSD	
15	Required	Cameras, storage, Video decoder & VMS from same OEM	
16	Warranty	5 Years	
17	MAF	To be attached from OEM	

Additional Specification for the VMS in NVR

24 Channel Licensed Software for camera control station (Video Management Software)			
Make:			
SL No	Parameter	Required Specification	Compliance (Yes/No)
1	Maximum License of IP cameras could be connected in the system scalability	Unlimited	
2	Version	Enterprise	
3	Required License	24 channel or better	
5	Multi-level Administration rights	Required	
7	Displaying of Alarm Events	Required	
8	Floating License	Required	
9	Video Stream	MJPEG, MPEG-4, H.264, H.265,	
10	Network Video Communication Supported	ONVIF, Pand RTSP	
11	Operating Software	Windows	

7) Video Decoder

Video Decoder			
Make:			
SI No	Specification	Description	Compliance (Y/N)
1	Memory	2 GB RAM, 1 GB Flash or better	
2	Video streaming	Multiple	
3	Video output	UHD, FHD 1080p, HD 720p, SD	
4	Audio output	Line output	
5	Security	Edge & Network Security required	
6	Mounting	Compatible with VESA	
7	Power	Power over Ethernet	
8	Connectors	Network: RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE Audio: 3.5 mm line out, stereo Power: DC input, terminal block USB: 2x USB type A SD-card slot (Highspeed/UHS-1) HDMI type A, CEC supported	
9	Warranty	5 Years or More	

8) POE Switch

POE Switch			
Make:			
SI No	Specification	Description	Compliance (Y/N)
1	Copper ports	24 x 10/100/1000 Base-T RJ45 with PoE	
2	SFP/mini-GBIC Slots	2 x 100/1000BASE-X, SFP interfaces	
3	POE Protocols	IEEE 802.3af POE(15.4W) and IEEE 802.3at POE+ (30W) on all port	
4	Console	1 x RJ 45 Port	
5	Supported Protocol	STP, RSTP, MSTP, and BPDU	
6	Link Aggregation	LACP, Static	
7	Security	Authentication, Access control list, MAC Security, Port Security, DHCP, ARP	
8	Management	IPv4 and IPv6, Web, Console/Telnet, SNMP V1/V2, TFTP, and HTTPS	

9	Power Requirements	AC:100V-240V,50Hz±10%	
10	Warranty	3 Year or More	

9) SFP Modules

1G SFP Module			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type of Transceiver	SFP 1G Support	
2	SFP Mode	Multimode	
3	Interface	Duplex	
4	Warranty	3 Years or More	

10) 55 Inch Display

55 Inch Display			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Screen Size	55 Inch or More	
2	Panel Technology	IPS	
3	Back Light Type	Direct LED	
4	Aspect Ratio	16:9	
5	Native Resolution	3840 x 2160 (UHD)	
6	Refresh Rate	60 Hz	
7	Brightness	500 nit (Min)	
8	Contrast Ratio	1000:1 (Min)	
9	Viewing Angle (H x V)	178 x 178	
10	Response Time	8 ms or better	
11	Operation Hours	24/7	
12	Orientation	Portrait & Landscape	
13	HDMI Input	2 Nos or More	
14	Speaker	Built in	
15	Power Supply	230 VAC	
16	Mounting	Wall	
17	Warranty	3 Years or More	

11) 9U Wall Mount Rack

9U Wall Mount Rack			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type of Rack	Wall Mount	
2	Usable height	19 " Wall mounting steel network rack of 600mm x 600mm x 9U size with provision for cable entry from top and bottom,	
3	Usable width	19 inches	
4	Overall Depth	600 mm or more	
5	Front door	toughened glass door,	
6	No. of Fan for Heat dissipation	2 Nos of ventilating fans or more,	
7	PDU	4 x 6A universal Socket with fusez	

12) Patch Panel

Patch Panel			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	No of Ports	24 Port Cat-6 Modular type Patch Panel, Fully-Loaded with RJ45 Keystone Jacks	
2	Type	Fully Loaded	
3	Size	Fastening (inch) : 19", Height Units (U) : 1	
4	Capacity (ports) :	24 snap-in connection modules shielded / unshielded or FO adapters Holder for connector / module : Snap-In Frame	
5	Labelling	Nonsticky/ Removable with labelling strips	
6	Assembly	Metal patch panel, empty, integrated cable tie shelf	
7	Material	Sub-rack made of sheet steel 1.5 mm, powder coated, screen made of plastic (ABS), halogen-free and heavy-metal free.	
8	Sub Item	RJ 45 I/O Modules / Keystone Jacks	
9	Standardization	ISO/IEC 11801, ANSI/TIA/EIA-568- C.2	
10	Connector category	Cat6 RJ45 Connector module, unshielded, with dust cover, snap-in frame, cable tie and installation instructions	
11	Connector type	Gold-plated bronze contacts for >750 mating cycles	

13) CAT6 I/O with Back Box

CAT6 I/O with Back Box			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type & No of Ports	Cat.6 I/O 1xRJ45,	
2	Connector Category	Connection module Cat.6, unshielded, with dust cover and installation instructions,	
3	Connector type	Gold-plated bronze contacts for >750 mating cycles,	
4	Material	Plastic: PC, UL 94 V-0; Halogen-free	
5	Mounting	Surface-Mounting,	
6	Make	UV Resistant Polycarbonate + ABS,	
7	Labelling	Include label strips and label covers,	
8	Surface Mount Box (SMB)	suitable for Face Plate	

14) 0.5 Mtr CAT 6 Patch Cord

0.5 Mtr CAT 6 Patch Cord			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Connector Category	Cat. 6	
2	Plug Housing:	Polycarbonate or equivalent	
3	Cable Jacket material	LSZH	
4	Cable Jacket material	LSZH	
5	Wire diameter	AWG 24	
6	Compliance	RoHS Compliant	
7	Length	0.5 Mtr	

15) 1 Mtr CAT 6 Patch Cord

1 Mtr CAT 6 Patch Cord			
Sl No	Specification	Description	Compliance (Y/N)
1	Connector Category	Cat. 6	
2	Plug Housing:	Polycarbonate or equivalent	
3	Cable Jacket material	LSZH	
4	Cable Jacket material	LSZH	
5	Wire diameter	AWG 24	
6	Compliance	RoHS Compliant	
7	Length	1 Mtr	

16) 27U Floor mount Rack

27U Floor mount Rack			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type of Rack	Floor Mount	
2	Usable height	27U	
3	Usable width	19 inches	
4	Overall Width	800 mm or more	
5	Overall Depth	800 mm or more	
6	Front door	toughened glass door,	
7	Side Panel	Removable Side Panel	
8	Cable Entry	cable entry from top and bottom,	
9	No. of Fan for Heat dissipation	2 Nos of ventilating fans or more,	
10	PDU	2 Nos of 10 x 6A universal Socket	

17) 3KVA UPS

3KVA UPS			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Capacity	3KVA or better	
2	Mounting type	Rack Mountable	
3	Input Voltage	175 - 280V at 100% linear load. 100 - 175V at 50% to 100 % linear load.	
4	Power Factor	> 0.9 or better	
5	Technology	True Online DSP Based Double conversion Ups	
6	Output Voltage	200V/208V/220V/230V/240V or better	
7	Power Factor	>0.9	

18) Battery UPS

Battery For UPS			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type	SMF, 12 V	
2	Backup	1 Hr on full load	
3	Accessories	Connecting Cable , Battery rack etc to be provided.	

19) Multimode Fiber

Multimode Fiber			
Make:			
SI No	Specification	Description	Compliance (Y/N)
1	Type	Multimode OM4, Loose Tube gel filled	
2	Number of fibres	6 core,	
3	Jacket material	Flame-retardant, low-smoke zero halogen (LSZH)	
4	Cable Attenuation	As per IEC 60793-1-40	
5	Bandwidth	As per IEC 60793-1-41	
6	Strength member	Glass yarns	
7	Tensile strength	1500N	
8	Compressive strength	2000N/10 cm	
9	Bending Radius	10D(Installation), 20D(Operational)	
10	Temperature	"-10°C to 40°C(Installation),	

20) CAT6 Cable

CAT6 Cable			
Make:			
SI No	Specification	Description	Compliance (Y/N)
1	Conductor	Solid Bare Copper	
2	Nominal Conductor Diameter	23AWG (0.55+/-0.015)	
3	Insulation	HDPE	
4	Pair Construction	Four Pairs	
5	Color Code: Pair #1 Pair #2 Pair #3 Pair #4	Blue-White with Blue Orange-White with Orange Green-White with Green Brown-White with Brown	
6	Outer Sheath	LSZH	
7	Colour of Sheath	Grey	
8	Sequential Marking	At Every Meter	
9	Filler	HDPE	
10	Rip cord	Yes	
11	Packing Length	305M in Reel in a Box	

21) 12 Port LIU

12 Port LIU			
Make:			
SI No	Specification	Description	Compliance (Y/N)
1	No of Ports	12 Port LIU Sliding Type ,	
2	Size	1U Rack Mount Front Modules Lockable with Key,	
3	Pigtail	LSZH Pigtails ,	
4	Construction Type	16 Gauge CRS n Rugged steel construction., LC Duplex, Multimode MM, should include with LIU Box, Adapter Panel and all Adapters as per requirement, Should have Splice Tray & Cable Spool provision inside LIU., LIU Panel cover should be slide out for easy maintenance. Removable Rear & Front cover for better access to interior of LIU.	
5	Mounting Kit	Mounting kit shall consist of cable ties; mounting screws, earthing and spiral wrap tube.	
6	Fiber Storing capacity	Should be capable of storing up to 3 meters of 900 µm.tight buffered fiber per adapter.	

7	Fiber Protection	Should have Rubber fiber slotted bracket built-in, metal splice shelf to protect the fibers.	
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22) LC-LC-MM Duplex patch cord

LC-LC-MM Duplex patch cord			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Connector type	LC-LC Fiber patch code	
2	Type	OFC, Pigtail, LC, MMF	
3	Cable jacket material	LSZH	
4	Conductor type	tight buffer	
5	Length (meter)	1 m,	
6	Fiber Patch Cords Bend Insensitivity	in Compliance with G657A2 Standards	

23) 3 Core Cable for UPS supply

3 Core Cable for UPS supply			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	No of Core	3 Core	
2	Conductor Material	Copper	
3	Size	2.5 Sqmm	
4	Insulation	Unarmoured, PVC	

24) Power Socket

Power Socket			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Type	3 Pin 6 Amps Indian sockets	
2	Materials:	The sockets should be made from high-quality durable plastic or better for the housing, with brass or copper contacts for electrical conduction.	
3	Mounting Type	With Surface mount box	
4	Marking and Identification	Each socket should be marked with manufacturer's name and ISI marking	

25) PVC Conduit

PVC Conduit			
Make:			
Sl No	Specification	Description	Compliance (Y/N)
1	Material	PVC conduits must be made of high-quality, polyvinyl chloride (PVC) material.	
2	Size	25mm	
3	Class	Medium	
4	Marking and Identification	Each conduit should be marked with the size, ISI Marking, manufacturer's name,	
5	RoHS Compliance:	Yes	
6	Accessories	Should be provided with all necessary accessories for the smooth installation	

A. Warranty, Post Warranty & Licensing

1. Warranty: Comprehensive warranty shall be provided by OEM.

5 year warranty with prompt replacement and delivery within next Seven working days shall be provided for all CCTV systems.

3 year Warranty Should be provided for the Active components.

25-year product and performance warranty from OEM to be provided for structured cabling.

2 year warranty to be provided for all other components.

2. Licensing: All active devices shall be supplied with valid licenses and each product shall be enabled for all the services /functionalities as specified in the tender, from day one onwards.

3. Licensed software for CCTV surveillance shall be provided in portable devices.

4. The services/functionalities shall be available not only during the warranty period alone, but till the end of life of the product irrespective of the AMC.

5. License expiry shall not affect the installed functionalities of any of the active devices.

6. Indian std. power tops only shall be used for all power connectivity.

B. Passive components and Labour Components

1. The list of active and passive devices is given in Annexure-1. Detailed specification of all active and passive devices is provided in Annexure-2.

2. The quantities mentioned for passive components are tentative only. During the actual work, in case of additional requirements, supplier shall supply the passive components required and complete the installation & commissioning activities. The payment for additional passive components, if any, will be paid as per the actual based on unit rate specified.

3. All labor activity related with the installation & supply of the facility surveillance shall be done by the supplier.

4. In case of any damage occurring for the existing system during the installation, the supplier will be responsible for re-establishing the facility and shall borne the incurring expenditure towards the damages.

5. Cable route markers shall be positioned along the outdoor fiber route for proper identification of the cable route.

6. All cable entry points through walls and ceilings shall be sealed properly to prevent pest entry with industry standard products.

7. The components provided in the RFP is tentative. Supplier shall propose additional items required, if any, for completing the installation and commissioning of CCTV system during the pre-bid meeting with the department and the same shall be included in the quotation. No additional charges will be paid for extra items used during commissioning other than mentioned in the quotation. However, payment for passive components shall be made based on actual quantities consumed during the installation.

C.Training

Training shall be provided to departmental manpower for configuration and management of the active devices, complete network and VMS software. Installation and operation manual of the facility shall be prepared and submitted at the time of commissioning of the facility.

D.Pre Bid Visit

A pre-bid meeting will be conducted with the interested vendors within 10 days from the bid publish date. Pre-bid site visit shall be arranged by LPSC. Interested supplier can visit the site of implementation before submission of their bids. Date and time of visit shall be finalized in consultation with department and supplier. PLEASE NOTE THAT ONLY THOSE BIDDERS PARTICIPATING IN THE PRE-BID MEETING ARE ELIGIBLE TO SUBMIT THEIR OFFERS. Those vendors who are interested, are requested to intimate their willingness to attend the Prebid meeting by mail to email id: pso_1@lpsec.gov.in.

F. BID QUALIFICATION CRITERIA (BQC)

The supplier must possess the adequate experience, expertise and capabilities in installation and commissioning of CCTV systems. In connection with this, the supplier should strictly adhere to the following Bid Qualification Criteria. Relevant documents like Contract Order, Contract Completion Certificate, Maintenance Certificate, Experience Certificate, Company Registration Certificate, Qualification Certificate, Confirmatory/Undertakings notes related to each of the Bid Qualification Criteria mentioned below shall be submitted as documentary proof along with the Bid of this technical bid.

1. Supplier should have experience in supply and installations of CCTV systems for any Government/ PSUs/Private Sector institutions during the past 7 Years.
2. Supplier must be a registered company under Indian Company Act-1956
3. The company must be registered with appropriate authorities for all applicable statutory duties/takes
4. The Supplier shall provide the details of the company including technical strength, skill set, manpower details, organization structure and shall have at least one certified professional with minimum Two Years of experience in CCTV installation and maintenance.
5. Supplier shall not be blacklisted by any Govt./PSU Institutions, for their non-performance/inability to fulfil the contract terms and conditions of any of the previous orders for similar works for the past three years.
6. The Supplier should have a local office at Kerala, to ensure timely support. Supplier shall fill the Checklist provided for Bid Qualification Criteria in Annexure C with relevant documentary proofs, without which their offer won't be considered for bid evaluation.
7. The party shall be ready for a demonstration of the sample product and demonstrate the features at LPSC at the time of technical evaluation, within 2 week of request from LPSC. A confirmation for this demonstration has to be included in the technical offer.

G. OEM Criteria for CCTV

1. The Camera OEM shall be in IP CCTV manufacturing for at least 10 years. The documentary proof shall be submitted.
2. The OEM should have their Own RMA Center in anywhere India for the last 7 years.
3. The Camera to be provided by the bidder all the components / parts / assembly / software used in the offered hardware and software, should not be complying to GB28181, GB/T 28181-2011; GB/T28181-2011; GBT 28181-2011; GBT28181-2011 standards. There should be no option to activate or deactivate these standards in the camera web page/Settings
4. Cameras, Storage, VMS, from same OEM for tight integration.
5. Warranty is 5 Years.
6. MAF to be submitted
7. The MAC ID's of the CCTV cameras to be supplied should be registered in the name of the OEM of the CCTV Cameras. An undertaking from the CCTV OEM on this shall be enclosed along with technical bid
8. The OEM for the CCTV camera and VMS should be a member of the ONVIF (Open Network Video Interface Forum) for the last 3 years. A certificate from ONVIF indicating membership details and membership start date shall be enclosed along with the Technical bid. Offered cameras and/or VMS should not be blacklisted/ banned by ONVIF ever
9. All the network cameras supplied must be certified for: FCC, CE and UL (Certificates to be enclosed)
10. The Cameras shall be PVC free for environmental sustainability and documentary proof shall be submitted.
11. The Cameras shall support tested and certified 3rd party analytics- By both Camera OEM and Analytics OEM
12. Camera OEM to the best of their Knowledge and belief should not have been blacklisted/any criminal case registered by any State / Central Government Department or Central /State PSUs or Globally during the last 5 years as on bid submission date. Bidder to submit OEM undertaking with detail.
13. MTBF of minimum 100000 hours for cameras

H. TECHNICAL AND PRICE BID

The supplier should submit their bid with following details.

1. Detailed Technical Proposal with Implementation Plan for Supply, Installation & Commissioning and maintenance of proposed system shall be submitted. List of deliverables shall be submitted along with detailed specifications including Make & Model along with time lines for delivery & execution of the contract. All the drawings & layouts for the proposed setup shall be enclosed.

2. Supplier shall provide the details asked in the Annexure/Compliance Statements with supporting documents which are required against Bid- Qualification Criteria & Techno-Commercial specifications specified in this tender.
3. OEM/Manufacturer’s authorization and Back-to-back support letters as per the format attached in the **Annexure A & Annexure B**
4. For installing the system, the supplier is responsible for supplying all items with required quantities which are mandatory for establishing CCTV system. Supplier has to specify all of them even if they are not mentioned explicitly in the tender with required quantities. Data Sheets/ catalogues of all the offered products shall be submitted along with Bid.
5. Bill of Materials (Items/Labor Components/Services) with Makes, Model No in the case of items & Quantity requirements should be given as per **Annexure 1**.
6. All documents submitted shall be duly signed by the authorized official of the supplier. Suppliers are requested to ensure all relevant details for the technical evaluation of their bid to minimize clarification correspondence.
7. The vendor shall provide a detailed technical compliance statement for offered products and specifications. The vendor should list a detailed bill of materials for all the items and sub-items offered along with part numbers.
8. Near obsolete and outdated technology-based products should not be quoted/offered as a part of the solution.
9. Supplied items should work on 220V, 50 Hz, AC power supply. All power sockets/fixtures at the installation site are Indian-type.
10. All Switches & Modules shall be of the same make.
11. All cameras & NVR shall be of the same make.

I. OTHER TERMS AND CONDITIONS

The supplier shall comply to the below terms and conditions.

Schedule For Completion

- Detailed schedule of work shall be submitted along with major milestones to the LPSC. The work should be completed in all respects and handed over to the Department within 6 months from the date of acceptance of the purchase order.

Liquidated Damages (LD)

- Liquidated Damages (LD) will be applicable in case of delay in delivery or completion of the work.

Installation & Commissioning

- The scope of the installation covers the complete installation and commissioning of all the hardware and software items offered as part of this tender at LPSC, Valiamala, Trivandrum.

- Total supply, installation, integration and successful testing of all the quoted items are the sole responsibility of the vendor.
- Onsite supply, installation and integration of all items/ subsystems/OS/software to be performed by experienced and trained technical persons.
- During commissioning, if it is found that some additional hardware accessories or software items with licenses are required to complete the configuration which were not included in the vendor's original list of deliverables then vendor is required to supply such items to ensure the completeness of the configuration at no extra cost to LPSC.
- The technical support from vendor includes onsite visits for troubleshooting, reconfigurations, performance optimizations, guidance on usage and software aspects, technical help in planning for augmentations, etc.
- The vendor should clearly provide escalation matrix for resolving problems. If unresolved issues are pending, warranty duration would be extended till satisfactory resolution of issues without any extra cost to LPSC.
- All necessary cables, connectors, adapters, accessories etc., should be supplied by the vendor as required for the successful integration of the total solution.

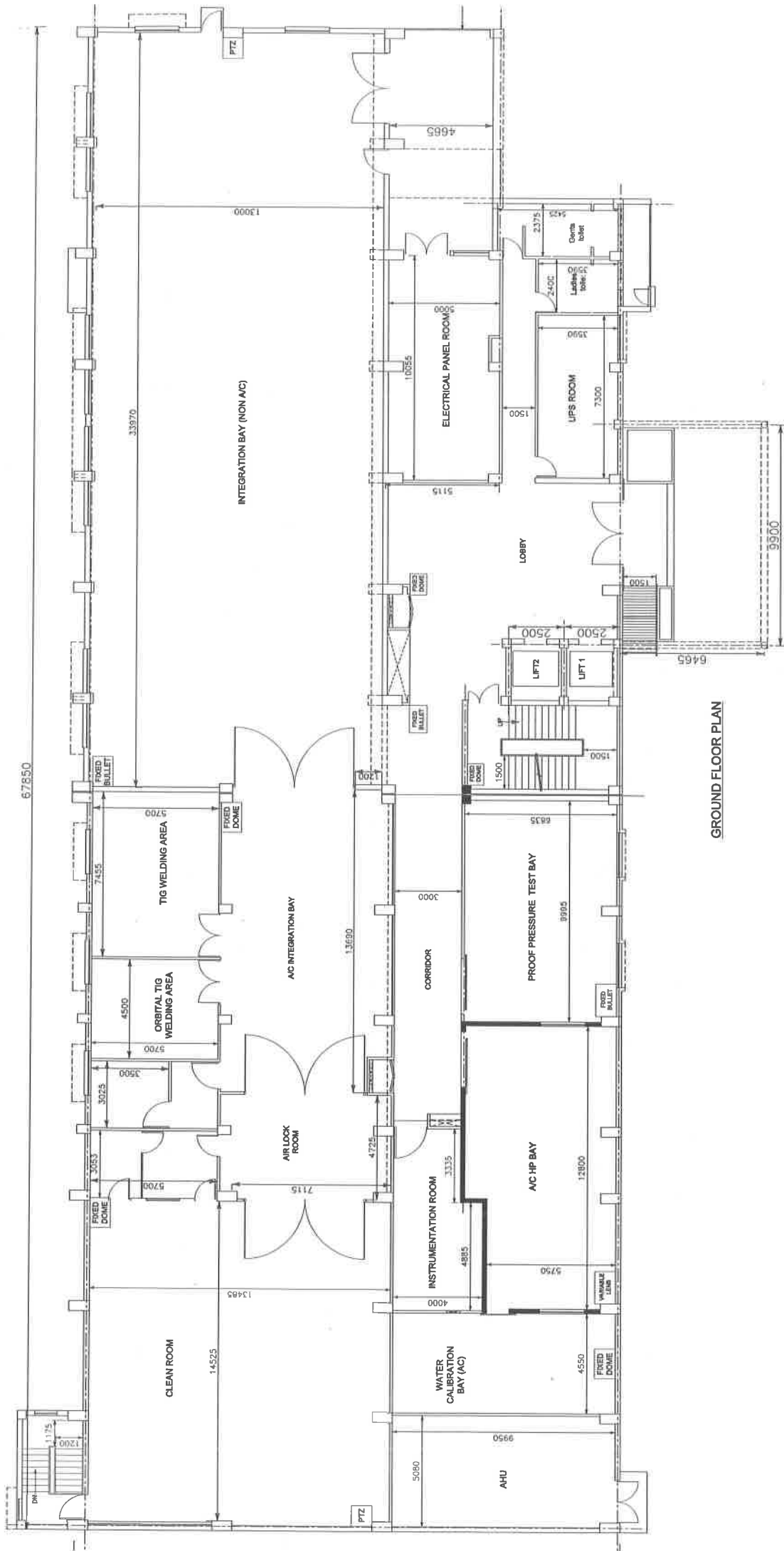
Payment

- Payment will be made 60%-30% -10% basis. Payment of 60% of the total cost will be made after the delivery of the items. 30% of the total cost will be made after the installation of the system and the remaining 10% will be made after the commissioning and training of the System.

Acceptance Criteria

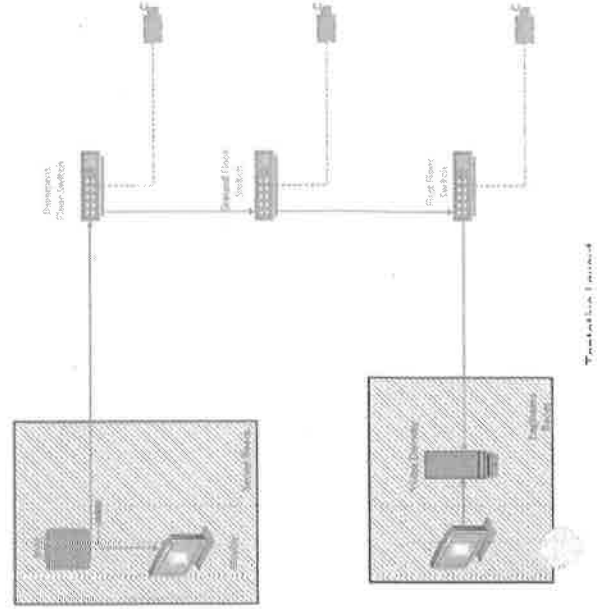
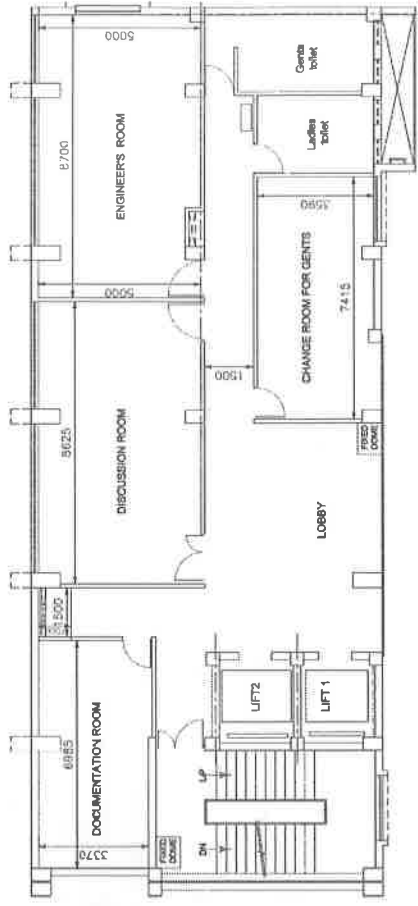
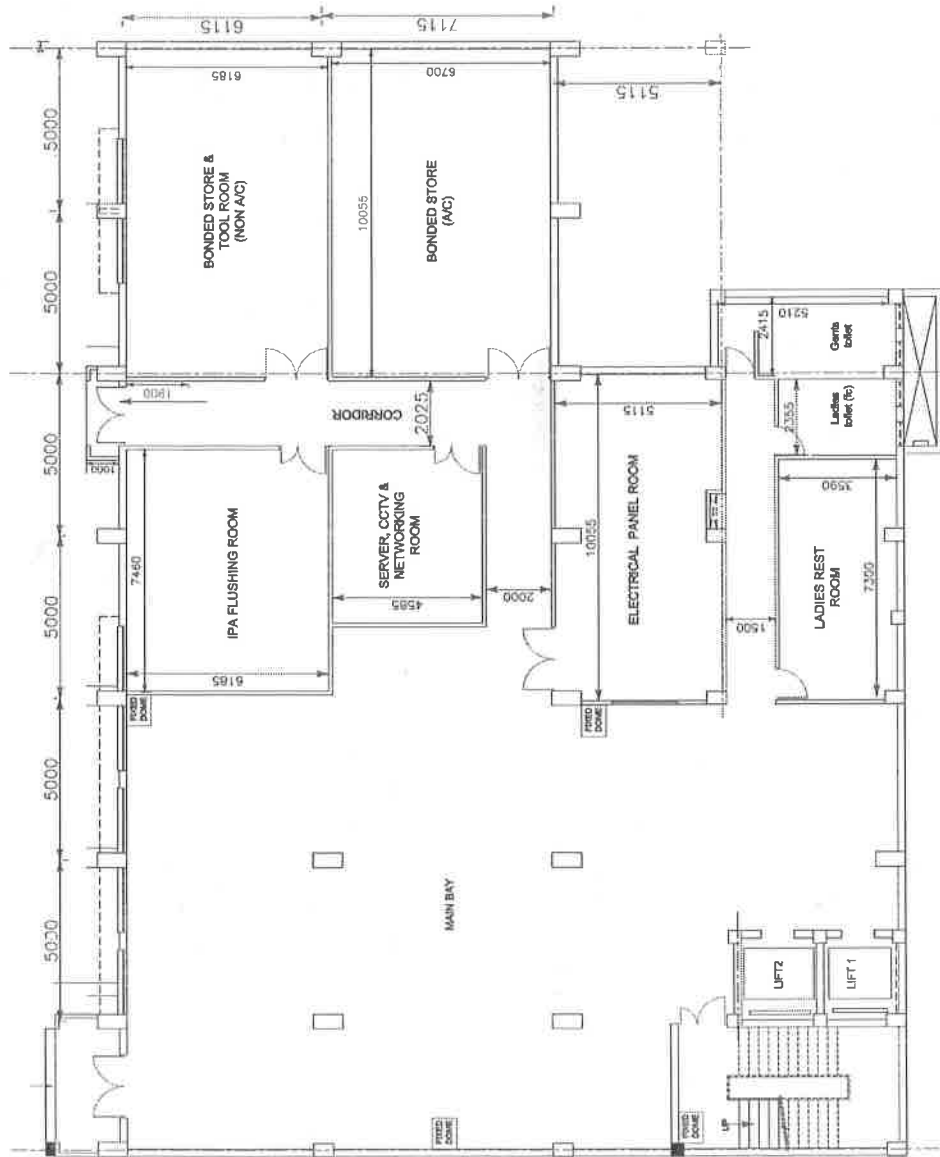
The party shall demonstrate the complete functional aspects of the CCTV systems and associated accessories after the installation. The final acceptance of the installation will be done by the LPSC. It is the responsibility of the supplier to resolve any performance-related issues.

ANNEXURE-3



GROUND FLOOR PLAN

ANNEXURE-3



Annexure A

1) Format for MAF

CERTIFICATE OF UNDERTAKING FROM ORIGINAL EQUIPMENT MANUFACTURER/S

(This certificate should be submitted along with the bid, signed & sealed by respective Original Equipment Manufacturer/s. The individual signing the OEM undertaking shall have the power of attorney to sign the undertaking and has to be signed with direct contact details)

We, M/s the manufacturer of (Item Name, Make, Model No.), hereby authorize M/s (Bidder Name) to participate in the tender (Tender No.) for (Tender Name). We guarantee that the equipment supplied is manufactured by us and is brand new and these items have not been used anywhere else before. Also, we hereby authorize M/s (Name of Bidder) to provide support and service for the supplied equipment during the warranty period and operation & maintenance contract period after warranty as per the terms and conditions specified in the tender document, (Tender No.). In case M/s (Name of Bidder) is not able to perform their duties including service support for our supplied equipment during installation, warranty, operation and maintenance period, we are ready to extend our support to LPSC for our supplied equipment, either directly or through our mutually agreed authorized service partner, under the same terms and conditions of this tender document, without any additional expenditure to LPSC. We further guarantee the availability of spares for the above-said period for the equipment supplied.

Name

Designation

Signature of the Manufacturer (OEM)

Seal of the manufacturer (OEM)

Annexure B

2) Format for OEM back-to-back support guarantee

To
The Purchase & Stores Office,
LPSC, Valiamala,
Thiruvananthapuram

Sir,

Agreement with product vendors on Back to Back support

This is to certify that we M/s, the manufacturer of (Item Name, Make, Model No.) have agreed to provide back-to-back support to M/s (Bidder Name & Address) for implementation, operations, and maintenance phases of the items supplied for the tender (Tender No.) for (Tender Name). The spares and upgrades will be available to LPSC for a minimum period of 3/5/25 years from the date of commissioning of the system in conformance to the tender terms and conditions.

Yours faithfully,

(Signature of the Authorised Signatory)

Date: _____

With rubber stamp

Annexure C– Checklist

Sl No	Criteria	Documents to be provided	Submitted (Yes/No)
1	Experience in CCTV installation: Minimum one in last Seven years. Provide Name of the Client, details of the contact person.	Copy of the PO for Supply, installation and commissioning of CCTV system	
2	Supplier must be a recognized company registered under Indian Company Act-1956	Certificate of Registration	
3	The company must be registered with appropriate authorities for all applicable statutory duties/taxes	GST Registration Number. Income Tax registration - PAN number and TAN number Income Tax returns for the previous three financial years	
4	Supplier shall not be blacklisted by any Govt./PSU Institutions for their non – performance / inability to fulfil the contract terms & conditions of any of the previous orders for -their work in the past three years.	Declpration from the bidder in their letter head and duly signed by the Head/Authorized Official of the Organisation/Unit.	
5	Manufacturer Authorisation Form (MAF) from OEM	Certificates from Original Equipment Manufacturer (OEM) as per the format attached in the Annexure A	
6	The Supplier should have back to back support from the OEM during Warranty period.	Undertaking as per the format mentioned in Annexure B	
7	Compliance to the detailed specifications / Terms & conditions.	Technical Compliance Statement duly signed in OEM letterhead	